Periodic Review Report
27 September 2022 – 27 September 2023
Three Star Anodizing Site
Wappingers Falls, New York
NYSDEC Site Number 314058

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

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December 2024
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EA Project No. 1602523.08

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LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	Microgram(s) per liter
AWQS	Ambient water quality standard
Aztech	Aztech Environmental Technologies
COC	Contaminant of concern
DCE	*cis*-1,2-dichloroethylene
DER	Division of Environmental Remediation
DFR	Daily Field Report
EA	EA Engineering, P.C. and its affiliate EA Science and Technology
EC	Engineering control
EPA	U.S. Environmental Protection Agency
IC	Institutional control
M-K	Mann-Kendall
MGP	Manufactured gas production
ng/L	Nanogram(s) per liter
No.	Number
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OU	Operable unit
PCE	Tetrachloroethylene
PDB	Passive diffusion bag
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PLC	Programmable logic controller
PRR	Periodic Review Report
RI	Remedial investigation
ROD	Record of Decision
Site	Three Star Anodizing Site
SMP	Site Management Plan
SSDS	Sub-slab depressurization system
SVOC	Semivolatile organic compound
TCE	Trichloroethylene
TP	Test Point

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

VOC	Volatile organic compound
VP	Vacuum Point

ES. EXECUTIVE SUMMARY

Table ES-1. Site Summary

Category	Summary/Results
Site Name/Site Number	Three Star Anodizing Site (314058)
Engineering Control	• Vegetated low-permeability cap constructed over the treated material. • Fencing around disposal cell.
Institutional Control	• Groundwater Use Restriction • Land Use Restriction • Site Management Plan • Soil Management Plan • Monitoring Plan
Site Management Plan	Site Management Plan Revision No. 0 – April 2018
Certification/Reporting Period	This report covers the period 27 September 2022 to 27 September 2023.
Prior (2022) Periodic Review Report Recommendations	• Complete a climate vulnerability assessment for the Three Star Anodizing Site. • Execute Environmental Easements for three parcels that still require them. • Groundwater and air sampling will continue on an annual basis.
Inspection	**Frequency**
Site Inspection	Annual
Monitoring	**Frequency**
Groundwater	Annual
Site Management Activities	• Vegetation clearing conducted on 2 November 2022. • Lagoon erosion inspection on 11 July 2023. • Indoor air sampling conducted on 7-8 March 2023. • Groundwater sampling and site inspection conducted on 14-16 August 2023. • SSDS repair, site visit and restart in November 2022, February 2023, August 2023 and July 2023. • Vacuum testing conducted on 27 September 2023.
Site Inspection Findings/Concerns	The site inspection checklist can be found in **Appendix H,** the daily field reports and photographic log can be found in **Appendix C.** During site inspections the site was found to be in compliance with institutional controls, and engineering controls were found to be in good condition. During the 2 November 2022 site inspection, brush was cleared from around the site. The site fencing was repaired during the 14-16 August 2023 site visit.

Groundwater Monitoring Findings/Results	Based on a review of results from the August 2023 groundwater sampling event, the following conclusions can be made: • VOCs and emerging contaminants had exceedances above ambient water quality standards.
Air Monitoring Findings/Results	Based on a review of results from the March 2023 air sampling event, the following conclusions can be made: • There were no exceedances of NYSDOH Ambient Air Quality Guidelines or Recommended Immediate Action Level for VOCs found in the air samples collected.
2023 Periodic Review Report Recommendations	• Execute Environmental Easements for three parcels that still require them. • Site inspections, monitoring and reporting will continue on an annual basis as established in the 2022 PRR and draft Site Management Plan.

1. INTRODUCTION

EA Engineering, P.C. and its affiliate EA Science and Technology (EA) was tasked by the New York State Department of Environmental Conservation (NYSDEC) under State Superfund Standby Contract Work Assignment Number (No.) D009806-23 to prepare a Periodic Review Report (PRR) for the Three Star Anodizing Site (Site No. 314058) that covers the period from 27 September 2022 through 27 September 2023. The purpose of this PRR is to certify the engineering controls (ECs) and institutional controls (ICs) required by the remedy, report the results of the site inspection and groundwater sampling, and summarize and evaluate the remedy implemented at the site, relative to the requirements of the Record of Decision (ROD) dated March 2009 (NYSDEC 2009). This report was prepared in accordance with the NYSDEC Division of Environmental Remediation (DER)-10, Technical Guidance for Site Investigation and Remediation (NYSDEC 2010). A site summary and applicable remedial program information are summarized in the following sections.

1.1 SITE LOCATION, OWNERSHIP, AND DESCRIPTION

The Three Star Anodizing Site (the Site) is a Class 2 inactive hazardous waste disposal site that is located within the Market Street Industrial Park on the west side of the village of Wappingers Falls, Dutchess County, New York (**Figure 1**).

The Site is approximately a 10-acre parcel (**Figure 2**) and has been divided into two separate operable units (OUs):

- OU-1 is the on-site source areas.
- OU-2 consists of the off-site and adjacent Wappinger Creek sediments. OU-2 is not addressed in this PRR.

OU-1 is comprised of five tax parcels and includes buildings, remnants of destroyed/demolished buildings, weathered/paved parking areas/access roadways, a lagoon area, and vegetated areas. **Table 1** provides a summary of each parcel comprising OU-1 including the section, lot, and block number. A real property map from the Village of Wappinger Falls with the tax parcels identified is provided in **Appendix A**.

The Site is located on the south bank of a meander in the Wappinger Creek which is approximately 1.5 miles upstream of the Hudson River. Topography of the Site is generally flat, with surface drainage in the direction of the Wappinger Creek. Over time, starting as early as 1832, the property has been associated with various industrial operations including textile dyeing operations, a manufactured gas plant, a metal plating facility, as well as other smaller-scale industrial operations. OU-2, which is associated with the Three Star property but not included in this periodic review for OU-1, includes the sediment deposited in Wappinger Creek adjacent to and downstream of the Site.

The March 2009 ROD indicates that the NYSDEC has determined that over 170 years of industrial activity have resulted in the release and disposal of hazardous wastes (such as volatile organic

compounds [VOCs], plating-related wastes, petroleum, and manufactured gas wastes) that have impacted soil, groundwater, and sediments at and near the Site. Historical occupants at the Site include Dutchess Print Works (also known as Dutchess Bleachery) from 1832 to 1955, Wappinger Water, Gas and Electric (with Dutchess Bleachery) from the late 1800s to 1915, Three Star Anodizing and Watson Metals Products from 1958 to 1995, and several other businesses including an automotive repair shop and the Axton-Cross Company, which was a manufacturer and distributor of chemical products.

The Site has been divided into five areas of concern which are shown on **Figure 2**. The five areas include the Lower Raceway Area, the Vat Area, the Lagoon Area, the Axton-Cross building, and the Manufactured Gas Production (MGP) area. These areas do not correspond to the five tax parcels that make up OU-1.

1.2 INVESTIGATION HISTORY

A remedial investigation (RI) was conducted at the Site during the time period between April 2001 and April 2003. The activities performed during the RI were used to evaluate the nature and extent of contamination associated with the historical use of the Site and to evaluate possible alternatives for reducing threats to human health and the environment. The RI included researching the Site history in order to better select locations for sampling surface and subsurface soil, advancement of borings in overburden soil and bedrock, installation of monitoring wells (completed in overburden soil and bedrock), groundwater sampling, and sampling of surface water and sediment.

A supplemental RI was conducted in November 2005 and April 2006 which primarily focused on the 23 plating vats located in the former Building 16 (Vat Area on **Figure 2**) and groundwater quality in their proximity. A fire associated with this building in May 2004 exposed the vats and allowed them to accumulate precipitation. The objective of the supplemental RI was to evaluate to what degree the water contained in the vats was impacted and to examine if leakage from those vats had impacted soil and groundwater.

1.3 REMEDIAL HISTORY

The NYSDEC submitted a request to the U.S. Environmental Protection Agency (EPA) for an emergency removal of a variety of containers containing known and unknown wastes that were remaining within the on-site buildings. An EPA contractor was mobilized in July 2004, shortly after the fire that occurred at the Site in May 2004. The purpose of this mobilization was to clear debris and remove/stage drums and containers of waste from Building 17 and other buildings on the Site. During that removal action, the EPA contractor determined that the May 2004 fire had destroyed approximately half of the structures on the Site and many of the waste containers were either buried by debris or were not accessible within the unstable structures. These structures were subsequently razed so that the EPA contractor could complete the removal action.

During the removal action, a total of 230 waste containers were sampled and categorized for removal from the Site. The waste was consolidated into 66 drums. Additionally, 20 compressed gas cylinders were removed, and a 10,000-gallon storage tank was pumped-out and cleaned. Some "oil-contaminated" soil was also placed in drums for disposal. In May 2005 a chain link fence was

subsequently installed around the OU-1 portion of the Site in order to restrict access to the former plating vats where access is not already restricted by Wappingers Creek or the steep hillside to the south of the Site. Analytical data obtained from composite liquid samples collected from the vats identified elevated concentrations of chromium. Approximately 12,000 gallons of liquid were removed from the vats and disposed of as hazardous waste. A larger fence was later installed around the Site in January 2009 in order to restrict access to the vats, remaining debris, and remaining buildings.

The RI and supplemental RI led to issuance of the ROD by NYSDEC (NYSDEC 2009) in March 2009. The selected remedy identified in the ROD included vat removal, lagoon dredging, limited excavation, and covering with contingency for in situ treatment within the Axton Cross area of the Site.

In 2013-2015, NYSDEC implemented a remedial program to address the previously identified contamination, in which the following actions were taken (Arcadis 2018a):

- Removal of debris, former plating vats and their contents, and the proper off-site disposal of impacted soil
- Installation of soil and asphalt covers in various areas of the Site and a sub-slab depressurization system (SSDS) in the Axton-Cross building.
- Injection of chemical oxidant into groundwater under and adjacent to the Axton-Cross building
- Dredging of sediment from the Three Star Lagoon
- Abatement of asbestos-containing materials
- Restoration of remediated areas.

1.4 REMEDIAL ACTION OBJECTIVES

According to the 2009 ROD, the remediation goals are to eliminate or reduce to the extent practicable the following:

- Exposures of persons at or around the Site to VOCs, polycyclic aromatic hydrocarbons and inorganics in soils, groundwater, soil vapor and the lagoon sediments
- Environmental exposures of flora or fauna to polycyclic aromatic hydrocarbons, and inorganics in soils and the lagoon sediments
- Release of contaminants from surface soil into ambient air through wind borne dust

- Release of contaminants from on-site soils into Wappinger Creek surface water and sediments through surface run-off and groundwater migration.

Further, the remediation goals include attaining to the extent practicable:

- Ambient water quality standards (AWQS) through source removal/remediation.

2. INSTITUTIONAL AND ENGINEERING CONTROL PLAN COMPLIANCE

ICs and ECs were established via an Environmental Notice dated 1 July 2016 and recorded with the Dutchess County Clerk. The Environmental Notice requires compliance with the established ICs and outlines the restrictions regarding future use and development of the property. It also ensures the implementation, maintenance and monitoring of the ECs that were established for the Site.

2.1 INSTITUTIONAL CONTROLS

The ICs established for the Site include the following:

- Groundwater Use Restriction
- Land Use Restriction
- Site Management Plan (SMP)
- Soil Management Plan
- Monitoring Plan.

Under the terms of the Environmental Notice, NYSDEC or its agent is obligated to the following:

- All ECs must be operated and maintained as specified in the August 2018 SMP.
- All ECs must be inspected and certified at a frequency and in a manner according to the SMP.
- Groundwater and other environmental or public health monitoring must be performed as specified in the SMP.
- Data and information collected under the authority of the SMP must be reported at a frequency and in a manner consistent with the SMP.
- On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected, and replaced as necessary to ensure continued functioning in a manner specified in the SMP.

The Environmental Notice also places the following restrictions on the property:

- Requires compliance with the approved SMP.

- Restricts the use of groundwater as a source of potable water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) and/or the NYSDEC.

- The owner of the property shall provide information to NYSDEC to assist it in carrying out its obligation to provide a periodic certification, prepared and submitted by a Professional Engineer or environmental professional acceptable to NYSDEC, which will certify that the ICs/ECs put in place are unchanged from the previous certification, comply with the SMP and, have not been impaired.

- The owner of the property shall continue in full force and effect any ICs/ECs required for the remedy and shall not, through any act or omission, interfere with NYSDEC's maintenance and monitoring of such controls, unless the owner first obtains permission to discontinue such controls from NYSDEC.

- There shall be no disturbance or excavation of the property which threatens the integrity of the ECs, or which may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils.

- Limit the use and development of the property to commercial or industrial uses.

Each of the ICs established for the Site apply to each of the five parcels that comprise the Site. The Site is currently in compliance with the ICs and associated restrictions.

2.2 ENGINEERING CONTROLS

The following ECs have been established for the Site:

- Vapor mitigation with an SSDS

- Cover systems

- Monitoring wells

There has also been an emphasis placed on ensuring the site fence remains intact and repairs are made on a regular basis.

2.2.1 Vapor Mitigation

The SSDS was installed in 2013–2014 by Aztech in a dedicated equipment room within the warehouse/storage space in the Axton-Cross building. The SSDS has its own metered utility power feed, is automatic in operation, and does not directly interface with other building systems. Control of the SSDS is provided by a programmable logic controller (PLC) that integrates a power supply, datalogger and wireless modem which allows remote access and alarm dissemination. The PLC monitors inputs and powers outputs in accordance with a customized control program. The PLC

also interfaces with two variable frequency drives, as well as sensors, relays, switches, pushbuttons, and indicator lights.

The SSDS is driven by two 7.5-horsepower regenerative blowers, each equipped with a water knockout vessel, which draw soil vapors from beneath the concrete slab via 14 extraction points. Sub-slab vapors are conveyed via a piping manifold that exits the building through the ceiling and discharges to the atmosphere above the roof line of the building. **Figure 3** presents a general layout for the SSDS at the Axton-Cross building. This EC applies only to the Axton-Cross building and is currently not applicable to the other four parcels that comprise the Site due to the other buildings on the remainder of the Site have either been demolished or are vacant.

2.2.2 Cover System

Three types of cover systems have been implemented at the Site. These include soil composite covers which were installed in the MGP Area, the MGP Buffer Area, and the Lower Raceway Area. A concrete and stone cover in the former Plating Vat Area, and a cover layer consisting of subbase course material and asphalt was also installed in the parking area of the Axton-Cross building. Cover systems are an EC applicable to the MGP Area; the former Plating Vat Area; the Lower Raceway Area and, the Axton-Cross building. All cover areas are represented on **Figure 4**.

2.2.3 Monitoring Wells

A network of 27 monitoring wells has been installed over the various phases of site investigation of which 14 remain for the purpose of evaluating groundwater quality. Monitoring well locations are shown on **Figure 5**. **Table 2** presents the specifications and status of each monitoring well. The monitoring well network is an EC that is applicable to all five areas of the Site.

2.3 INSTITUTIONAL CONTROLS/ENGINEERING CONTROLS CERTIFICATION

The IC/EC certification form is provided in **Appendix B** of this PRR. Both Wappingers Falls Estuary Enterprises, Inc. (Site Owner) and EA have certified that the ICs and ECs are still in place and functioning as intended.

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3. MONITORING AND SAMPLING PLAN COMPLIANCE

The SMP (Arcadis 2018) was prepared to set guidelines for management of soil, soil vapor, indoor air, and groundwater during future site activities at the Site. The SMP states that monitoring/inspection will occur annually to maintain the ECs and ICs at the Site.

The monitoring program for the Site was directed by the SMP and recommendations made in the 2022 Final PRR (EA 2022). Additionally, an updated SMP was submitted draft to the NYSDEC for review in 2023 which incorporates the recommendations of the 2022 PRR. The monitoring program is summarized in **Table 3.**

This PRR will evaluate each component of the monitoring program as directed by the 2018 SMP and 2022 PRR in terms of its compliance, performance, effectiveness, and protectiveness of the goals outlined in the ROD.

3.1 GROUNDWATER MONITORING

3.1.1 Compliance

The most recent groundwater sampling event was conducted between 14-16 August 2023. Samples were collected from the 14 accessible monitoring wells along with one field duplicate, a matrix spike, and a matrix spike duplicate, which is generally consistent with previous PRR sampling events. The Site is in compliance with the annual monitoring schedule set in the SMP and groundwater monitoring is expected to continue on an annual basis through the second quarter of 2024. The next annual sampling event at the Site is scheduled to be conducted during the second or third quarter of 2024.

3.1.2 Groundwater Sampling

In August 2023, EA conducted groundwater sampling from 14 wells in accordance with the SMP. The other 13 monitoring wells were either inaccessible, damaged, or not located, or abandoned (BMW-3 and MW-8). A summary of monitoring wells sampled, and condition of the monitoring wells in 2023 is provided in **Table 2.** Daily field reports (DFRs) for the sampling dates are included in **Appendix C**. Monitoring well locations are presented on **Figure 5**. Located wells were purged and sampled via low flow methods. Water quality field parameters including temperature, pH, dissolved oxygen, conductivity, turbidity, and oxidation-reduction potential were recorded. Purging continued until the field parameters stabilized and then samples can be taken. Due to collection of emerging contaminants including 1,4-dioxane, perflourooctane sulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and other per- and polyfluoroalkyl substances, wells were gauged the following day after sampling was complete to determine the depth of groundwater measured from the top of the well casing at each location. Samples were analyzed by Con-Test Analytical Laboratory for the analytes listed in **Table 3**. Laboratory results are presented in **Appendix D,** and a Data Usability Summary Report is provided In **Appendix E**.

3.1.3 Groundwater Results, Effectiveness, and Protectiveness

The goal of the ROD is to establish a remedial approach for the Site that protects human health and the environment. Therefore, groundwater quality must meet and satisfy the AWQS guidance for Class GA groundwater as defined by NYSDEC Technical and Operational Guidance Series 1.1.1 (NYSDEC 1998).

VOCs were detected in 11 monitoring wells. **Table F-1** in **Appendix F** presents analytic results for August 2023 VOC groundwater samples compared to AWQS Class GA criteria. **Figure 6** presents a summary of the distribution of the August 2023 concentrations of chlorinated VOC contaminants of concern (COCs) for the site, including vinyl chloride which is not listed as a COC but is detected at concentrations above AWQS. The highest VOC concentrations were at MW-14D for *cis*-1,2-dichloroethylene (DCE) and trichloroethylene (TCE) with values of 660 micrograms per liter (µg/L) and 520 µg/L, respectively. A total of nine locations had VOC concentrations greater than NYSDEC AWQS. However, COC VOC concentrations have decreased over time as shown in **Table 4**.

Metals were analyzed in groundwater samples to determine if metal concentrations have decreased over time. Metals were detected in samples collected from the 14 wells, and analytic results for August 2023 groundwater metal concentrations are provided in **Table F-2** in **Appendix F.** Four metals previously identified as COCs were detected at concentrations greater than AWQS Class GA criteria at two locations, MW-11 and MW-12. Arsenic and cadmium were detected at concentrations greater than AWQS with values of 140 µg/L and 5.3 µg/L at MW-11, compared to AWQS Class GA criteria of 25 µg/L and 5 µg/L, respectively. Chromium and nickel concentrations at MW-12 exceeded AWQS with values of 80 µg/L and 130 µg/L, compared to AWQS Class GA criteria of 50 µg/L and 100 µg/L, respectively. COC concentrations in groundwater have decreased over time, as seen in **Table 5**.

Pesticides were not detected at the 14 monitoring wells sampled during the August 2023 sampling event. Pesticide data is presented in **Appendix D**.

Groundwater samples collected in 2023 were also analyzed for emerging contaminants including 1,4-dioxane, PFOS, PFOA, and other per- and polyfluoroalkyl substances. Analytic results for August 2023 groundwater emerging contaminant groundwater samples are provided in **Table F-3** in **Appendix F**. A summary of emerging contaminant results from this sampling event compared to historical results can be found in **Table 6**. 1,4-dioxane was detected in 7 monitoring wells, with 6 of those having concentrations greater than the NYSDEC AWQS of 350 nanograms per liter (ng/L). MW-13 showed the highest concentration with a result of 7,900 ng/L.

PFOA and PFOS were detected in all 13 monitoring wells on-site. PFOA was detected at concentrations greater than the AWQS for drinking water of 6.7 ng/L at 4 locations. PFOS was detected at concentrations greater than the AWQS for drinking water of 2.7 ng/L at 12 locations. The highest concentrations of PFOA and PFOS were found in MW-10 with values of 9.2 ng/L and 460 ng/L, respectively, which were both lower than previous sampling rounds (**Table 6**). **Figure 7** presents the 2023 sampling results.

3.1.4 Groundwater Trend Analysis

Historical groundwater concentrations for COCs are summarized in **Tables 4 through 6** for VOCs, metals, and emerging contaminants. Mann-Kendall (M-K) trend analysis was performed for VOCs. Four metals at one location each exceeded AWQS, so M-K analysis was not performed on groundwater metals. It should be noted that M-K analysis was not performed at monitoring wells MW-15D, and MW-16, which generally have some of the highest VOC concentrations at the Site, due to insufficient sample events.

M-K trend analysis is used to demonstrate groundwater plume control or stability to confirm protective conditions. Concentrations of VOCs for selected monitoring points (i.e., those with a minimum of four recent data points) were evaluated using M-K statistical tests which are summarized in **Table 7**. M-K trend analysis worksheets are included as **Appendix G**.

It is important to note that the M-K trend analysis is more robust with more events, and changes or trends in concentrations may be over- or under-estimated due to the limited number of analytical results. Therefore, monitoring points that had COC concentrations that were non-detect across all sampling events were also omitted from analysis due to an insufficient amount of data and were noted in **Table 2**. Non-detect results included in the M-K trend analysis were entered as one-half the reporting limit for the analyte in question. Trend analysis results for the Site are described below.

Based on the M-K trend analysis, the following monitoring wells were determined to have decreasing trends for the COC(s) identified in parentheses:

- MW-1 (DCE and vinyl chloride)
- MW-2 (tetrachloroethylene [PCE], TCE, DCE, vinyl chloride, and chlorobenzene)
- MW-3 (DCE)
- MW-4 (PCE and TCE)
- MW-9R (PCE and TCE)
- MW-14D (TCE and DCE)

Based on the M-K trend analysis, the following monitoring wells were determined to have stable trends for the COC(s) identified in parentheses:

- MW-1 (TCE)
- MW-9R (DCE and chlorobenzene)
- MW-10 (DCE and vinyl chloride)
- MW-12 (vinyl chloride)
- MW-14D (1,1,1-trichloroethane)

MW-14D was the only well to show an increasing trend and only for vinyl chloride. It is likely that the increasing trend is due to the breakdown of TCE and DCE to VC resulting in increasing VC concentrations. Continued monitoring should occur to identify changes in trends at this location.

Remaining trends are considered to have "no trend," which could be the result of inconsistent observations or the limited dataset. Expansion of the data set through future groundwater sampling events will likely identify further trends.

3.1.5 Groundwater Gauging

Groundwater gauging was conducted at the end of the groundwater sampling event on 16 August 2023. Groundwater elevation measurements to the nearest 0.01 foot were collected from the 14 wells in the sampling program using a Solinst® water level meter. Groundwater elevation measurements are provided in **Table 2** and a groundwater elevation contour map (**Figure 8**). Local groundwater flow direction varies but trends dominantly to the northwest towards Wappingers Creek.

3.2 INDOOR AIR MONITORING

3.2.1 Compliance

The most recent air sampling event at the site took place on 7 and 8 March 2023. Four indoor air samples and one outdoor air sample was collected along with one field duplicate. The previous air sampling event took place in March 2022. Therefore, the Site is in compliance with the annual monitoring schedule set in the 2018 SMP (Arcadis 2018b) and air monitoring is expected to continue on an annual basis through the second quarter of 2024. The next annual sampling event at the Site is scheduled to be conducted during the first or second quarter of 2024.

3.2.2 Indoor Air Sampling

EA conducted indoor air sampling in accordance with the SMP and recommendations made in the 2021 PRR (Aztech 2022) in the Axton-Cross building. DFRs for the sampling dates are included in **Appendix C**. EA collected four indoor and one outdoor air sample presented on **Figure 3.** Samples were analyzed by Con-Test Analytical Laboratory for the analytes listed in **Table 3**. A summary of the air sampling results can be found in **Table 8.** Laboratory results are presented in **Appendix D** and a Data Usability Summary Report is provided in **Appendix E.**

A visual inspection of the SSDS was also conducted during this event. EA collected readings from the system panels and the accessible extraction wells (VP-7, VP-8, VP-9, and VP-10).

3.2.3 Effectiveness and Protectiveness

The goal of the ROD is to establish a remedial approach for the Site that protects human health and the environment. Therefore, air quality must meet and satisfy the EPA subsurface vapor intrusion guidance values.

VOCs were detected at all monitoring points. However, concentrations were below NYSDOH Ambient Air Guidelines (NYSDOH 2006). Detected concentrations are comparable to historical

results or have decreased since the last sampling event. Indicating that the implemented remedial actions are effectively maintaining indoor air quality below guidelines.

3.3 SUB-SLAB DEPRESSURIZATION SYSTEM MONITORING

The March 2009 ROD provided evaluation and mitigation of soil vapor intrusion at the Axton-Cross building located at 33 McKinley Street. The SSDS was designed by Arcadis and installed by Aztech in 2013–2014. The SSDS contains two 7.5-horsepower regenerative blowers, each equipped with a moisture separator vessel that extracts soil vapors from beneath the concrete slab at the building via 14 extraction points (**Figure 3**). Sub-slab vapors are conveyed via a piping manifold that exits the building through the ceiling and discharges to the atmosphere above the roofline of the building.

3.3.1 Compliance

A monitoring schedule specific to the SSDS was established by the 2020 PRR recommendation for an annual inspection to be added to the monitoring program for the Site. The annual SSDS inspection verifies that the system is operating properly and documents a verifiable vacuum is imposed beneath the concrete slab of the building. Both NYSDEC and NYSDOH concurred with this recommendation.

The annual inspections include measuring the vacuum below the sub-slab via test points (TPs) and at the SSDS extraction points via vacuum point (VP) ports, along with measuring the total VOC concentration at the SSDS discharge.

The annual SSDS inspection was conducted in August 2022 and is in compliance with the current monitoring schedule.

3.3.2 Vacuum Testing

On 27 September 2023, EA performed SSDS monitoring of the 14 TPs and 12 VPs at the Axton Cross building and the DFR is included in **Appendix C**. Two VPs were inaccessible and therefore not monitored. Vacuum was measured at the TPs, which are holes drilled in the sub-slab, and the VPs, which are taps in the SSDS intake piping. A FLUKE 87-V Multimeter was used in conjunction with a photoionization detector to screen the vacuum points. **Table 9** presents the results of the field measurements collected. The TPs used during previous monitoring events had been sealed, so new test points were installed with a rock drill, at locations marked by Labella Associates personnel. **Figure 3** presents the approximate location of VP and TP measurements. Imposed vacuum was measured at 10 of the 14 TP locations compared to 11 of 14 TP locations in 2022. Imposed vacuum was documented at 14 of 14 VP location taps in the SSDS. After collection of sub-slab TP measurements, EA installed removable foam seals into each point.

EA collected readings using a photoionization detector from the SSDS discharge via a newly installed point on the effluent line. VOCs had a concentration of 5.5 parts per million in the effluent line.

3.3.3 Effectiveness and Protectiveness

To evaluate the effectiveness and protectiveness of the SSDS consideration is given to its operational history, the measurable vacuum imposed beneath the concrete slab, and the quality of indoor air.

The SSDS at the Axton-Cross building had measurable induced vacuum beneath the concrete slab and throughout the SSDS indicating VOCs are captured before they enter the indoor air within the building, which was confirmed through indoor air sampling performed during the heating season. Therefore, it can be concluded that the SSDS is effective and protective of human health and the environment.

3.4 SITE-WIDE INSPECTION AND SOIL COVER MONITORING

ICs/ECs have been established for the Site and require annual inspection and certification. The site-wide inspection requires confirmation that ICs are adhered to and that ECs, including soil covers, the SSDS, and monitoring wells, are operating as intended. Composite soil covers, which consist of a layer of topsoil underlain by general fill overlying a demarcation fabric, were placed in the MGP area, the MGP buffer area, and lower raceway area. The cover placed in the vat area is comprised of New York State Department of Transportation type-4 overlying general fill and concrete slabs. The Axton-Cross parking lot area is covered by a composite including asphalt and subbase course material overlying demarcation fabric. **Figure 4** shows all cover types and areas on the Site.

3.4.1 Compliance

The site-wide and soil cover inspection were conducted in conjunction with the groundwater sampling event in August 2023. Therefore, the Site is in compliance with the annual monitoring schedule established by the SMP.

3.4.2 Inspection Performance

The site-wide and soil cover inspections were performed on 16 August 2023. DFRs for the inspection are included in **Appendix C**. No evidence of demolition or construction activities, disturbances to the site, or changes to designated site use was observed during the site inspection. Wells were assessed for general conditions; specifically, well casings, collars, labels, locks, covers, caps, risers, and annular spaces were inspected. The IC/EC certification form is provided in **Appendix B** and site inspection forms are provided in **Appendix H.**

Wells were all found to be locked. One area of damage to the Site fence was identified during the site wide inspection.

Soil covers were found to be in good shape, with little evidence of damage, erosion, animal burrows, or other impacts that could reduce their protectiveness. During the last reporting period, erosion had been identified at the mouth of the lagoon area. Vegetation has since been established in the areas previously susceptible to erosion providing erosion protection. Subsequent site visits

performed have continued to monitor erosion at the lagoon area mouth and have further confirmed the establishment of vegetation is currently controlling erosion. There is currently no immediate need for repair due to the establishment of vegetation in the area. However, the lagoon area will continue to be monitored and inspected regularly, especially after major storm events.

3.4.3 Effectiveness and Protectiveness

The effectiveness and protectiveness of ICs/ECs including the soil covers is measured through maintaining their integrity over the areas they were installed. The ICs/ECs including soil covers are effective and protective of human health and the environment. All other site inspections and maintenance that were conducted during this reporting period also ensure the continued effectiveness of all remedial actions that have been put in place.

3.4.4 Additional Site Visit Performed

EA personnel were on-site a total of 12 days during this reporting period to perform a variety of tasks. Site and system inspections were conducted, along with site maintenance and groundwater and air sampling. DFRs documenting each visit can be found in **Appendix C**. Site visits not previously discussed in Section 3 include:

- November 2022 brush clearing.
- July 2023 lagoon post storm event erosion inspection.
- November 2022; February, June, July, and September 2023 SSDS repair.
- May 2023 fence and building inspection.

3.4.4.1 Brush Clearing Site Visit

On 2 November 2022, EA performed vegetation clearing at the MGP area and vat area southwest of 28 McKinley Street, Wappinger Falls, New York. The equipment utilized for this field event included a skid steer with brush-hog attachment and weed whackers.

3.4.4.2 Lagoon Erosion Inspection Site Visit

On 11 July 2023, EA performed a visual inspection of the lagoon southwest of the Hudson Valley Granite building at 33 McKinley Street after a damaging storm event occurred in the area. The lagoon is located adjacent to the Axton-Cross building, with as little as 6 feet between the building and lagoon perimeter, which has a suspected slope of 1 to 1. There is evidence of a stacked stone retaining wall on the southern end of the lagoon that is perpendicular to the building and supports the embankment between the lagoon and the residential property at 19-21 McKinley Street.

The lagoon was found to be in good condition with no visible erosion during the inspection.

3.4.4.3 Sub-slab Depressurization System Maintenance Site Visit

On 15 November 2022 and 8 February 2023, EA personnel were on-site to troubleshoot and restart the SSDS. On both occasions the system had been shut down and after some troubleshooting it was restarted and running properly upon departure from the Site.

On 19 June 2023, EA personnel were on-site to inspect the system. It was determined that the system had no power. Attempts were made to reset circuits, but the power remained off. EA made repairs with tie wire, but power was still not restored.

On 27 July 2023, EA personnel were on-site to troubleshoot the systems electrical issues. The 3-phase power was turned off and a multimeter was used to confirm all fuses were functioning properly. The voltage was then measured on all 3 upstream phases which determined the switch was not receiving power from the meter. The wires between the building and the service pole were deemed to be in poor shape. EA determined the electrical issue was with Central Hudson Gas and Electric services. Power to the system has not been restored at this time.

On 1 September 2023, EA personnel met Central Hudson Gas and Electric on site to restore power to the meter. The power supply to the meter was re-established and the SSDS was successfully re-started.

3.4.4.4 Building and Fence Inspection

On 10 May 2023, EA personnel were on-site to check the integrity of the site fence and take photographs of the Anodizing building. The fence appeared to be in good condition with no new holes or entry points. Photographs were taken of the interior of the Three Star Anodizing building for NYSDEC.

4. GREEN REMEDIATION AND CLIMATE CHANGE RESILIENCE

Consistent with NYSDEC DER-31 Green Remediation Policy, this section provides a brief summary and qualitative assessment of the overall environmental impacts or environmental footprint of the Site for the current reporting period. In accordance with the NYSDEC's Executive Order No. 24, consideration has been given to reducing the consumption of energy and materials; and thereby, reducing the production of greenhouse gases, in the operation and maintenance of the Site. Implementation of NYSDEC DER-31 and Executive Order No. 24 have not compromised the selected remedy's protectiveness of public health and the environment, nor has it hindered achievement of the remedial goals established for the site.

As each discrete step of any site operation and maintenance activity consumes resources and energy, consideration has been given to reducing/eliminating those activities which may not be critical to the protectiveness of the selected remedy.

A climate vulnerability assessment was completed during this certifying period. This assessment will generally be utilized to evaluate the potential consequences climate changes may have on a site, as well as any ongoing Site management activities. The complete climate vulnerability assessment can be found in **Appendix I**.

4.1 GREEN REMEDIATION ASSESSMENT

In accordance with the NYSDEC's DER-31 Green Remediation policy, the following section provides a qualitative assessment of the overall environmental impacts, or environmental footprint associated with the remedy.

4.1.1 Electric Usage

Implementation of the selected remedy uses electricity to operate the SSDS.

4.1.2 Fossil Fuel Usage

Implementation of the selected remedy does not directly use fossil fuels as part of site management; however, fossil fuels are indirectly used during the completion of maintenance and monitoring activities associated with the groundwater monitoring well network.

Indirect fossil fuel use results from completion of the following site-related activities:

- Transportation to and from the Site for monitoring, sampling, and well rehabilitation.
- Maintenance of Site vegetation.
- Off-site transportation and shipment of samples collected for laboratory analysis.
- Disposal of waste generated at the Site.

4.1.3 Water Usage

Implementation of the selected remedy does not directly require the use water at this Site. However, a *de minimis* quantity of water is used during sampling events for equipment decontamination.

4.1.4 Air Emissions

Implementation of the selected remedy emits a *de minimis* quantity of VOCs from the SSDS discharge. The remedy emits contaminants to the air through the combustion of fossil fuels in vehicles and use in generators, as described above.

4.1.5 Consumption of Materials and Generation of Waste

Monitoring, maintenance and reporting activities associated with groundwater sampling events result in material consumption and the generation of waste. A summary of the current material consumption and waste generation activities for the Site are summarized below:

- Personal protective equipment associated with groundwater sampling, such as nitrile gloves, etc.
- Consumables associated with groundwater sampling such as polyethylene tubing, paper towels, trash bags, etc.
- Packaging material and ice are used to pack and preserve samples to be submitted for laboratory analysis.
- Paper and office supplies associated with site logs, monitoring logs, and report preparation.
- Repair and replacement of equipment associated with the monitoring well network.

4.2 CLIMATE CHANGE VULNERABILITY ASSESSMENT

Increases in both the severity and frequency of storms and weather events, an increase in sea-level elevations along with accompanying flooding impacts, shifting precipitation patterns and wide temperature fluctuations, resulting from global climate change and instability, have the potential to significantly impact the performance, effectiveness, and protectiveness of a given site remedy. The intent of this vulnerability assessment is to provide information to allow the site remedy to better prepare for the impacts of the increasing frequency and intensity of severe storms, weather events, and associated flooding brought on by global climate changes and instabilities, in order to ultimately enhance the remedy's resilience to such events.

This section briefly summarizes the vulnerability of the Site and/or the remedy to severe storms, weather events and associated flooding. The complete climate change vulnerability assessment can be found in **Appendix I**.

This assessment included consideration of the following:

- Flood Plain: The Site is in a flood plain.

- Site Drainage and Storm Water Management: The site is generally well drained but due to its presence in a flood plain it does have potential for flooding or damage to the monitoring well network during severe rain events.

- Erosion: There is evidence of past erosion at the site that will be addressed through a Corrective Measure at the mouth of the lagoon area.

- High Wind: Many observation wells are stick-ups and are susceptible to damage from the wind itself or falling objects, such as trees during periods of high wind.

4.3 CONSIDERATIONS FOR OPTIMIZATION OF PHYSICAL SYSTEMS

Environmental and energy conservation measures and other methods to reduce energy consumption, resource usage, waste generation, and water usage have been considered and are described below. During the certifying period one groundwater sampling event was conducted, which required the purging of water from the observation wells prior to sampling. For future events, the use of HydraSleeves or passive diffusion bags (PDBs) would significantly reduce or negate the need for purging observation wells and would reduce or negate the need for associated equipment and energy/fuel consumption. VOCs in groundwater will diffuse across the bag material until constituent concentrations within the bag reach equilibrium with concentrations in the surrounding groundwater. The advantages of PDB samplers is that they are inexpensive and have the potential to eliminate or substantially reduce the amount of purge water associated with sampling. The samplers are easy to deploy and recover. Because PDB samplers are disposable, there is no down-hole equipment to be decontaminated between wells. The limitation of the PDB bags is the bags cannot be used to collect groundwater samples for the analysis of emerging contaminants, metals or pesticides.

Additionally, electric powered trimmers and non-powered hand tools have been used as much as possible to reduce the amount of fossil fuel use at the Site. Further evaluation and reduction of vegetative clearing areas could potentially reduce the amount of fossil fuel use at the Site while enhancing habitat.

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5. CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

The remaining contaminants of concern are those that show concentrations above groundwater screening levels. The 2023 inspection confirmed compliance with all ICs and all aspects of ECs to be in good condition.

5.2 RECOMMENDATIONS

Based on site observations and groundwater analytical results, the following changes to site management activities are recommended. A summary of the recommended monitoring and inspection schedule is presented in **Table 3**. Recommendations will be incorporated into the SMP pending NYSDEC approval.

Additionally, it is recommended that Environmental Easements be executed for the three parcels that still require them.

5.2.1 Sub-Slab Depressurization System Inspection

It is recommended that SSDS inspections be conducted annually to verify it is operating properly and document that it creates a measurable vacuum beneath the concrete slab of the Axton-Cross building.

5.2.2 Groundwater Monitoring

It is recommended that groundwater sampling continue to be performed annually for the parameters identified in the 2022 PRR. The August 2023 sampling event showed levels of VOCs, metals, and emerging contaminants that were generally lower than previous sampling events. However, concentrations were still found to be greater than AWQS. Pesticides were not detected in 2023.

VOC trend evaluation using the M-K analysis identified some decreasing and stable trends (**Table 7**). The small data set limits the analysis' ability to fully identify trends, and additional sampling events would provide for a more thorough and robust trend evaluation. It is recommended that annual groundwater sampling continue for VOCs, metals, and emerging contaminants. Future sampling events may also identify that metals have decreased to levels less than their respective AWQS.

The analytical results suggest the continued success of the remediation efforts implicated at the site. Further groundwater sampling will continue to evaluate if the remedy continues to be effective in achieving remedial goals.

5.2.3 Indoor Air Monitoring

Indoor air sampling should continue to be conducted annually along with a concurrent outdoor air sample. This is recommended to be completed in conjunction with the SSDS inspections that occur at the same frequency. The March 2023 sampling event reported no exceedances of guidance values for VOCs.

5.2.4 Site-wide and Soil Cover Inspections

It is recommended that the Site-wide and soil cover inspections continue to be performed annually and conducted in conjunction with the annual groundwater monitoring event.

5.2.5 Periodic Review Reporting

The PRR is required to be completed on an annual basis, as groundwater and air sampling is also conducted on an annual basis. The requirements for discontinuing site management activities have not been met. Therefore, the monitoring schedule set forth by the SMP for the Site will continue.

6. FUTURE SITE ACTIVITIES

Based on the recommendations in Section 5, the following site management activities will be completed during the next PRR reporting period (27 September 2023 to 27 September 2024):

- Site Inspection – annual (planned for August 2024)
- Soil Cover Maintenance – annual (planned for August 2024)
- On-site maintenance (i.e., erosion repair, brush clearing, fence repair) – as needed.
- SSDS Inspection – annual (planned for March 2024)
- Groundwater sampling – annual (planned for August 2024)
- Indoor Air Sampling - annual (planned for March 2024)
- PRR – annual (next reporting period 27 September 2024 to 27 September 2025).

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Tables

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Table 1. Parcels Comprising Three Star Anodizing Operable Unit-1

Area Name	Owner	Section	Block	Lot	Size (acres)
MGP Area	Wappinger Falls Estuary	6158	17	115227	3.195
Axton-Cross Building Area	Wappinger Falls Estuary	6158	17	150250	1.340
Former Plating Vat Area	Three Star Anodizing	6158	17	162220	3.000
Lower Raceway Area	Teckram Realty Co.	6158	17	178199	1.200
Burned Building/Rubble Area	Threeco Inc.	6158	17	180237	1.510

Table 2. Monitoring Well Specifications (August 2023)

Well ID	DTW (feet below TOC)	Total Depth (feet below TOC)	Screened Interval (ft bgs)	Groundwater Elevation (feet amsl)	Northing	Easting	Status
MW-1	8.38	22.8	5.0-20.0	2.61	1007439.750	649376.9900	Good
MW-2	14.54	29.18	12.0-27.0	1.57	1007393.609	649089.5256	Good
MW-3	12.92	18.96	9.0-19.0	1.91	1007500.340	949141.3000	Good
MW-4	10.51	18.81	3.0-18.0	1.30	1007651.590	649012.6800	Good
MW-5	11.86	18.54	3.0-18.0	0.30	10075825.23	648923.6100	Good
MW-6	NA	NA	4.0-19.0	NA	1007645.970	649420.2600	NL
MW-7	NA	NA	3.0-18.0	NA	1007371.430	649710.5300	NL
MW-8	NA	NA	5.0-19.0	NA	1007716.860	649867.9700	Abandoned
MW-9	4.21	16.69	4.0-19.0	4.65	1007521.110	649256.7600	Good
MW-10	4.79	18.89	3.0-18.0	1.58	1007682.460	649505.8300	Good
MW-11	5.85	19.32	3.0-18.0	3.11	1007248.730	649415.7100	Good
MW-12	9.15	17.99	2.0-17.0	-4.67	1007436.870	649636.6900	Good
MW-13	15.76	25.4	10.0-25.0	1.46	1007439.380	649818.4500	Good
MW-14D	4.47	32.87	29.0-34.0	1.29	1007514.600	949261.3500	Good
MW-15D	6.79	24.85	20.0-25.0	1.17	1007555.710	649228.3500	Good
MW-16	5.81	14.32	5.5-15.5	2.00	1007550.360	949231.7700	Good
MW-17	NA	NA	5.0-15.0	NA	1007588.510	649344.5800	Good
MW-18	4.38	10.47	3.0-13.0	0.82	1007753.550	649264.5300	Good
MW-19	NA	NA	9.5-14.5	NA	NA	NA	NL
MW-20	NA	NA	10.0-20.0	NA	NA	NA	NL
MW-21D	NA	NA	22.5-27.5	NA	NA	NA	NL
MW-22D	NA	NA	NA	NA	NA	NA	NL
PZ-1	NA	NA	NA	NA	NA	NA	Abandoned
PZ-2	NA	NA	NA	NA	NA	NA	NL
BMW-1	NA	NA	45.0-50.0	NA	1007618.390	648959.7000	NL
BMW-2	NA	NA	61.0-66.0	NA	1007228.850	649577.8100	NL
BMW-3	NA	NA	47.0-52.0	NA	1007749.718	649806.7310	Abandoned

Notes:
amsl = Above mean sea level
bgs = Below ground surface
DTW = Depth to water
ft = Foot (feet)
NA = Not Available
NL = Not Located
TOC = Top of Casing
MW-14D inaccessible due to being located under a roll off dumpster
MW-17 was found open to the air and had a blockage at 4 ft bgs

Table 3. Monitoring Program Summary and Recommendations

Monitoring Program	Frequency*	Matrix	Current Analysis**	Recommendations
Groundwater	Annual monitoring for five years	Groundwater	•TCL VOCs (8260C) •TAL Metals (6010B) •Pesticides (8081) •1,4-Dioxane (8270 SIM) •PFAs (1633)*** •Field Parameters	No Change
Indoor Air	Annual monitoring for five years	Indoor air at two locations within the Axton-Cross Building and concurrent Outdoor Air sample	•VOCs (TO-15) for the NYSDEC DERs •Vapor Intrusion •TCL	No Change
SSDS	Annual Inspection	Discharge air Vacuum System Components	•Effluent PID Screening •Airspeed •System Vacuum •Observed Vacuum (sub-slab) •Visual inspection of system components	No Change
Soil Cover	Inspection during each groundwater event specified above	Asphalt and soil covers	•Visual Inspection	No Change
Periodic Review Report	Annual	NA	NA	No Change

Notes:

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and the NYSDOH

** The first round of groundwater samples should be analyzed for all suspected site-related contaminants; the second round of sampling may be modified to eliminate specific parameters based on the analytical results of the first round, with NYSDEC approval. Upon 2022 sampling it is recommended PCBs, pesticides, and SVOCs be removed from the groundwater analysis list.

*** Both linear and non-linear branch isomers

DER=Division of Environmental Remediation

NA = Not applicable

NYSDEC = New York State Department of Environmental Conservation

NYSDOH = New York State Department of Health

PCB = Polychlorinated biphenyl

PFA = Perfluoroalkoxy alkane

PID = Photoionization detector

SSDS = Sub-slab depressurization system

SVOC = Semivolatile organic compounds

TAL = Target analyte list

TCL = Target compound list

VOC = Volatile organic compound

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Table 4. Summary of Volatile Organic Compounds in Groundwater (2015 through 2023)

		Well ID	MW-1					MW-2					MW-3					MW-4					MW-5				
		Date	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023
Analyte	**Units**	**NYSDEC AWQS**																									
Tetrachloroethylene	µg/L	5.0	**37**	**18**	**21**	**54**	**47**	**150**	**10**	**9.9**	**9.1**	**6.0**	**18**	0.9	0.6	0.78	0.78	**9.4**	0.9	0.6	0.52	ND	ND	ND	ND	ND	ND
Trichloroethylene	µg/L	5.0	**24**	**11**	**6.4**	**9.0**	**7.6**	**480**	**18**	**19**	**17**	**12**	**54**	2.6	1.1	1.7	1.2	**25**	1.1	0.5	0.41	0.25	ND	ND	ND	ND	ND
cis -1,2-Dichloroethylene	µg/L	5.0	**26**	**17**	**7.0**	ND	**5.3**	**1,105**	**18**	**21**	**14**	**13**	1.2	2.3	1.0	0.97	0.5	**81**	**5.2**	4.7	**5.3**	2.6	ND	ND	ND	ND	ND
Vinyl Chloride	µg/L	2.0	**9.0**	**3.2**	**2.5**	1.7	0.38	**17**	**2.2**	**2.5**	1.4	0.90	0.9	ND	ND	ND	ND	**10**	**7.2**	**12**	**19**	**11**	ND	ND	ND	ND	ND
1,1,1-trichloroethane	µg/L	5.0	**7.1**	3.0	3.6	4.8	**10**	**12**	ND	ND	ND	ND	2.9	ND	ND	ND	ND	**16**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	µg/L	5.0	ND	ND	ND	ND	ND	**24**	**5.3**	**5.9**	**5.1**	2.8	0.9	ND	ND	ND	ND	0.9	ND	ND	0.50	0.57	ND	ND	ND	ND	ND
Toulene	µg/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/L	NSL	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Well ID	**MW-9R**					**MW-10**					**MW-11**					**MW-12**					**MW-13**				
		Date	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023
Analyte	**Units**	**NYSDEC AWQS**																									
Tetrachloroethylene	µg/L	5.0	**3,100**	**130**	**290**	**43**	3.9	ND	ND	ND	0.74	0.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene	µg/L	5.0	**950**	**90**	**88**	**31**	2.8	ND	0.5	ND	0.62	0.27	ND	ND	ND	ND	ND	ND	ND	ND	1.8	0.91	ND	ND	ND	ND	ND
cis -1,2-Dichloroethylene	µg/L	5.0	**570**	**1,700**	**720**	**270**	**53**	**5.2**	**5.6**	**5.2**	4.1	**5.0**	ND	ND	ND	ND	ND	**31**	**6.6**	ND	2.5	**11**	ND	ND	ND	0.23	0.33
Vinyl Chloride	µg/L	2.0	**19**	**81**	**81**	**20**	**24**	**5.3**	**4.7**	**2.8**	**3.0**	**4.3**	ND	ND	ND	ND	ND	**18**	**11**	**4.5**	**5.2**	**26**	ND	ND	ND	ND	ND
1,1,1-trichloroethane	µg/L	5.0	**92**	ND	ND	1.2	ND	ND	ND	ND	0.35	0.27	ND	ND	ND	ND	ND	ND	ND	ND	1.2	0.21	ND	ND	ND	ND	ND
Chlorobenzene	µg/L	5.0	**24**	ND	**34**	**18**	**19**	ND	ND	ND	0.21	0.31	ND	ND	ND	ND	ND	**10**	3.5	ND	2.1	**21**	ND	ND	ND	ND	ND
Toulene	µg/L	5.0	**67**	ND	ND	2.6	0.51	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23	ND	ND	ND	ND	ND
Ethylbenzene	µg/L	5.0	**100**	**110**	ND	**26**	**6.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	µg/L	NSL	560	57	ND	21	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		Well ID	**MW-14D**					**MW-15D**					**MW-16**					**MW-19**					**PZ-2**				
		Date	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023
Analyte	**Units**	**NYSDEC AWQS**																									
Tetrachloroethylene	µg/L	5.0	**2,800**	**98**	**100**	NS	**16**	ND	ND	NS	ND	0.42	**29**	**12**	NS	5.0	1.6	**54**	NS	**24**	NS	NS	**180**	**55**	**73**	**10**	NS
Trichloroethylene	µg/L	5.0	**2,000**	**1,300**	**1,200**	NS	**520**	ND	ND	NS	ND	ND	**58**	**19**	NS	**28**	1.6	**72**	NS	**9.4**	NS	NS	**130**	**21**	**30**	**5.2**	NS
cis -1,2-Dichloroethylene	µg/L	5.0	**1,800**	**900**	**680**	NS	**660**	**31,000**	**1,900**	NS	**75**	**33**	**3,300**	**360**	NS	**2,200**	**210**	**790**	NS	**15**	NS	NS	**700**	**81**	**130**	**45**	NS
Vinyl Chloride	µg/L	2.0	ND	**41**	**47**	NS	**85**	**2,300**	**2,300**	NS	**300**	**120**	**520**	**130**	NS	**790**	**260**	**4.3**	NS	ND	NS	NS	**240**	**63**	**120**	**43**	NS
1,1,1-trichloroethane	µg/L	5.0	ND	**26**	**23**	NS	**18**	ND	**51**	NS	**8.6**	2.9	ND	ND	NS	ND	0.66	**11**	NS	1.7	NS	NS	ND	2.4	ND	ND	NS
Chlorobenzene	µg/L	5.0	ND	ND	ND	NS	**16**	ND	**450**	NS	**390**	**270**	ND	ND	NS	**7.0**	**16**	ND	NS	ND	NS	NS	ND	ND	ND	1.1	NS
Toulene	µg/L	5.0	**85**	ND	ND	NS	1.7	**620**	**310**	NS	**59**	**19**	ND	ND	NS	**130**	1.0	ND	NS	ND	NS	NS	ND	ND	ND	ND	NS
Ethylbenzene	µg/L	5.0	**140**	ND	ND	NS	2.3	**440**	**350**	NS	**230**	**120**	ND	ND	NS	**22**	1.0	ND	NS	ND	NS	NS	ND	ND	ND	ND	NS
Xylenes	µg/L	NSL	480	22	ND	NS	5.4	940	900	NS	180	51	50	ND	NS	51	ND	ND	NS	ND	NS	NS	ND	ND	ND	ND	NS

Notes:
Samples analyzed via EPA Method 8260C for volatile organic compounds
µg/L = Microgram(s) per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
ND = Not detected
NS = Not sampled
NSL = No screening level
NYSDEC = New York State Department of Environmental Conservation
Bold values exceed NYSDEC AWQS (TOGS 1.1.1)

Table 5. Summary of TAL Metals in Groundwater (2015 through 2023)

		Well ID	MW-1					MW-2					MW-3					MW-4					MW-5				
		Date	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023
Analyte	**Units**	**NYSDEC AWQS**																								
Arsenic	µg/L	25	ND	6.6	ND	ND	ND	ND	5.8	ND	ND	ND	ND	**120**	ND	ND	ND	7.8	ND	ND	5.1	ND	ND	ND	ND	ND	ND
Cadmium	µg/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.67	1.5	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	µg/L	50	ND	ND	ND	ND	ND	ND	4.9	ND	ND	ND	8.9	2.2	8.6	ND	ND	3.2	3.4	ND	ND	ND	2.8	3.7	4.2	4.2	ND
Copper	µg/L	200	1.9	ND	1.7	ND	4.8	ND	2.0	ND	ND	ND	2.6	2.7	17	ND	ND	ND	2.4	ND	ND	ND	ND	2.5	2.5	ND	ND
Lead	µg/L	25	5.9	4.1	ND	ND	ND	3.2	ND	ND	ND	ND	3.5	5.2	4.7	ND	ND	8.9	24	ND	ND	ND	3.7	ND	ND	ND	ND
Mercury	µg/L	0.7	ND	ND	ND	ND	NS	ND	ND	ND	ND	NS	ND	ND	ND	ND	NS	0.34	0.22	ND	ND	NS	ND	ND	ND	ND	NS
Nickel	µg/L	100	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	µg/L	2,000	11	3.0	ND	7.1	ND	ND	6.2	ND	5.0	ND	ND	5.2	ND	ND	ND	55	1,400	ND	31	28	10	1.2	ND	10	ND
Cyanide	µg/L	200	ND	ND	ND	5.3	NS	ND	ND	ND	8.4	NS	ND	ND	ND	18	NS	67	18	ND	7.0	NS	11	13	11	11	NS
		Well ID	MW-9R					MW-10					MW-11					MW-12					MW-13				
		Date	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2022
Analyte	**Units**	**NYSDEC AWQS**																								
Arsenic	µg/L	25	6.6	ND	ND	4.8	ND	14	6.2	13	7.2	8.5	**220**	**94**	**91**	18	**140**	**43**	**55**	**33**	**39**	24	ND	22	7.9	11	22
Cadmium	µg/L	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	µg/L	50	**92**	23	27	21	28	9.3	4.5	16	15	23	1.6	2.7	ND	ND	ND	**82**	5.4	7.7	ND	**80**	ND	1.6	ND	ND	ND
Copper	µg/L	200	4.0	3.2	6.4	11	ND	ND	ND	2.8	ND	ND	ND	3.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	ND	ND	ND
Lead	µg/L	25	ND	ND	4.8	8.2	15	ND	ND	ND	ND	ND	ND	4.3	ND	ND	ND	ND	4.7	ND	ND	ND	6.0	5.3	ND	ND	ND
Mercury	µg/L	0.7	ND	ND	ND	ND	NS	ND	ND	ND	ND	NS	0.13	ND	ND	ND	NS	ND	ND	ND	MD	NS	ND	0.15	ND	ND	NS
Nickel	µg/L	100	2.0	ND	3.5	ND	2.7	2.2	ND	4.1	9.2	4.6	ND	ND	ND	ND	ND	**440**	ND	**340**	**310**	**130**	ND	ND	ND	ND	ND
Zinc	µg/L	2,000	6.2	4.3	ND	32	27	4.9	4.9	ND	72	7.3	3.4	6.3	ND	14	16	1,700	1,300	ND	2,000	1,000	2.5	6.0	ND	5.3	ND
Cyanide	µg/L	200	16	15	12	14	NS	6.2	9.6	11	14	NS	6.6	7.1	16	17	NS	ND	ND	ND	7.0	NS	11	8.2	5.5	20	NS
		Well ID	MW-14D					MW-15D					MW-16					MW-19					PZ-2				
		Date	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/15/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023	6/4/2015	7/14/2020	4/28/2021	6/27/2022	8/14/2023
Analyte	**Units**	**NYSDEC AWQS**																								
Arsenic	µg/L	25	ND	ND	ND	NS	ND	ND	8.3	NS	5.4	12	ND	ND	NS	ND	11	ND	NS	ND	NS	NS	ND	ND	ND	ND	NS
Cadmium	µg/L	5.0	ND	ND	ND	NS	ND	ND	ND	NS	ND	1.4	ND	1.0	NS	0.90	ND	ND	NS	ND	NS	NS	ND	ND	ND	ND	NS
Chromium	µg/L	50	ND	2.5	1.5	NS	ND	ND	1.5	NS	ND	ND	44	12	NS	3.4	ND	16	NS	14	NS	NS	ND	2.5	5.8	ND	NS
Copper	µg/L	200	ND	5.5	3.0	NS	8.6	ND	1.7	NS	ND	ND	5.2	8.5	NS	8.1	ND	ND	NS	ND	NS	NS	ND	ND	15	ND	NS
Lead	µg/L	25	ND	4.3	ND	NS	ND	ND	4.3	NS	ND	ND	ND	ND	NS	ND	ND	ND	NS	ND	NS	NS	ND	ND	ND	ND	NS
Mercury	µg/L	0.7	ND	ND	ND	NS	NS	ND	ND	NS	ND	NS	ND	ND	NS	ND	NS	ND	NS	ND	NS	NS	ND	ND	ND	ND	NS
Nickel	µg/L	100	8.3	4.5	2.3	NS	3.3	ND	ND	NS	ND	ND	ND	ND	NS	ND	ND	3.1	NS	2.4	NS	NS	ND	ND	13	ND	NS
Zinc	µg/L	2,000	16	120	ND	NS	120	16	7.0	NS	4.5	ND	3.0	9.8	NS	11	ND	4.2	NS	ND	NS	NS	ND	2.1	ND	5.0	NS
Cyanide	µg/L	200	ND	5.2	ND	NS	NS	6.1	ND	NS	4.7	NS	13	13	NS	ND	NS	6.1	NS	ND	NS	NS	ND	17	21	18	NS

Notes:
µg/L = Microgram(s) per liter
AWQS = Ambient water quality standards
EPA = U.S. Environmental Protection Agency
ID = Identification
ND = Not detected
NS = Not sampled
NYSDEC = New York State Department of Environmental Conservation
TAL = Target analyte list
Bold values exceed NYSDEC AWQS (TOGS 1.1.1)

Table 6. Summary of Emerging Contaminants in Groundwater (2018 through 2023)

		Well ID	MW-1					MW-2					MW-3					MW-4					MW-5				
		Date	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/15/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/15/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023
Analyte	**Units**	**NYSDEC AWQS**																									
1,4-Dioxane	ng/L	350	NS	350	**380**	310	ND	NS	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	ND	ND
PFOA	ng/L	6.7	NS	3.6	3.2	4.1	4.6	NS	2.0	1.3	2.0	**9.0**	NS	**8.1**	2.9	4.7	2.6	3.7	4.1	1.5	3.2	3.0	NS	2.6	1.4	0.71	1.2
PFOS	ng/L	2.7	NS	**6.8**	**6.0**	**6.3**	**10**	NS	2.3	**3.3**	1.8	**450**	NS	**9.3**	**5.0**	**6.7**	**6.0**	**7.4**	**6.7**	**3.0**	**5.5**	**6.1**	NS	**8.9**	**7.4**	**4.7**	**5.8**
Total PFAS	ng/L	NA	NS	17.5	18.1	24.8	27.35	NS	12.8	30.4	11.8	630.69	NS	59.6	17.8	31.2	19.83	22.6	28.5	8.6	22.6	22.86	NS	16.8	10.4	110.4	17.78
		Well ID	**MW-9R**					**MW-10**					**MW-11**					**MW-12**					**MW-13**				
		Date	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/15/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/15/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/15/2023
Analyte	**Units**	**NYSDEC AWQS**																									
1,4-Dioxane	ng/L	350	NS	**420**	340	**440**	**390**	NS	**620**	**550**	**480**	**510**	NS	**1,700**	280	**540**	**360**	NS	**390**	350	320	280	NS	**11,000**	**2,900**	**4,500**	**7,900**
PFOA	ng/L	6.7	NS	3.5	2.7	4.8	4.0	NS	**37**	**22**	**37**	**9.2**	NS	**11**	5.6	5.4	**10**	NS	**15**	**16**	**18**	**14**	NS	5.1	2.3	4.0	4.2
PFOS	ng/L	2.7	NS	**8.9**	**8.7**	**7.2**	**4.9**	NS	**1,800**	**1,400**	**1,700**	**460**	NS	**8.1**	**9.2**	**14.0**	**22.0**	NS	**28**	**25**	**38**	**31**	NS	**4.6**	**2.9**	**3.4**	2.4
Total PFAS	ng/L	NA	NS	83.2	27.2	28.5	32.0	NS	1,992.6	123.9	2,286.6	651.1	NS	35.8	20.5	24.5	43.9	NS	73.4	50.1	104.2	84.04	NS	30.7	13.4	27.9	26.77
		Well ID	**MW-14D**					**MW-15D**					**MW-16**					**MW-19**					**PZ-2**				
		Date	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/15/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/20232	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023	7/18/2018	7/14/2020	4/28/2021	6/27/2022	8/14/2023
Analyte	**Units**	**NYSDEC AWQS**																									
1,4-Dioxane	ng/L	350	NS	**930**	**640**	NS	**690**	NS	**5,000**	NS	**2,800**	**4,300**	ND	210	NS	**370**	ND	ND	NS	130	NS	NS	ND	130	220	130	NS
PFOA	ng/L	6.7	NS	2.5	2.3	NS	2.0	NS	3.4	NS	4.3	3.4	6.6	**8.1**	NS	**7.6**	2.5	5.8	NS	4.0	NS	NS	**16**	3.8	**11**	2.6	NS
PFOS	ng/L	2.7	NS	**6.0**	**4.7**	NS	**4.5**	NS	**9.1**	NS	**8.6**	**6.9**	**2.9**	**9.0**	NS	**8.0**	**4.3**	**8.6**	NS	**5.4**	NS	NS	**13**	**7.5**	**10**	**6.4**	NS
Total PFAS	ng/L	NA	NS	86.6	39.6	NS	22.49	NS	21.0	NS	24.8	25.21	21.4	57.2	NS	55.6	23.38	33.3	NS	27.8	NS	NS	74.3	31.0	73.2	36.3	NS

Notes:
Samples analyzed via EPA Method 537.1 for PFAS for 2018 to 2022 data
Samples analyzed via EPA Method 1633 for PFAS for 2023
AWQS = Ambient Water Quality Standards
EPA = U.S. Environmental Protection Agency
ID = Identification
ND = Not detected
ng/L = nanograms per liter
NS = Not sampled
NYSDEC = New York State Department of Environmental Conservation
PFAS = Per- and polyfluoroalkyl substances
PFOA = Perfluorooctanoic acid
PFOS = Perfluorooctane sulfonic acid
Bold values exceed NYSDEC AWQS

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Table 7. Mann-Kendall Trend Analysis Summary

MW-01	PCE	TCE	DCE	VC	1,1,1-TCA	Chlorobenzene	Toluene	Ethylbenzene	Xylenes
Coefficient of Variation	0.45	0.62	0.93	0.99	0.5	Insufficient Detects	Insufficient Detects	Insufficient Detects	Insufficient Detects
Mann-Kendall Statistic (S)	4	-6	-8	-10	4				
Confidence Factor	75.8%	88.3%	95.8%	99.2%	75.8%				
Concentration Trend[1]	No Trend	Stable	Decreasing	Decreasing	No Trend				
Most Recent Concentration (µg/L)	47	7.6	5.30	0.38	10.0	ND	ND	ND	ND
MW-02	**PCE**	**TCE**	**DCE**	**VC**	**1,1,1-TCA**	**Chlorobenzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Coefficient of Variation	1.71	1.9	2.08	1.43	Insufficient Detects	1.01	Insufficient Detects	Insufficient Detects	Insufficient Detects
Mann-Kendall Statistic (S)	-10	-8	-8	-8		-8			
Confidence Factor	99.2%	95.8%	95.8%	95.8%		95.8%			
Concentration Trend[1]	Decreasing	Decreasing	Decreasing	Decreasing		Decreasing			
Most Recent Concentration (µg/L)	6	12	13	0.90	ND	3	ND	ND	ND
MW-03	**PCE**	**TCE**	**DCE**	**VC**	**1,1,1-TCA**	**Chlorobenzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Coefficient of Variation	1.83	1.93	0.56	Insufficient Detects	Insufficient Detects	Insufficient Detects	Insufficient Detects	Insufficient Detects	Insufficient Detects
Mann-Kendall Statistic (S)	-5	-6	-8						
Confidence Factor	82.1%	88.3%	95.8%						
Concentration Trend[1]	No Trend	No Trend	Decreasing						
Most Recent Concentration (µg/L)	0.78	1.20	0.50	ND	ND	ND	ND	ND	ND
MW-04	**PCE**	**TCE**	**DCE**	**VC**	**1,1,1-TCA**	**Chlorobenzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Coefficient of Variation	1.71	2.01	1.73	0.37	1.1	Insufficient Detects	Insufficient Detects	Insufficient Detects	Insufficient Detects
Mann-Kendall Statistic (S)	-10	-10	-6	4	-1				
Confidence Factor	99.2%	99.2%	88.3%	75.8%	50.0%				
Concentration Trend[1]	Decreasing	Decreasing	No Trend	No Trend	No Trend				
Most Recent Concentration (µg/L)	0.17	0.25	2.6	11	0.15	ND	ND	ND	ND
MW-09R	**PCE**	**TCE**	**DCE**	**VC**	**1,1,1-TCA**	**Chlorobenzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Coefficient of Variation	1.88	1.73	0.96	0.73	2.19	0.65	2.11	1.08	1.89
Mann-Kendall Statistic (S)	-8	-10	-6	1	-1	0	-1	-4	-6
Confidence Factor	95.8%	99.2%	88.3%	50.0%	50.0%	40.8%	50.0%	75.8%	88.3%
Concentration Trend[1]	Decreasing	Decreasing	Stable	No Trend	No Trend	Stable	No Trend	No Trend	No Trend
Most Recent Concentration (µg/L)	3.9	2.8	53	24	0.15	19	0.51	6.6	2.90
MW-10	**PCE**	**TCE**	**DCE**	**VC**	**1,1,1-TCA**	**Chlorobenzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Coefficient of Variation	Insufficient Detects	Insufficient Detects	0.11	0.27	Insufficient Detects	Insufficient Detects	Insufficient Detects	Insufficient Detects	Insufficient Detects
Mann-Kendall Statistic (S)			-5	-4					
Confidence Factor			82.1%	75.8%					
Concentration Trend[1]			Stable	Stable					
Most Recent Concentration (µg/L)	ND	ND	5.0	4.3	ND	ND	ND	ND	ND
MW-12	**PCE**	**TCE**	**DCE**	**VC**	**1,1,1-TCA**	**Chlorobenzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Coefficient of Variation	Insufficient Detects	Insufficient Detects	1.20	0.70	Insufficient Detects	1.16	Insufficient Detects	Insufficient Detects	Insufficient Detects
Mann-Kendall Statistic (S)			-2	0		0			
Confidence Factor			59.2%	40.8%		40.8%			
Concentration Trend[1]			No Trend	Stable		No Trend			
Most Recent Concentration (µg/L)	ND	ND	11	26	ND	21	ND	ND	ND
MW-14D	**PCE**	**TCE**	**DCE**	**VC**	**1,1,1-TCA**	**Chlorobenzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
Coefficient of Variation	1.81	0.48	0.53	0.79	0.67	1.73	Insufficient Detects	Insufficient Detects	1.84
Mann-Kendall Statistic (S)	-4	-6	-6	6	0	3			-4
Confidence Factor	83.3%	95.8%	95.8%	95.8%	37.5%	72.9%			83.3%
Concentration Trend[1]	No Trend	Decreasing	Decreasing	Increasing	Stable	No Trend			No Trend
Most Recent Concentration (µg/L)	16	520	660	85	18	16	ND	ND	5

Notes:

[1] At least four independent sampling events per well are required for calculating the trend. Methodology is valid for 4 to 40 samples.

Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable

µg/L = Microgram(s) per liter, parts per billion

DCE = *cis* -1,2-dichloroethylene

PCE = Tetrachloroethylene

TCE = Trichloroethylene

VC = Vinyl chloride

1,1,1-TCA = 1,1,1-Trichloroethane

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Table 8. Summary of Detected VOCs in Indoor and Outdoor Air (March 2023)

Analyte	Building	Indoor Air										Outdoor Air		NYSDOH Ambient Air Quality Guideline[1]	NYSDOH Ambient Air Quality Recommended Immediate Action Level[1]
	Sample ID	IA-1		IA-5		IA-4		IA-2		DUP		OA-1			
	Laboratory ID	23C1364-02		23C1364-05		23C1364-04		23C1364-03				23C1364-01			
	Room	1st Floor/Near TP-5		1st Floor/Near TP-14				1st Floor/Near TP-11		1st Floor/Near TP-11		Outdoor			
	Sample Date	3/7/2023		3/7/2023		3/7/2023		3/7/2023		3/7/2023		3/7/2023			
	Sample Type	Indoor Air		Indoor Air		Indoor Air		Indoor Air		Indoor Air		Outdoor Air			
VOCs (TO-15)															
Acetone	µg/m^3	ND		ND		ND		39		NS		4.1		--	--
Benzene	µg/m^3	0.28		0.32		0.41		0.5		NS		0.12		--	--
2-Butanone (MEK)	µg/m^3	ND		ND		ND		ND		NS		ND		--	--
Carbon Disulfide	µg/m^3	ND		ND		ND		ND		NS		ND		--	--
Carbon Tetrachloride	µg/m^3	0.082		0.08		0.082		0.079		NS		0.075		--	--
Chloroethane	µg/m^3	ND		ND		ND		ND		NS		ND		--	--
Chloromethane	µg/m^3	0.58		0.56		0.58		0.58		NS		0.57		--	--
Cyclohexane	µg/m^3	0.24		0.29		0.56		0.4		NS		ND		--	--
Dichlorodifluoromethane (Freon 12)	µg/m^3	0.52		0.54		0.59		0.49		NS		0.49		--	--
1,2-Dichloropropane	µg/m^3	ND		ND		ND		ND		NS		ND		--	--
Ethanol	µg/m^3	11		13		13		11		NS		1.7		--	--
Ethylbenzene	µg/m^3	0.15		0.18		0.36		0.28		NS		ND		--	--
4-Ethyltoluene	µg/m^3	0.048		0.057		0.07		0.091		NS		ND		--	--
Heptane	µg/m^3	0.25		0.29		0.48		0.41		NS		ND		--	--
Hexane	µg/m^3	0.57	J	0.65	J	0.94	J	1.2	J	NS		ND		--	--
Isopropanol	µg/m^3	1.5		0.35	J	0.3	J	0.49	J	NS		0.57	J	--	--
Methylene Chloride	µg/m^3	ND		ND		ND		ND		NS		ND		*60*	--
Naphthalene	µg/m^3	ND		0.43		0.027	J	0.04		NS		ND		--	--
Propene	µg/m^3	ND		1.9		ND		ND		NS		ND		--	--
Styrene	µg/m^3	0.02	J	0.02	J	0.057		1.7		NS		ND		--	--
Tetrachloroethylene	µg/m^3	ND		ND		ND		ND		NS		ND		*30*	*300*
Tetrahydrofuran	µg/m^3	ND		ND		ND		ND		NS		ND		--	--
Toluene	µg/m^3	1.1		1.2		2		1.7		NS		0.049		--	--
Trichloroethylene	µg/m^3	ND		ND		ND		ND		NS		ND		*2*	*20*
Trichlorofluoromethane (Freon 11)	µg/m^3	0.21		0.21		0.22		0.24		NS		0.21		--	--
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	µg/m^3	0.061	J	0.061	J	0.063	J	0.063	J	NS		0.063	J	--	--
1,2,4-Trimethylbenzene	µg/m^3	0.17		0.21		0.25		0.39		NS		ND		--	--
1,3,5-Trimethylbenzene	µg/m^3	0.05		0.052		0.064		0.098		NS		ND		--	--
m&p-Xylene	µg/m^3	0.47		0.54		1.1		0.95		NS		ND		--	--
o-Xylene	µg/m^3	0.17		0.2		0.38		0.41		NS		ND		--	--

Notes:

[1.] NYSDOH Ambient Air Guidelines and Immediate Action Levels based on the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006, and NYSDOH Soil Vapor Intrusion Updates dated September 2013, August 2015, and May 2017.

µg/m3 = Microgram(s) per cubic meter = parts per billion
ID = Identification
J = Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimatedconcentration (CLP J-Flag).
ND = Not Detected
NYSDEC = New York State Department of Environmental Conservation
NYSDOH = New York State Department of Health
VOC = Volatile organic compound

Analytical data results provided by Con-Test.

Duplicate sample was collected at IA-2.

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Table 9. Observed Vacuum Measurements

Site Three Star Anodizing
Address 33 McKinley Street Wappingers Falls, NY
Date of monitoring 9/27/2023

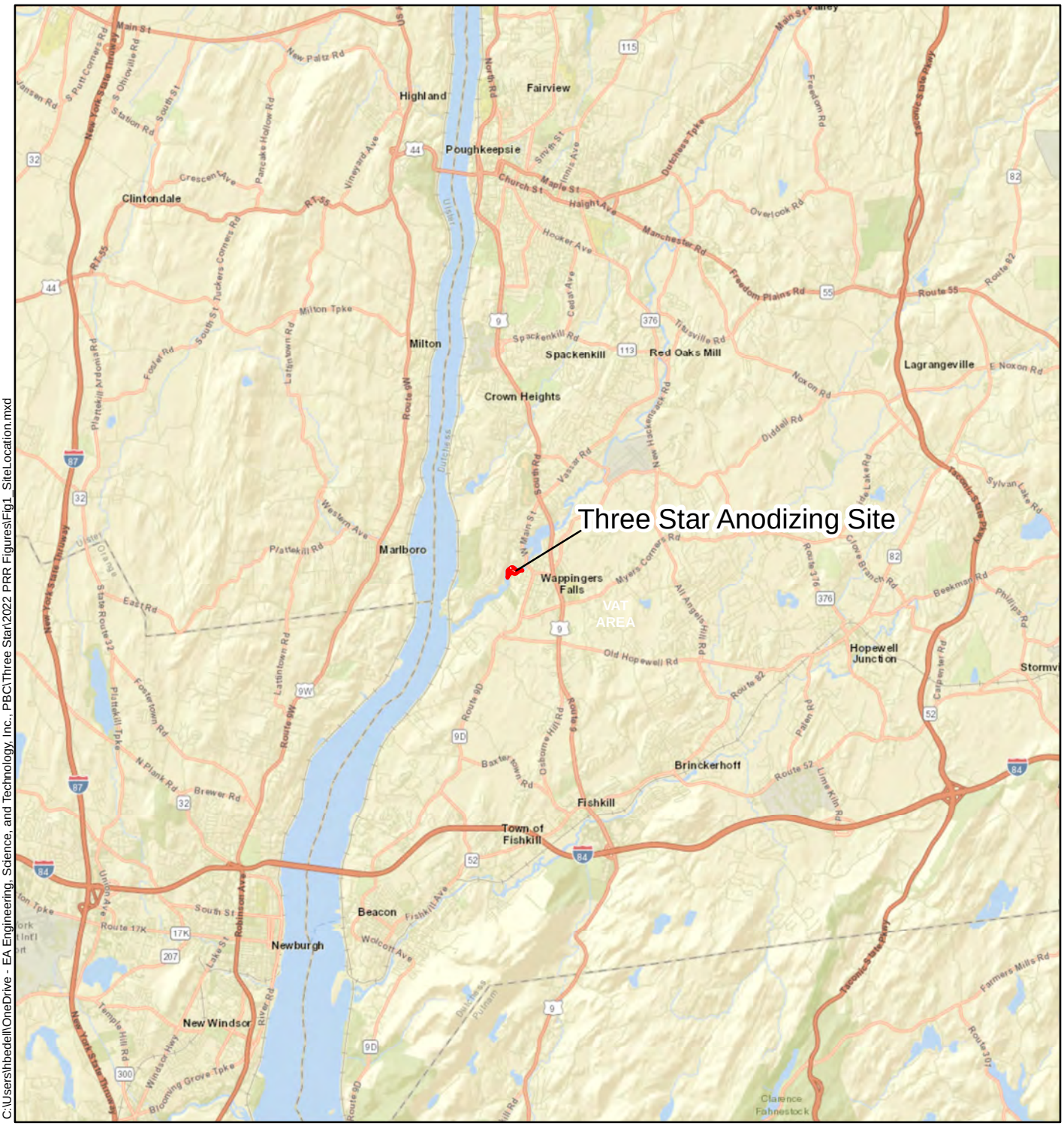
Point ID	Vacuum Measurement	Units	Time
TP-01	0.0000	in. H2O	1152
TP-02	-0.0020	in. H2O	1155
TP-03	0.0000	in. H2O	1157
TP-04	-0.0020	in. H2O	1237
TP-05	-0.0020	in. H2O	1241
TP-06	-0.0040	in. H2O	1227
TP-07	-0.0020	in. H2O	1240
TP-08	-0.0010	in. H2O	1242
TP-09	-0.0030	in. H2O	1247
TP-10	0.0000	in. H2O	1244
TP-11	-0.0030	in. H2O	1202
TP-12	0.0000	in. H2O	1205
TP-13	-0.0040	in. H2O	1208
TP-14	-0.0020	in. H2O	1251
VP-01	-12.7860	in. H2O	1243
VP-02	-14.8860	in. H2O	1231
VP-03	Not Accessible		
VP-04	-16.7560	in. H2O	1159
VP-05	-17.0180	in. H2O	1159
VP-06	-16.1530	in. H2O	1158
VP-07	-15.1160	in. H2O	1135
VP-08	-15.2180	in. H2O	1137
VP-09	Not Accessible		
VP-10	-15.9760	in. H2O	1134
VP-11	-15.3050	in. H2O	1249
VP-12	-14.9450	in. H2O	1238
VP-13	-14.9870	in. H2O	1241
VP-14	-14.9200	in. H2O	1250

Notes:
in. H20 = Inches of water

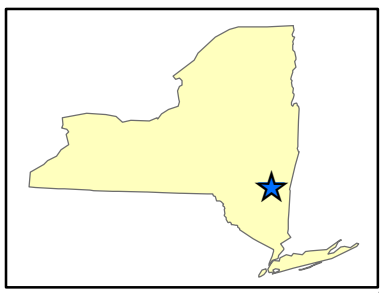
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Figures

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C:\Users\hbedell\OneDrive - EA Engineering, Science, and Technology, Inc., PBC\Three Star\2022 PRR Figures\Fig1_SiteLocation.mxd



0 2 4
Miles

N

Legend

Approximate Site Boundary

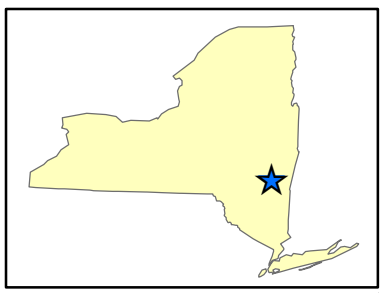
Figure 1
Site Location
Three Star Anodizing Site (NYSDEC Site 314058)
Wappingers Falls, NY

Map Date: 1/5/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation



\\syracusefp\Syracuse\GISdata\StateandLocal\ThreeStar\PROJECTS\ArcMap (mxd)\2023 PRR\Figure 2_Site Layout Map.mxd



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Feet

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Approximate OU-1 Boundary

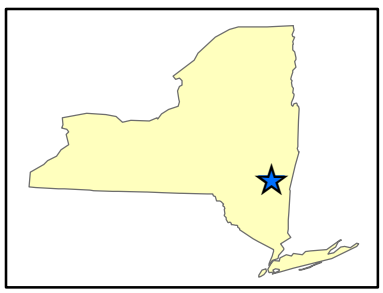
Figure 2
Site Layout Map
Three Star Anodizing Site (NYSDEC Site 314058)
Wappinger Falls, NY

Map Date: 10/11/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation



\\syracusefp\Syracuse\GISdata\StateandLocal\ThreeStar\PROJECTS\ArcMap (mxd)\2023 PRR\Figure 3_SSDS & Air Sampling.mxd



Legend

- Vacuum Monitoring Points
- SSDS Extraction Points
- Outdoor Air Sample
- Indoor Air Sample
- Approximate Site Boundary

0 200
Feet

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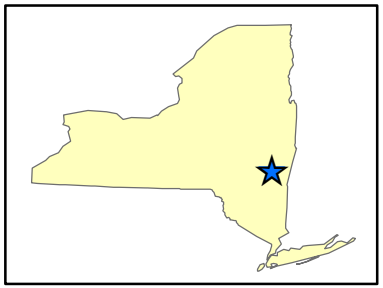
Figure 3
SSD System Monitoring Points
with Air Sampling Locations
Three Star Anodizing Site (NYSDEC Site 314058)
Wappinger Falls, NY

Map Date: 10/16/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

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Feet

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Legend

- Monitoring Wells Not Sampled
- Monitoring Wells Sampled
- Approximate Site Boundary
- Approximate Asphalt Cover
- Approximate Concrete and Stone Cover
- Approximate Soil Cover

Figure 4
Approximate Cover Areas
Three Star Anodizing Site (NYSDEC Site 314058)
Wappinger Falls, NY

Map Date: 10/11/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

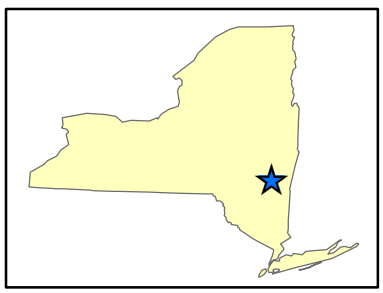
NEW YORK STATE Department of Environmental Conservation

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\\syracusefp\Syracuse\GISdata\StateandLocal\ThreeStar\PROJECTS\ArcMap (mxd)\2023 PRR\Figure 4_Monitoring Wells.mxd



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Feet

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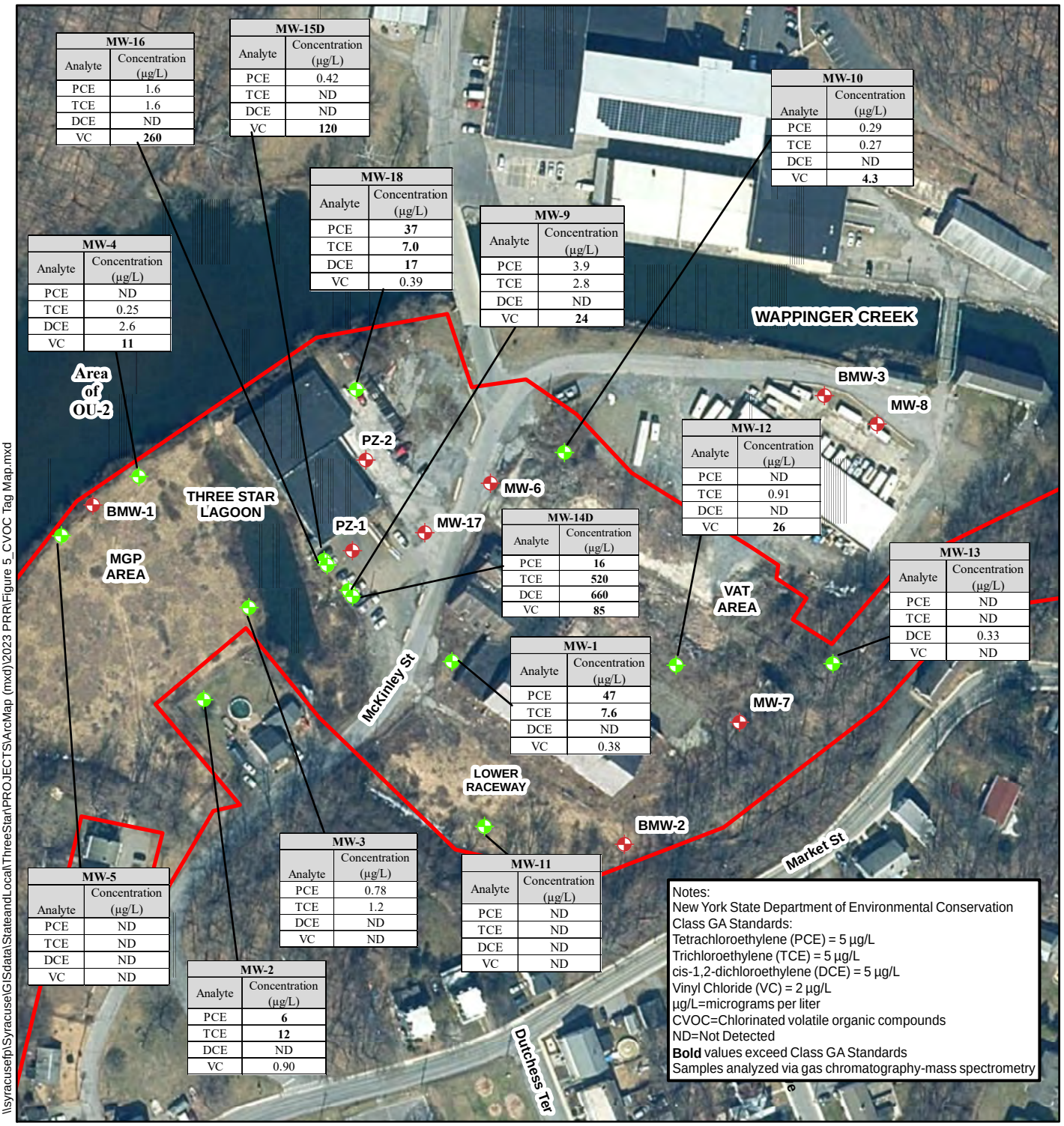
Legend

- Monitoring Wells Not Sampled
- Monitoring Wells Sampled
- Approximate Site Boundary

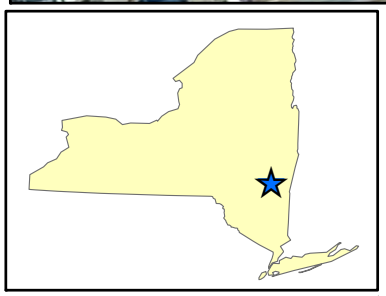
Figure **5**
Monitoring Point Locations
Three Star Anodizing Site (NYSDEC Site 314058)
Wappinger Falls, NY

Map Date: 10/11/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

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\\syracusefp\Syracuse\GISdata\StateandLocal\ThreeStar\PROJECTS\ArcMap (mxd)\2023 PRR\Figure 5_CVOC Tag Map.mxd



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Feet
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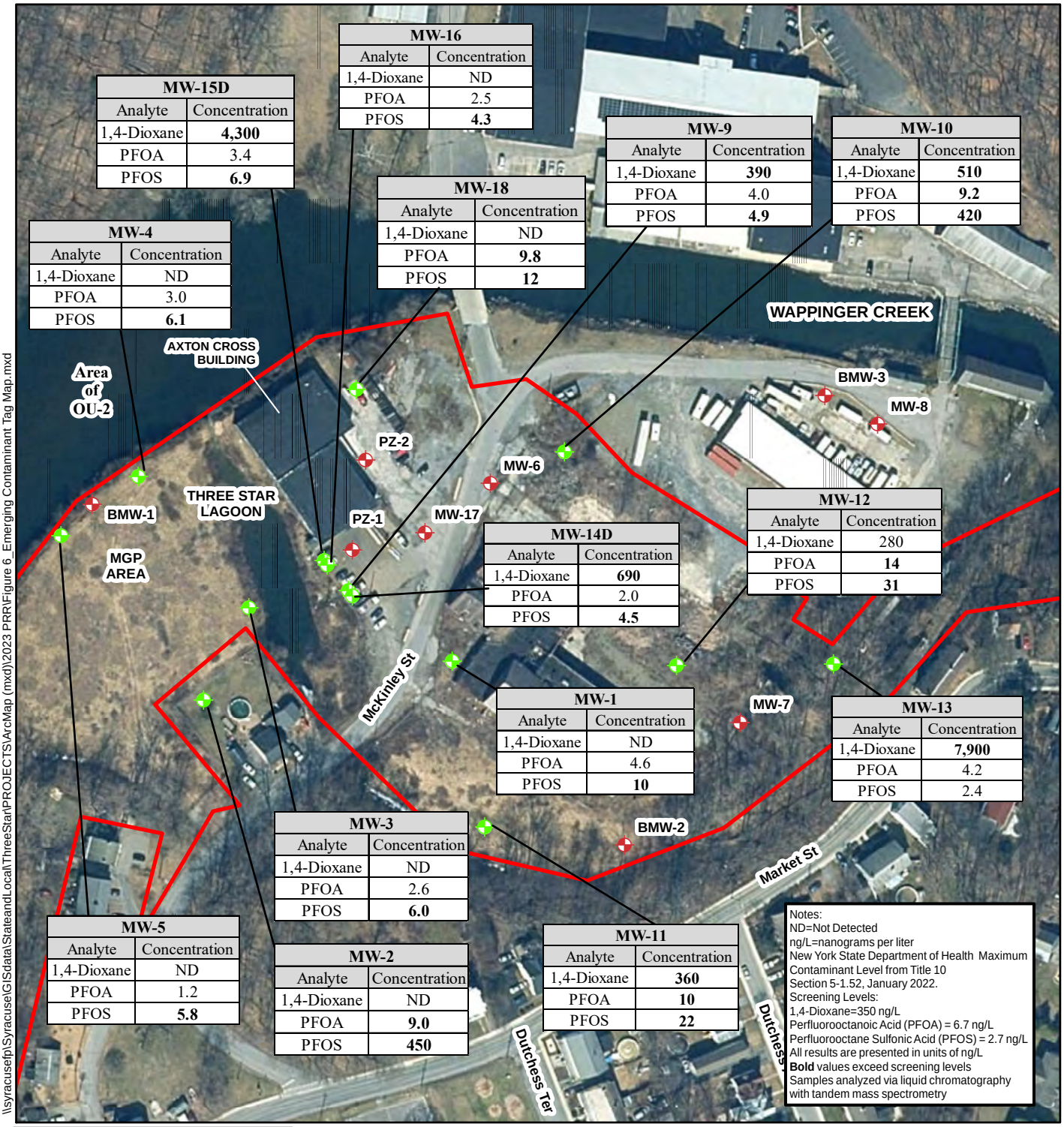
Legend

- Monitoring Wells Not Sampled
- Monitoring Wells Sampled
- Approximate Site Boundary

Figure 6
CVOCs in Groundwater
August 2023
Three Star Anodizing Site (NYSDEC Site 314058)
Wappinger Falls, NY

Map Date: 10/11/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

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\\syracusefp\Syracuse\GIS\data\StateandLocal\ThreeStar\PROJECTS\ArcMap (mxd)\2023 PRR\Figure 6_Emerging Contaminant Tag Map.mxd



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Feet
N

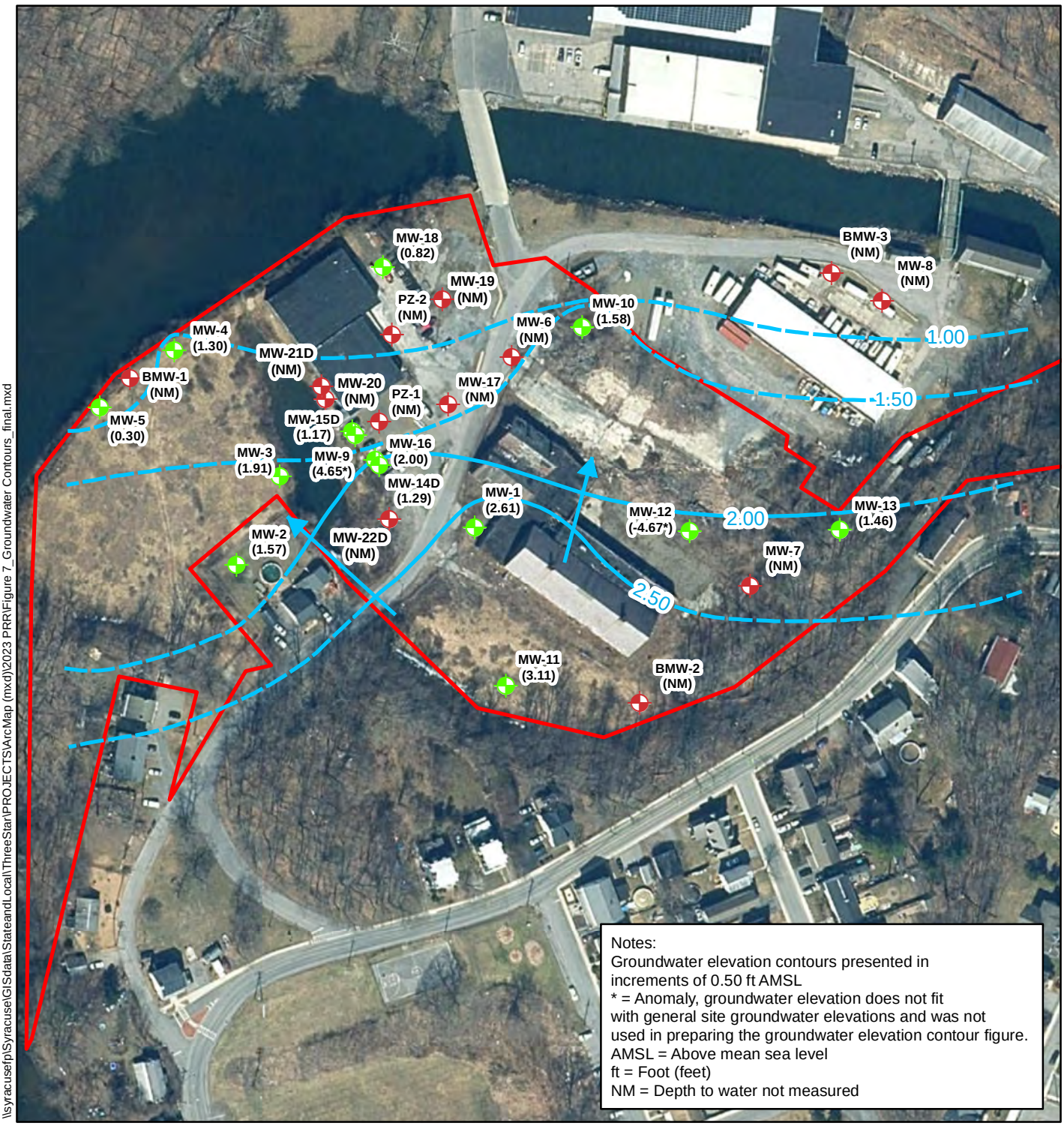
Legend

- Monitoring Wells Not Sampled
- Monitoring Wells Sampled
- Approximate Site Boundary

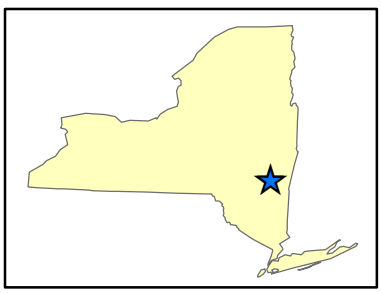
Figure 7
Emerging Contaminants in Groundwater
August 2023
Three Star Anodizing Site (NYSDEC Site 314058)
Wappinger Falls, NY

Map Date: 10/11/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

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Notes:
Groundwater elevation contours presented in increments of 0.50 ft AMSL
* = Anomaly, groundwater elevation does not fit with general site groundwater elevations and was not used in preparing the groundwater elevation contour figure.
AMSL = Above mean sea level
ft = Foot (feet)
NM = Depth to water not measured



0 200
Feet
N

Legend

- Monitoring Wells Sampled
- Monitoring Wells Not Gauged or Sampled
- Approximate Site Boundary
- Inferred Groundwater Elevation Contour
- Groundwater Elevation Contour
- Groundwater Flow Direction

Figure 8
Groundwater Elevation Contours - August 2023
Three Star Anodizing Site (NYSDEC Site 314058)
Wappinger Falls, NY

Map Date: 10/16/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

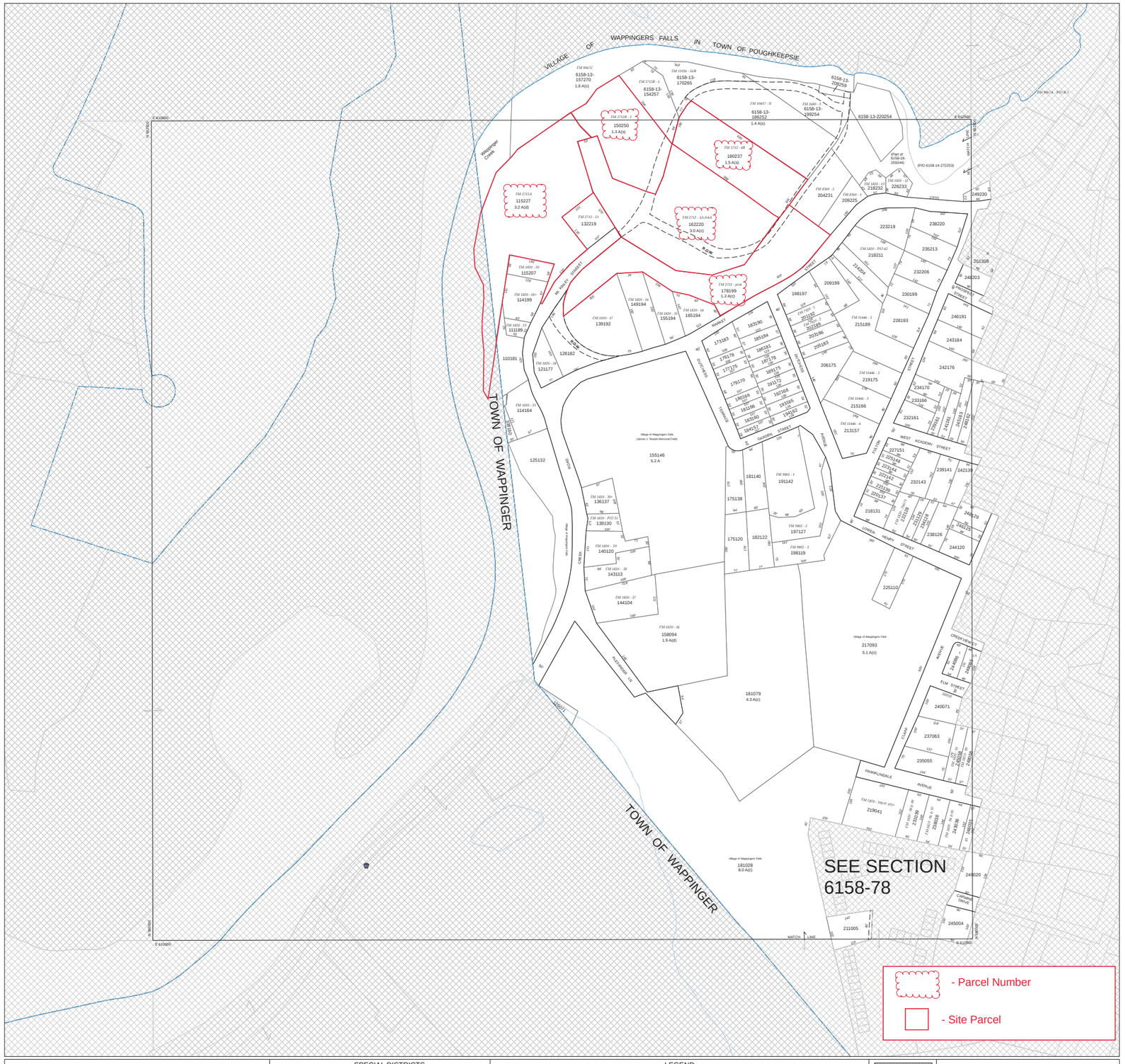
NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation | EA

\\syracusefp\Syracuse\GISdata\StateandLocal\ThreeStar\PROJECTS\ArcMap (mxd)\2023 PRR\Figure 7_Groundwater Contours_final.mxd

Appendix A

Real Property Map – Village of Wappinger Falls

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VILLAGE OF WAPPINGERS FALLS IN TOWN OF POUGHKEEPSIE
TOWN OF WAPPINGER
TOWN OF WAPPINGER
SEE SECTION 6158-78
6158-13-157270 1.6 A(c)
6158-13-154257
6158-13-170265
6158-13-206259
6158-13-220254
6158-13-186252 1.4 A(s)
6158-13-199254
150250 1.3 A(s)
180237 1.5 A(s)
115227 3.2 A(s)
132219
162220 3.0 A(c)
178199 1.2 A(c)
204231
209225
218232
226233
249230
251208
246203
223219
238220
235213
218211
232206
230199
228193
215189
246191
243184
242176
234170
233166
232161
215166
213157
206175
209199
198197
227151
239141
242139
232143
218131
238126
244120
225110
240071
237063
235055
219041
249020
245004
211005
217093 5.1 A(c)
181079 4.3 A(d)
181028 8.0 A(c)
158094 1.9 A(d)
155146 5.2 A
155194
165194
149194
139192
126182
121177
114199
115207
111189
114164
110181
125132
136137
138120
140120
143113
144104
175138
181140
191142
197127
198119
182122
175120
173383
193190
185184
193183
185178
193176
177175
193172
179170
193168
193166
193165
182186
193162
183160
193158
184157
194152
Village of Wappingers Falls (James J. Temple Memorial Field)
Village of Wappingers Falls
Village of Wappingers Falls
Village of Wappingers Falls
FM 9067C
FM 10926 - 16/8
FM 10457 - 32
FM 2732A
FM 2732 - 23
FM 2732 - 14.4/4.6
FM 2732 - pt/e4
FM 2732B - 1
FM 2732B - 2
FM 2732 - 48
FM 1820 - 20
FM 1820 - 18
FM 1820 - 16
FM 1820 - 17
FM 1820 - 19
FM 1820 - 34
FM 1820 - 35
FM 1820 - 34
FM 1820 - 37
FM 1820 - 33
FM 1820 - 30
FM 1820 - P/O 33
FM 1820 - 29
FM 1820 - 38
FM 1820 - 27
FM 1820 - 26
FM 1820 - P/O 42
FM 1820 - 7/8/9 - 97/1
FM 1820 - 7/8/9 - 96
FM 1820 - 7/8/9 - 97
FM 1820 - 7/8/9 - 98
FM 1820 - 7/8/9 - 99
FM 1820 - 7/8/9 - 100
FM 1820 - 7/8/9 - 101
FM 1820 - 7/8/9 -

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Appendix B

Institutional Controls/Engineering Controls Certification

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Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 314058

Site Name Three Star Anodizing

Site Address: Market Street Zip Code: 12590
City/Town: Wappingers Falls
County: Dutchess
Site Acreage: 8.500

Reporting Period: September 27, 2023 to September 27, 2024

	YES	NO
1. Is the information above correct?	X	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	X	☐
7. Are all ICs in place and functioning as designed?	X	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. 314058 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
	Wappinger Falls Estuary	Ground Water Use Restriction Landuse Restriction
		Ground Water Use Restriction Landuse Restriction
		Ground Water Use Restriction Landuse Restriction
		Ground Water Use Restriction Landuse Restriction
		Soil Management Plan Monitoring Plan Site Management Plan
		Soil Management Plan Monitoring Plan Site Management Plan
		Soil Management Plan Monitoring Plan Site Management Plan
		Ground Water Use Restriction Soil Management Plan Landuse Restriction Monitoring Plan Site Management Plan

A series of ICs are required to implement, maintain and monitor the ECs. The Environmental Notice (EN) requires compliance with the ICs.The EN for this site was recorded on 07/18/16 in Dutchess County under Miscellaneous Records as instrument #2016-122.

The EN ensures that:

- All ECs must be operated and maintained as specified in the Aug. 2018 SMP
- All ECs on the Site must be inspected and certified at a frequency and in a manner defined in the SMP
- Environmental monitoring must be performed as defined in the SMP
- Data and information pertinent to SM for the Controlled Property must be reported at the frequency and in a manner defined in the SMP
- On-site environmental monitoring devices, including but not limited to groundwater monitoring wells, must be protected and replaced as necessary to ensure continued functioning in the manner specified in the SMP.

In addition, the EN places the following restrictions on the property:

• Required compliance with the approved SMP. Restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by the New York State Department of Health (NYSDOH) and/or the NYSDEC
• The owner of the Property shall provide information to the NYSDEC to assist it in carrying out its obligation to provide a periodic certification, prepared and submitted by a professional engineer or environmental professional acceptable to the NYSDEC or Relevant Agency, which will certify that the IC/ECs put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired
• The owner of the Property shall continue in full force and effect any IC/ECs required for the Remedy and shall not, through any act or omission, interfere with the NYSDEC's maintenance and monitoring of such controls, unless the owner first obtains permission to discontinue such controls from the NYSDEC or Relevant Agency, in compliance with the approved SMP subject to modifications as approved by the NYSDEC or Relevant Agency
* There shall be no disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results or may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils. • Limit the use and development of the property to commercial or industrial uses.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
	Vapor Mitigation
	Cover System
	Fencing/Access Control
	Vapor Mitigation
	Cover System
	Fencing/Access Control
	Vapor Mitigation
	Cover System
	Fencing/Access Control
	Vapor Mitigation
	Cover System
	Fencing/Access Control
	Monitoring Wells
	Monitoring Wells
	Monitoring Wells
	Vapor Mitigation
	Cover System
	Fencing/Access Control
	Monitoring Wells

Because remaining contamination is present at this Site, ECs and ICs have been implemented to protect public health and the environment for the applicable future use. The Controlled Property has the following ECs:
• a cover system placed over remaining waste
* MGP Area: Six inches of topsoil, underlain by six inches of general fill, underlain by demarcation fabric
* MGP Buffer Area: Six of topsoil underlain by 18 inches of general fill, underlain by demarcation fabric.
* Lower Raceway: Six inches of topsoil underlain by 6-18 inches of general fill, underlain by demarcation fabric
* Vat Area: Six inches of NYSDOT Type 4 underlain by general fill and concrete slabs
* Axton Cross Building Parking Lot: Four inches of asphalt material underlain by a minimum of eight inches of subbase course material underlain by demarcation fabric.
• site access controls
• surface water drainage conveyance
• monitoring wells
* SSDS (Axton Cross bldg. only)

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 314058

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____
Signature of Owner, Remedial Party, or Designated Representative Date
Rendering Certification

EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Donald Conan at 333 W. Washington St., Syracuse, NY 13202,
print name print business address

am certifying as a Qualified Environmental Professional for the NYSDEC
(Owner or Remedial Party)



Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification | Stamp (Required for PE) | Date

Appendix C

Daily Field Reports

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NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Contract No.

DEC Insp. – N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Moriah Gilkey & Hannah Bedell

Site Location: Former Three Star Anodizing

Weather Conditions				
General Description	--	AM	Sunny	PM
Temperature	--	AM	78 F	PM
Wind	--	AM	3 mph N	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

N.A.

Summary of Work Performed	Arrived at site:	1515	Departed Site:	1545

(1515) M. Gilkey and H. Bedell (EA) onsite to check fence and Three Star Anodizing building. The fence was in good conditions with new new holes or entry ways. EA took photos of the interior of the Three Star Anodizing building for NYSDEC. (1545) M. Gilkey and H. Bedell (EA) secured gates and were offsite.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Moriah Gilkey	EA	Engineer	0.5
Hannah. Bedell	EA	Engineer	0.5

Equipment Description	Contractor/Vendor	Quantity	Used
Hand Tools	EA	NA	Y

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
None.						

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		**Yes**	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**

Site Representatives

Name	Representing
Moriah Gilkey	**EA**
Hannah Bedell	**EA**

Project Schedule Comments

Issues Pending
NA

Interaction with Public, Property Owners, Media, etc.

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)

Comments
None.

Site Inspector(s): M. Gilkey	**Date:** 05/10/23

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work. Yes ☐

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?	Yes ☒	No ☐
Comments:		

REMEDIAL ACTIVITIES AT PROPERTIES

1. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
2. Is anyone at this location isolated or quarantined for COVID-19?	Yes ☐	No ☒
3. Has anyone at this location had contact with anyone known to have COVID-19 in the past 14 days?	Yes ☐	No ☒
4. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
5. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
If Yes to any of 1-4 above: • If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry. • If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry.	Yes ☐	No ☒
Comments: None.		

On-Site Waste Storage

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: None.			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☐	N/A☒
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☐
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: None.			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Comments: None.			

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Site Location: Wappingers Falls, NY

Contract No.

DEC Insp. –N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Mike Miller, Alex Stoogenke

Weather Conditions

General Description	Sunny	AM	--	PM
Temperature	70 F	AM	--	PM
Wind	1-3 MPH	AM	--	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

None.

Summary of Work Performed	Arrived at site:	**0945**	Departed Site:	**1115**

(0945) M. Miller and A. Stoogenke (EA) arrive on site. (0950) EA inspected the SSDS which appeared to have no power. Attempts were made to reset circuits, but power remained off. M. Miller made calls to get in contact with CHGE. (1015) EA inspected the fences and found that one had been cut near the main building. (1022) EA made repairs with tie wire. (1030) EA inspects lagoon and finds there to be no active erosion and vegetation is holding up. (1035) CHGE confirmed that power was on and EA tried to reset circuits again. (1045) EA off-site to Home Depot to purchase pad lock. (1105) EA replaces lock on MGP area gate (Code= 4058). (1110) EA offsite.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Mike Miller	EA	Scientist	1.5
Alex Stoogenke	EA	Scientist	1.5

Equipment Description	Contractor/Vendor	Quantity	Used
Hand Tools	EA	NA	N
Padlock	EA	1	Y
Ford Escape	EA	1	Y

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No

Site Representatives

Name	Representing

Project Schedule Comments

Issues Pending

Interaction with Public, Property Owners, Media, etc.

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)	
	
Repairs made to fence around main building using wire ties.	Banks of lagoon with vegetation behind occupied building

	
End of fence around main building	Facing occupied building

	
Padlock put on MGP area gate	

Comments	
Site Inspector(s): Mike Miller, Alex Stoogenke	**Date: 06/19/2023**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments:		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments:			

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Contract No.

DEC Insp. –N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Alex Stoogenke

Site Location: Wappingers Falls, NY

Weather Conditions

General Description	Sunny	AM	--	PM
Temperature	65 F	AM	--	PM
Wind	1-2 MPH	AM	--	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

None.

Summary of Work Performed	Arrived at site:	**1100**	Departed Site:	**1130**

(1100) A. Stoogenke and C. Zook (EA) on site. (1105) EA inspected the loading docks on the west side of Three Star Anodizing building. (1110) EA walked the swale to determine if blocked or eroded from recent storm. (1115) EA checked the culvert between the swale and the lagoon; on the swale side there is sediment and detritus partially blocking the culvert. The culvert wasn't visible on the lagoon side and seems to be more obstructed than the swale side. (1120) EA walked from McKinley St. to Wappinger Creek along the lagoon and inspected for erosion and took note of the vegetation on banks and near entrance to Wappinger Creek. (1130) EA off site.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Alex Stoogenke	EA	Scientist	0.5
Clara Zook	EA	Intern	0.5

Equipment Description	Contractor/Vendor	Quantity	Used
Ford F-150	Enterprise	1	Yes

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No

Site Representatives

Name	Representing

Project Schedule Comments

Issues Pending

Interaction with Public, Property Owners, Media, etc.

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)	
	
Three Star Anodizing building loading dock	Three Star Anodizing building loading dock

	
Looking South-West out from the loading dock.	Swale- side of culvert which is blocked

	
Supposed location of lagoon side of culvert which wasn't visible and is blocked.	Looking South across the lagoon- evidence of flooding from past storm.

	
Looking North at the intersection of the lagoon and Wappinger Creek.	Looking South at the intersection of the lagoon and Wappinger Creek- flood marks vegetation are ~1 ft over current stream level.

Comments

Site Inspector(s): Alex Stoogenke	**Date: 07/11/2023**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments:		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments:			

* BART – Best Available Retrofit Technology

Report No. **(Three Star Anodizing) - NYSDEC Site No. 314058** Date: 02-08-2023

NYSDEC
Division of Environmental Remediation

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYSDEC Contract No.

Superintendent:

NYSDEC PM: Evelyn Hussey

Consultant PM: Mike Miller

Consultant Site Inspectors: Moriah Gilkey, Hannah Bedell

Site Location: Wappingers Falls, NY

Weather Conditions

General Description	Sunny	AM	NA	PM
Temperature	40	AM	NA	PM
Wind	NE	AM	NA	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No X	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No X	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No X	NA

Health & Safety Comments

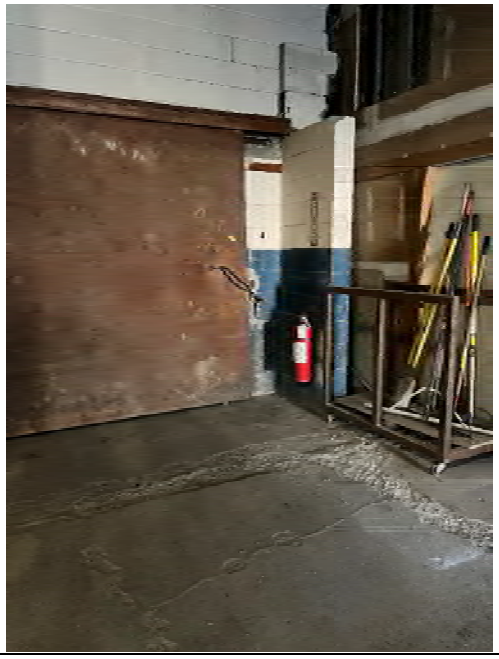
None

Summary of Work Performed	Arrived at site:	1345	Departed Site:	1415

(1345) M. Gilkey and H. Bedell arrive at Three Star Anodizing Site. (1355) M. Gilkey troubleshoot SSDS and turn it back on. (1405) M. Gilkey and H. Bedell complete walking the fence to make sure it is secure. (1410) Ensured SSDS was still running (1415) M. Gilkey and H. Bedell offsite.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
Moriah Gilkey	**EA**	**Yes**	**No X**
Hannah Bedell	**EA**	**Yes**	**No X**

Site Photographs (Descriptions Below)	
	
System panel after restart	Secured entrance after restart
	
Blower 2 after restart	Blower 1 after restart

	
Fenced area, no repairs needed	Fenced area, repairs needed
	
Fenced area, with drum located outside	Fenced area, no repairs needed

	
ThreeStar Building	
Comments	
None	
Site Inspector(s): Moriah Gilkey	**Date: 2/8/2023**

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?	Yes ☐	No ☒
Comments:		

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☒	N/A☐
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☒	N/A☐
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☒	N/A☐
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is the site supplied with green power and is it properly installed and/or maintained?	Yes ☐	No ☐	N/A☒
Is the site employing 2007 or newer or retrofitted diesel trucks?	Yes ☐	No ☒	N/A☐
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is equipment properly maintained and operated by trained personnel?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points?	AM ☐	PM ☐	N/A☒
Are products and materials appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Are appropriate metrics documented for inclusion on Form A, Summary of Green Remediation Metrics, by the CONTRACTOR?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒

Report No. **(Three Star Anodizing) - NYSDEC Site No. 314058** Date: 02-08-2023

Comments:

Report No. **(Three Star Anodizing) - NYSDEC Site No. 314058** Date: 11-2-2022

NYSDEC
Division of Environmental Remediation

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

NYSDEC Contract No.

Superintendent:

NYSDEC PM: Evelyn Hussey

Consultant PM: Mike Miller

Consultant Site Inspectors: Noah Robinson/Liane DeSantis, Donald Howe

Site Location: Wappingers Falls, NY

Weather Conditions				
General Description	Sunny	AM	NA	PM
Temperature	54	AM	NA	PM
Wind	5/NE	AM	NA	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No X	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No X	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No X	NA

Health & Safety Comments

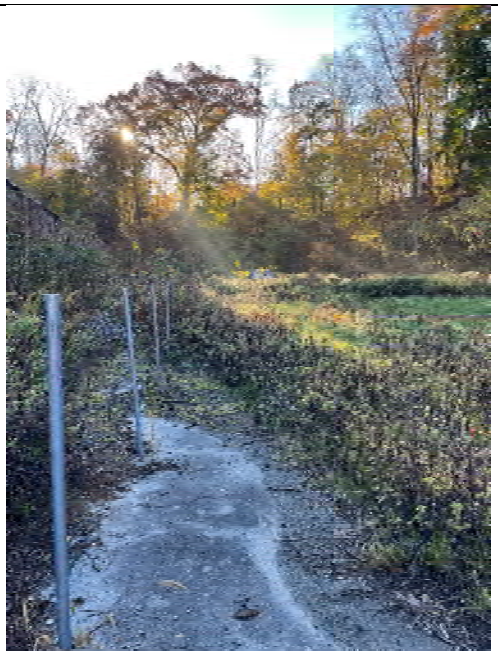
None

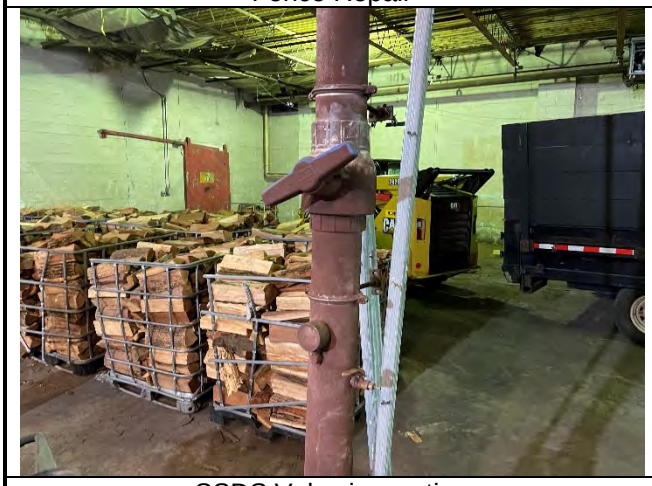
Summary of Work Performed	Arrived at site:	0645	Departed Site:	1200

(0645) N. Robinson and M. Wright arrive at Three Star Anodizing Site, specifically 28 McKinley St, Wappinger Falls, New York. EA began performing brush clearing at site with skid steer and weed whackers. (1100) EA complete brush clearing, fence repair and take pictures. Complete inspection of SSDS ball valve repair – ball valve not replaced; temporary repair remains intact. (1120) Begin cleaning skid steer and clean up. (1200) EA offsite.

Visitors to Site

Name	**Representing**	**Entered Exclusion/CRZ Zone**	
Noah Robinson	**EA**	**Yes**	**No X**
Mike Wright	**EA**	**Yes**	**No X**

Site Photographs (Descriptions Below)	
	
MGP Area	MGP Area
	
28 McKinley Property	28 McKinley Property

	
Gap in fencing	Fence Repair
	
Fence Repair	Fence damage from trailers
	
SSDS Valve inspection	SSDS Valve inspection

Comments	
Site map presenting fence repairs and gaps attached.	
Site Inspector(s): Noah Robinson	**Date: 11/2/22**

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?	Yes ☐	No ☒
Comments:		

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☒	N/A☐
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☒	N/A☐
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☒	N/A☐
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒

Comments:

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is the site supplied with green power and is it properly installed and/or maintained?	Yes ☐	No ☐	N/A☒
Is the site employing 2007 or newer or retrofitted diesel trucks?	Yes ☐	No ☒	N/A☐
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is equipment properly maintained and operated by trained personnel?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points?	AM ☐	PM ☐	N/A☒
Are products and materials appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Are appropriate metrics documented for inclusion on Form A, Summary of Green Remediation Metrics, by the CONTRACTOR?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Comments:			

Report No. **(Three Star Anodizing) - NYSDEC Site No. 314058** Date: 11-15-2022

NYSDEC Division of Environmental Remediation	**NYSDEC Contract No.** Superintendent: NYSDEC PM: Evelyn Hussey Consultant PM: Mike Miller Consultant Site Inspectors: Noah Robinson/Liane DeSantis, Donald Howe

Site Location: Wappingers Falls, NY

Weather Conditions

General Description	Sunny	AM	NA	PM
Temperature	37	AM	NA	PM
Wind	NE	AM	NA	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No X	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No X	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No X	NA

Health & Safety Comments

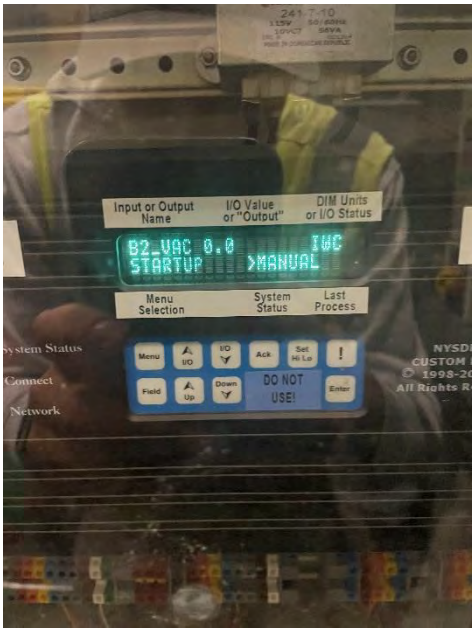
None

Summary of Work Performed	Arrived at site:	1045	Departed Site:	1145

(1045) N. Robinson arrive at Three Star Anodizing Site. (1057) N. Robinson troubleshoot SSDS system and turn it back on. (1115) N. Robinson complete walking the fence to make sure it is secure. (1130) N. Robinson measure area behind Axton Cross building for engineering specs. (1145) N. Robinson offsite.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
Noah Robinson	**EA**	**Yes**	**No X**

Site Photographs (Descriptions Below)	
	
System panel before restart	Control panel before restart
	
Blower 1 before restart	Blower 2 before restart

	
System panel after restart	Blower 1 after restart
	
Blower 2 after restart	Control panel after restart

	
Fenced area, no repairs needed	Fenced area, no repairs needed
	
Fenced area, no repairs needed	Fenced area, repair needed
	
Area of interest near building errosion	Area of interest near building errosion



Building errosion



Corner of building



SSDS outlet



Lagoon and creek area

Comments

None

Site Inspector(s): Noah Robinson	**Date: 11/15/22**

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed	Yes ☐	No ☒

with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?		
Comments:		

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☒	N/A☐
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☒	N/A☐
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☒	N/A☐
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☒	N/A☐
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is the site supplied with green power and is it properly installed and/or maintained?	Yes ☐	No ☐	N/A☒
Is the site employing 2007 or newer or retrofitted diesel trucks?	Yes ☐	No ☒	N/A☐
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is equipment properly maintained and operated by trained personnel?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points?	AM ☐	PM ☐	N/A☒
Are products and materials appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒

Are resiliency features included in the design or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Are appropriate metrics documented for inclusion on Form A, Summary of Green Remediation Metrics, by the CONTRACTOR?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Comments:			

NYSDEC
Division of Environmental Remediation

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Contract No.

DEC Insp. – N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Haley Young & Lincoln Backman-Lowe

Site Location: Former Three Star Anodizing

Weather Conditions

General Description	--	AM	Sunny	PM
Temperature	--	AM	44 F	PM
Wind	--	AM	10 mph N	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

Safety Topic: Vehicles, slips, trips & falls.

Summary of Work Performed	Arrived at site:	1310	Departed Site:	1530

(1310) EA [L. Backman-Lowe & H. Young] onsite. (1315) Meet with property landlord & tenant [fire wood processing facility] for brief tour of premises and discussion of SOW for sampling effort; no key for entrance into side door [SSD system access]. (1330) Landlord offsite to get key for SSD system access. (1339) Set up and begin collection at OA-1 location. (1344) Set up and begin collection at IA-5 location. (1347) Set up and begin collection at IA-1 location. (1349) Set up and begin collection at IA-4 location. (1355) Landlord onsite with key(s). (1400) Visual inspection of SSDS system to confirm that it is running. (1414) Set and begin collection at IA-2 with field duplicate [FD-1]. (1430) Opened valves from influent 4" PVC pipes, visual inspection of premises and inventory logging. (1445) PID reading taken from effluent [0.0 ppm], pictures taken of outside electricity meters. (1500) Drum moved from next to fence to inside fence perimeter, visual inspection of fence perimeter with photos taken of holes/damage (from fence inside the outer fence boundary). (1530) EA personnel offsite.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Lincoln Backman-Lowe	EA	Scientist	1.5
Haley Young	EA	Scientist	1.5

Equipment Description	Contractor/Vendor	Quantity	Used
Horiba U-52	Pine Environmental	1	No
Peristaltic Pump	Pine Environmental	1	No
Water Level Meter	Pine Environmental	1	No
Mini Rae 3000	Pine Environmental	1	Yes
SUMMA Cannister	Pace	6	Yes

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
None.						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		**Yes**	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**

Site Representatives

Name	Representing
Lincoln Backman-Lowe	**EA**
Haley Young	**EA**

Project Schedule Comments

Issues Pending
Could not locate electric meter associated with SSD system, will look inside building tomorrow.

Interaction with Public, Property Owners, Media, etc.
None.

Include (insert) figures with markups showing location of work and job progress

Attached in separate file

Site Photographs (Descriptions Below)

Attached in separate file

Comments
None.

Site Inspector(s): Lincoln Backman-Lowe, Haley Young	**Date:** 03/07/2023

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work. Yes ☐

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?	Yes ☒	No ☐
Comments:		

REMEDIAL ACTIVITIES AT PROPERTIES

1. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
2. Is anyone at this location isolated or quarantined for COVID-19?	Yes ☐	No ☒
3. Has anyone at this locaton had contact with anyone known to have COVID-19 in the past 14 days?	Yes ☐	No ☒
4. Does anyone at this locaton have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
5. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
If Yes to any of 1-4 above: • If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry. • If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry.	Yes ☐	No ☒
Comments: None.		

On-Site Waste Storage

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: None.			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☐	N/A☒
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☐
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒

Comments:
None.

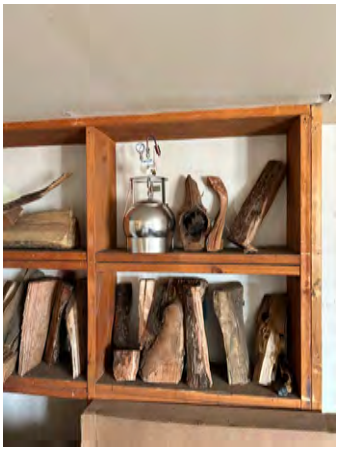
RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Comments: None.			

* BART – Best Available Retrofit Technology

Photographic Record

Former Three Star Anodizing
Wappingers Falls, NY
March 2023



Indoor air sample IA-5 location



4" PVC influent pipe, valve turned to 'ON' postion



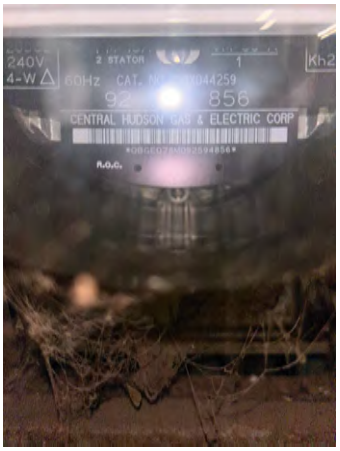
One of 5 electric meters on the exterior of building



Hole in fence, located within outer fence perimeter, does not present problem for potential trespassing



Indoor electric meter, associated with SSD system



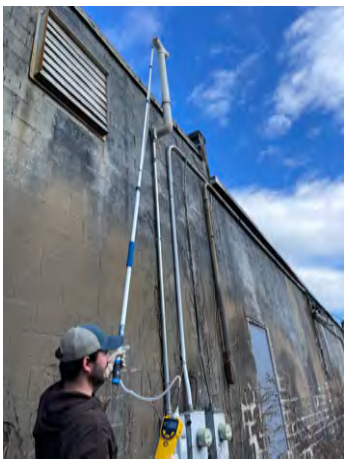
Close-up image of indoor electric meter, associated with SSD system

Photographic Record

Former Three Star Anodizing
Wappingers Falls, NY
March 2023



Extension cord, hanging from 4" PVC that runs to/ from SSD system



PID measurement taken from outside effluent discharge location, using telescoping pole and LDPE tubing connected to MiniRAE 3000

NYSDEC
Division of Environmental Remediation

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Contract No.

DEC Insp. – N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Haley Young & Lincoln Backman-Lowe

Site Location: Former Three Star Anodizing

Weather Conditions				
General Description	Partly cloudy	AM	--	PM
Temperature	36 F	AM	--	PM
Wind	4 mph N	AM	--	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

Safety Topic: Vehicles, slips, trips & falls.

Summary of Work Performed	Arrived at site:	0930	Departed Site:	1100

(0930) EA [L. Backman-Lowe & H. Young] onsite. (0935) Stop collection for OA-1 sample. (0937) Stop collection for IA-4 sample. (0938) Stop collection for IA-1. (0939) Stop collection for IA-5. (0942) Pack SUMMA cannisters and flow controllers into boxes while waiting for site landlord to arrive with keys. (0955) Site landlord onsite to allow access to SSD system. (0958) EA locates and captures photos of SSD system electric meter, inspects inside of SSD system shed to see if there is an effluent tap for measuring with PID. (1005) Stop collection for IA-2. (1006) Stop collection for FD-1. (1012) Site landlord offsite, EA packs all equipment and sample cannisters and prepares chain of custody. (1045) PID reading taken from outside effluent [0.0 ppm]. (1100) EA personnel offsite.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Lincoln Backman-Lowe	EA	Scientist	1.5
Haley Young	EA	Scientist	1.5

Equipment Description	Contractor/Vendor	Quantity	Used
Horiba U-52	Pine Environmental	1	No
Peristaltic Pump	Pine Environmental	1	No
Water Level Meter	Pine Environmental	1	No
Mini Rae 3000	Pine Environmental	1	Yes
SUMMA Cannister	Pace	6	Yes

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
None.						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		**Yes**	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**

Site Representatives

Name	Representing
Lincoln Backman-Lowe	**EA**
Haley Young	**EA**

Project Schedule Comments

Issues Pending
None.

Interaction with Public, Property Owners, Media, etc.
None.

Include (insert) figures with markups showing location of work and job progress

See 07 March 2023 Daily Inspection Report

Site Photographs (Descriptions Below)

See 07 March 2023 Daily Inspection Report

Comments	
None.	
Site Inspector(s): Lincoln Backman-Lowe, Haley Young	**Date:** 03/08/2023

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work. Yes ☐

DAILY HEALTH CHECKLIST

Is social distancing being practiced?	Yes ☒	No ☐
Is the tail gate safety meeting held outdoors?	Yes ☒	No ☐
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☒	No ☐
Were personal protective gloves, masks, and eye protection being used?	Yes ☒	No ☐
Are sanitizing wipes, wash stations or spray available?	Yes ☒	No ☐
Have any workers/visitors been excluded based on close contact with individuals diagnosed with COVID-19, have recently traveled to restricted areas or countries, or are symptomatic (fever, chills, cough/shortness of breath)?	Yes ☒	No ☐
Comments:		

REMEDIAL ACTIVITIES AT PROPERTIES

1. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
2. Is anyone at this location isolated or quarantined for COVID-19?	Yes ☐	No ☒
3. Has anyone at this locaton had contact with anyone known to have COVID-19 in the past 14 days?	Yes ☐	No ☒
4. Does anyone at this locaton have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
5. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
If Yes to any of 1-4 above: • If it is not critical that service/entry be carried out immediately and can be postponed until the risk of COVID-19 is lower, or can be accomplished remotely/without entry, postpone or conduct service without entry. • If it is critical that service/entry be carried out immediately, advise occupants that as a precaution and for our own protection, project personnel will be donning appropriate PPE* (including respiratory protection) - and do so prior to entry.	Yes ☐	No ☒
Comments: None.		

On-Site Waste Storage

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments: None.			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☐	N/A☒
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒
Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☐
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒

Comments:
None.

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Comments: None.			

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Site Location: Wappingers Falls, NY

Contract No.

DEC Insp. –N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Alex Stoogenke

Weather Conditions

General Description	--	AM	Sunny	PM
Temperature	--	AM	84 F	PM
Wind	--	AM	1-2 mph NW	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

Electrical hazard topics such as live wires, step potential, and arc flash were discussed as well as how to prevent grounding oneself. All work was performed with the switch box in the "OFF" position.

Summary of Work Performed	Arrived at site:	**1213**	Departed Site:	**1300**

(1213) A. Stoogenke and J. Gill (EA) on site. EA conducts a tailgate safety meeting. (1215) EA mob to the SSDS electrical meter on the southwest side of the Axton Cross building. EA turns the 3-phase safety switch box to the "OFF" position. EA uses multimeter to confirm fuses are function (confirmed). EA then measures voltage on all 3 upstream phases- Identifies that switch is not receiving power from meter, issue may be with Central Hudson Gas and Electric. (1230) EA calls Mike Miller to discuss implications of findings. (1238) EA inspects wires between building and service pole (Central Hudson Gas and Electric maintained), observed to be in poor shape. (1300) EA off site.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Alex Stoogenke	EA	Scientist	0.75
Jack Gill	EA	Intern	0.75

Equipment Description	Contractor/Vendor	Quantity	Used
2020 Ford Explorer	EA	1	Yes
Commercial Electric Multimeter (MMA-8301R)	EA	1	Yes

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
None.						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No

Site Representatives

Name	Representing

Project Schedule Comments

Issues Pending

Interaction with Public, Property Owners, Media, etc.

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)



Meter and 3-phase safety switch

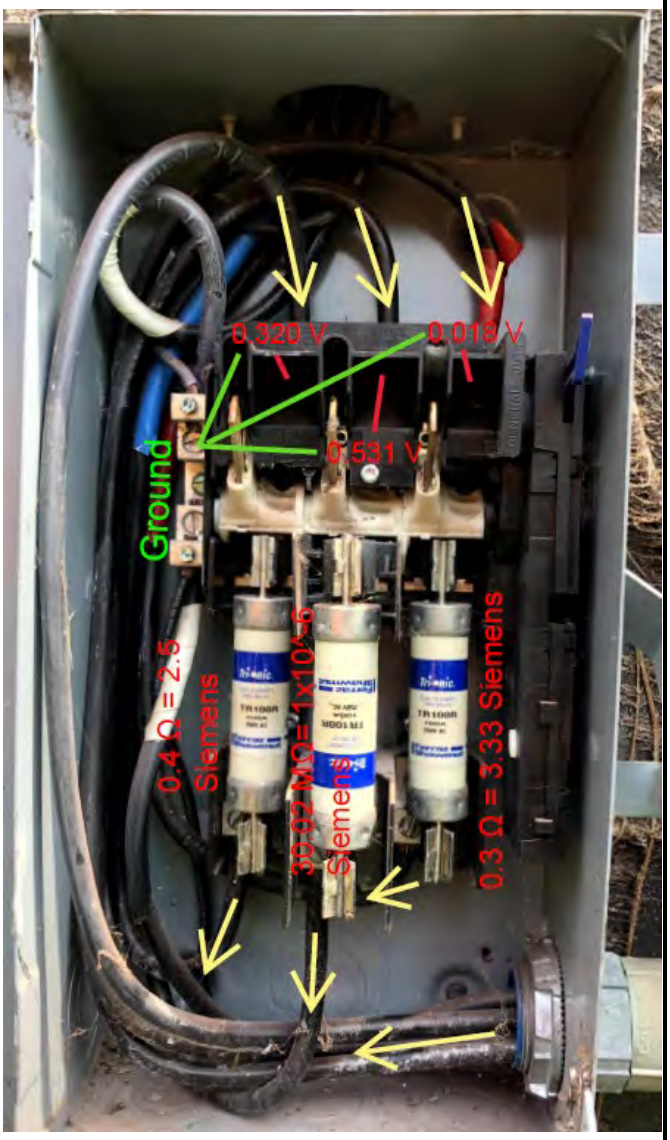


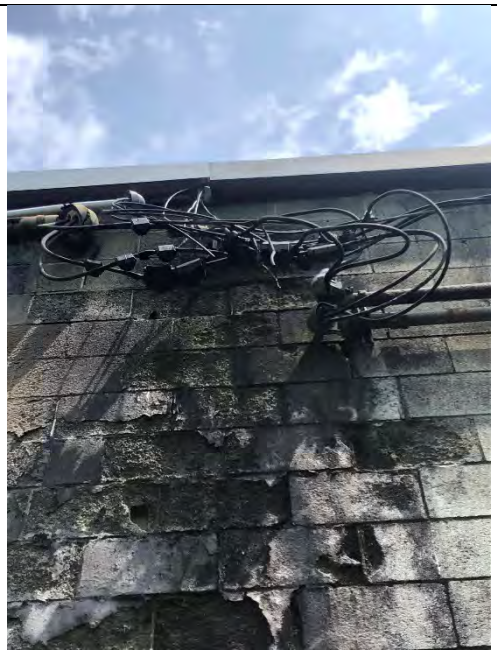
Diagram of safety switch: Yellow arrows=direction of e- flow. Green line= multimeter contact with ground. Red line= multimeter contact with phase. *Resistance measurements of the fuses are converted to conductance using (1/Ω = Siemens).

	
Close up of downstream fuse contacts.	Fuse 1 resistance reading.

	
Fuse 2 resistance reading	Fuse 3 resistance reading


Commercial Electric
AUTO
AC
0.320
V
ORANGE


Commercial Electric

Phase 1 to Ground AC voltage reading	Phase 2 to Ground AC voltage reading
	
Phase 3 to Ground AC voltage reading	Wiring upstream of electrical meter
Comments	
Site Inspector(s): Alex Stoogenke	**Date: 07/27/2023**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments:		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments:			

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Contract No.

DEC Insp. –N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Moriah Gilkey

Site Location: Wappingers Falls, NY

Weather Conditions

General Description	Sun	AM	Sun	PM
Temperature	74 F	AM	88 F	PM
Wind	3 mph WSW	AM	3 mph WSW	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

Uneven ground, tall brush, ticks

Summary of Work Performed	Arrived at site:	**1000**	Departed Site:	**1630**

(1000) M. Gilkey, H. Bedell, L. Casey, and C. Zook (EA) on site. EA conducts a tailgate safety meeting. (1005) EA calibrates Horibas and PIDs. (1112) EA begins purging wells. Due to PFAS sampling, a site wide gauging event will take place at the end of the sampling event when the wells have recharged. See below table for well purging and sampling details. All samples were analyzed for VOCs, Pesticides, TAL Metals (excl. Hg), PFAS, and 1,4-Dioxane. (1300) EA tried to locate MW-14D but was unable to locate it. EA believed that was under a scrap metal pile. (1530) Interacted with individual asking about county access to the site building . Gave the person NYSDEC PMs name and EA PMs name and number. (1542) MW-9R needed to be sampled for Filtered Tal 23 Metals along with unfiltered Tal 23 Metals due to high turbidity readings during sampling. (1630) M. Gilkey, H. Bedell, L. Casey, and C. Zook (EA) off site to ship samples.

Well ID	Date Purged	Purge Time	Sample Time	QA/QC
MW-5	08/14/2023	1113	1154	
MW-15D	08/14/2023	1134	1210	MS/MSD
MW-16	08/14/2023	1130	1215	FD-01
MW-4	08/14/2023	1225	1301	
MW-9R	08/14/2023	1302	1542	
MW-3	08/14/2023	1343	1415	
MW-11	08/14/2023	1509	1548	

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Moriah Gilkey	EA	Engineer	6.5
Hannah Bedell	EA	Engineer	6.5
Liam Casey	EA	Intern	6.5
Clara Zook	EA	Intern	6.5

Equipment Description	Contractor/Vendor	Quantity	Used
2020 Ford Explorer	EA	1	Yes
2019 Crew Cab	EA	1	Yes
2019 Ford F-150	EA	1	Yes
Horiba U-52	Pine Environmental	3	YES
Peristaltic Pump	Pine Environmental	3	Yes
ppbRAE 3000	Pine Environmental	3	Yes
Hand Tools	EA	-	Yes
Hedge trimmers	EA	1	Yes
Solnist Water Level Meters	Pine Environmental	3	Yes

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
None.						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No
		Yes	No

Site Representatives

Name	Representing
Moriah Gilkey	EA

Project Schedule Comments

Plan for following day: continue sampling, look for MW-14D again, clear path to MW-10

Issues Pending

Interaction with Public, Property Owners, Media, etc.

One man stopped and asked about the building condition. Said he was looking to buy the building at auction. EA answered his questions to the best of their ability.

One woman stopped asking about county access to the locked portion of the site. EA directed them to NYSDEC PM and gave EA PM information to her. EA answered her other questions to the best of their ability.

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)



MW-16 located



MW-15D located



Scrap metal and wood debris where MW-14D should be located



MW-9R located in debris

Comments

Site Inspector(s): Moriah Gilkey

Date: 08/14/2023

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments:		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments:			

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Contract No.

DEC Insp. –N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Moriah Gilkey

Site Location: Wappingers Falls, NY

Weather Conditions

General Description	Rain	AM	Rain	PM
Temperature	68 F	AM	78 F	PM
Wind	3 mph WSW	AM	3 mph WSW	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

Uneven ground, tall brush/buckthorn, ticks, large amounts of poison ivy

Summary of Work Performed	Arrived at site:	**0800**	Departed Site:	**1600**

(0800) M. Gilkey and L. Casey (EA) on site. EA conducts a tailgate safety meeting. (1005) EA calibrates Horibas and PIDs. (0830) EA locates MW-10. Metal debris and trash had been disposed of around the wells. EA cleared vines and poison ivy from around the access point and around debris. EA removed most of the trash/debris. EA was able to access well. (0845) EA tried to access MW-12 from the same route as the last sampling event. Buck thorn trees had grown significantly in this area. EA tried to remove them but was unsuccessful in creating a safe path. EA brush cleared a path around the building to access the well from the back side of the property. (0904) EA begins purging wells. Due to PFAS sampling, a site wide gauging event will take place at the end of the sampling event when the wells have recharged. See below table for well purging and sampling details. All samples were analyzed for VOCs, Pesticides, TAL Metals (excl. Hg), PFAS, and 1,4-Dioxane. (1100) EA spoke with property owners to access MW-2 in their backyard. (1230) H. Bedell and C. Zook (EA) onsite. (1255) Cleared path to MW-1. (1405) Moved metal debris and wood from location that MW-14D was suspected to be. EA removed muck/mud from surrounding locations and located MW-14D. (1600) M. Gilkey, H. Bedell, L. Casey, and C. Zook (EA) offsite to ship samples.

Well ID	Date	Purge Time	Sample Time	QA/QC
MW-5	08/14/2023	1113	1154	
MW-15D	08/14/2023	1134	1210	MS/MSD
MW-16	08/14/2023	1130	1215	FD-01
MW-4	08/14/2023	1225	1301	
MW-9R	08/14/2023	1302	1542	
MW-3	08/14/2023	1343	1415	
MW-11	08/14/2023	1509	1548	
MW-10	08/15/2023	0904	0940	
MW-12	08/15/2023	1001	1028	
MW-13	08/15/2023	1034	1119	
MW-2	08/15/2023	1209	1251	
MW-18	08/15/2023	1328	1400	
MW-1	08/15/2023	1334	1425	
MW-14D	08/15/2023	1405	1515	

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Moriah Gilkey	EA	Engineer	8
Hannah Bedell	EA	Engineer	3.5
Liam Casey	EA	Intern	8
Clara Zook	EA	Intern	3.5

Equipment Description	Contractor/Vendor	Quantity	Used
2020 Ford Explorer	EA	1	Yes
2019 Crew Cab	EA	1	Yes
2019 Ford F-150	EA	1	Yes
Horiba U-52	Pine Environmental	3	YES
Peristaltic Pump	Pine Environmental	3	Yes
ppbRAE 3000	Pine Environmental	3	Yes
Hand Tools	EA	-	Yes
Hedge trimmers	EA	1	Yes
Solnist Water Level Meters	Pine Environmental	3	Yes

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
None.						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		**Yes**	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**

Site Representatives

Name	Representing
Moriah Gilkey	**EA**

Project Schedule Comments

Plan for following day: complete site gauging, fence repairs, and site covers

Issues Pending

Interaction with Public, Property Owners, Media, etc.

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)



Brick pile that is used to access MW-12 – Path is inaccessible due to vegetation



Brick pile that is used to access MW-12 – Path is inaccessible due to vegetation



Brick pile that is used to access MW-12 – Path is inaccessible due to vegetation



MW-10 – trash and metal debris has been placed on MW-10

	
Field south west of the Threestar building looking northwest	MW-12
	
MW-18 that needed to be bailed out – No surface water entered the well.	MW-14D

	
Location of MW-14D	

Comments	
Site Inspector(s): Moriah Gilkey	**Date: 08/15/2023**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments:		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments:			

* BART – Best Available Retrofit Technology

NYSDEC
Division of Environmental Remediation

NEW YORK STATE | Department of Environmental Conservation

Contract No.

DEC Insp. –N/A

DEC PM – Evelyn Hussey

Contractor Supt. – N/A

Engineer PM – Mike Miller

Engineer Insp. – Moriah Gilkey

Site Location: Wappingers Falls, NY

Weather Conditions

General Description	Sun	AM	NA	PM
Temperature	75 F	AM	NA	PM
Wind	5 mph WSW	AM	NA	PM

Health & Safety
If any box below is checked "Yes", provide explanation under "Health & Safety Comments".

Were there any changes to the Health & Safety Plan?	*Yes	No	NA
Were there any exceedances of the perimeter air monitoring reported on this date?	*Yes	No	NA
Were there any nuisance issues reported/observed on this date?	*Yes	No	NA

Health & Safety Comments

Uneven ground, tall brush/buckthorn, ticks, large amounts of poison ivy

Summary of Work Performed	Arrived at site:	**0800**	Departed Site:	**0900**

(0800) M. Gilkey, H. Bedell, L. Casey, and C. Zook (EA) onsite. EA conducts a tailgate safety meeting. (0800) EA begins site wide gauging event. (0830) EA inspects site cover. (0845) EA repairs part of the fence that had been damaged. (0900) M. Gilkey, H. Bedell, L. Casey, and C. Zook (EA) offsite.

Equipment/Material Tracking
If any box below is checked "Yes", provide explanation under "Material Tracking Comments".

Were there any vehicles which did not display proper D.O.T numbers and placards?	*Yes	No	NA
Were there any vehicles which were not tarped?	* Yes	No	NA
Were there any vehicles which were not decontaminated prior to exiting the work site?	* Yes	No	NA

Personnel and Equipment

Individual	Company	Trade	Total Hours
Moriah Gilkey	EA	Engineer	1
Hannah Bedell	EA	Engineer	1
Liam Casey	EA	Intern	1
Clara Zook	EA	Intern	1

Equipment Description	Contractor/Vendor	Quantity	Used
2020 Ford Explorer	EA	1	Yes
2019 Crew Cab	EA	1	Yes
2019 Ford F-150	EA	1	Yes
Horiba U-52	Pine Environmental	3	YES
Peristaltic Pump	Pine Environmental	3	Yes
ppbRAE 3000	Pine Environmental	3	Yes
Hand Tools	EA	-	Yes
Hedge trimmers	EA	1	Yes
Solnist Water Level Meters	Pine Environmental	3	Yes

Material Description	Imported/ Delivered to Site	Exported off Site	Waste Profile (If Applicable)	Source or Disposal Facility (If Applicable)	Daily Loads	Daily Weight (tons)*
None.						

*On-Site scale for off-site shipment, delivery ticket for material received

Equipment/Material Tracking Comments:

None.

Visitors to Site

Name	Representing	Entered Exclusion/CRZ Zone	
None.		**Yes**	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**
		Yes	**No**

Site Representatives

Name	Representing
Moriah Gilkey	**EA**

Project Schedule Comments
NA
Issues Pending
Interaction with Public, Property Owners, Media, etc.

Include (insert) figures with markups showing location of work and job progress

Site Photographs (Descriptions Below)



Three Star building on the side of MW-12



Side of building cover in vegetation on side of MW-12



Looking north from MW-12



Cement path on north side of site.



Brick pile that is now covered in vegetation



Lagoon area

	
Fence line on the southeast side of the Three Star building	Parking lot across from Threestar building
	
Parking lot across from Threestar building	Parking lot across from Threestar building
	
Looking at the north side of the three star building	Hardwood company parking lot looking west



Concrete section on the north est side of the ThreeStar bulding



Gate on the northeast side of the Threestar building



Looking southwest down Mckinnley St.



MW-1 over the fence



Fence was repaired where the patch had been unattached to the fence



Path to MW-10

	
Northeast side of the fence	MW-10
	
Norhtern fence line – walking path near arrow is now inaccessible due to vegetation	Small tree on fence on northern side
	
Northern fence line	

Comments	

Site Inspector(s): Moriah Gilkey	**Date: 08/16/2023**

Videos of discreet operations have been provided to the DEC Project Manager to facilitate understanding of the ongoing work? Yes ☐ No ☐ N/A ☒

REMEDIAL ACTIVITIES AT PROPERTIES

1. Does anyone at this location have any symptoms of a respiratory infection (e.g., cough, sore throat, fever, or shortness of breath)?	Yes ☐	No ☒
2. Have anyone at this location been tested and confirmed to have COVID-19?	Yes ☐	No ☒
3. Were personal protective gloves, masks, and eye protection being used?	Yes ☐	No ☒
4. Does the Department and its contractors have your permission to enter the property at this time?	Yes ☒	No ☐
5. If Yes to 1 or 2, follow the latest NYSDOH COVID-19 guidance: https://coronavirus.health.ny.gov/home	Yes ☐	No ☐
Comments:		

ON-SITE WASTE STORAGE

Drums, roll offs and piles are staged in secure areas?	Yes ☐	No ☐	N/A☒
Liners and berms have been installed if necessary to prevent cross contamination of clean areas?	Yes ☐	No ☐	N/A☒
Containers are in good condition or properly overpacked?	Yes ☐	No ☐	N/A☒
Waste materials are scheduled to be properly characterized and disposed of prior to demobilization?	Yes ☐	No ☐	N/A☒
Complying with RCRA 90 day storage limitation for hazardous waste?	Yes ☐	No ☐	N/A☒
Piles are securely covered when not in use?	Yes ☐	No ☐	N/A☒
Containers are closed when not in use?	Yes ☐	No ☐	N/A☒
Staging areas should be inspected periodically and any issues addressed immediately?	Yes ☐	No ☐	N/A☒
Signage and labeling comply with RCRA requirements for all staging areas and containers?	Yes ☐	No ☐	N/A☒
If any issues noted, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

NUISANCE CHECKLIST

Were there any community complaints related to work on this date?	Yes ☐	No ☒	N/A☐
Were there any odors detected on this date?	Yes ☐	No ☒	N/A☐
Was noise outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Were vibration readings outside specification and/or above background on this date?	Yes ☐	No ☐	N/A☒
Any visible dust observed beyond the work perimeter on this date?	Yes ☐	No ☐	N/A☒
Any visible contrast (turbidity) beyond engineering controls observed on this date?	Yes ☐	No ☐	N/A☒
Was turbidity checked at the outfall(s)?	AM ☐	PM ☐	N/A☒
Were any property owners NOT provided advance notice for work performed on this property on this date?	Yes ☐	No ☐	N/A☒

Was the temporary fabric structure closed at the end of the day?	Yes ☐	No ☐	N/A☒
Has Contractor failed to protect all foundations and structures adjacent to and adjoining the site which are affected by the excavations or other operations connected with performance of the Work?	Yes ☐	No ☐	N/A☒
If yes, has Contractor been notified?	Yes ☐	No ☐	N/A☒
Comments:			

RESILIENCE/GREEN REMEDIATION CHECKLIST

Is site power procured from renewable energy sources (e.g., solar, wind, geothermal, biomass and biogas)?	Yes ☐	No ☐	N/A☒
Is the Contractor employing 2007 or newer or retrofitted (BART*) diesel on-road trucks and non-road equipment?	Yes ☐	No ☐	N/A☒
Is vehicle idling adequately reduced per 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Have equipment operators been trained in the idling requirements of 6NYCRR Part 217-3?	Yes ☐	No ☐	N/A☒
Is BART-equipped equipment properly maintained and working?	Yes ☐	No ☐	N/A☒
Is work being sequenced to avoid double handling?	Yes ☐	No ☐	N/A☒
Is there an onsite recycling program for CONTRACTOR-generated wastes and is it complied with?	Yes ☐	No ☐	N/A☒
Are office trailer heating and cooling systems maintained at efficient set points, have programable thermostats been installed?	Yes ☐	No ☐	N/A☒
Are products and materials used in performance of the work appropriately certified (e.g., LEED, Energy Star, Sustainable Forestry Initiative®, etc.)?	Yes ☐	No ☐	N/A☒
Are resiliency features included in the design, or completed remedy properly installed and/or maintained (flood control, storm water controls, erosion measures, etc.)?	Yes ☐	No ☐	N/A☒
Are green remediation elements included in the design, or completed remedy properly installed and/or maintained (e.g., porous pavement, geothermal, variable speed drives, native plantings, natural stream bank restoration, etc.)?	Yes ☐	No ☐	N/A☒
Has Contractor been notified of any deficiencies?	Yes ☐	No ☐	N/A☒
Are remote/call in job meetings being held in lieu of meeting in person where possible?	Yes ☐	No ☐	N/A☒
Comments:			

* BART – Best Available Retrofit Technology

Appendix D

Laboratory Analysis Reports

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

March 29, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

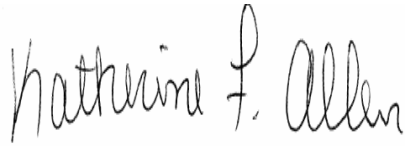
Project Location: Franklin Square, NY
Client Job Number:
Project Number: 1602523.0011
Laboratory Work Order Number: 23C1351

Enclosed are results of analyses for samples as received by the laboratory on March 10, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 3/29/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 1602523.0011

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23C1351

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Franklin Square, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
130058-IA-1-0323	23C1351-01	Indoor air		EPA TO-15	
130058-IA-2-0323	23C1351-02	Indoor air		EPA TO-15	
130058-OA-1-0323	23C1351-03	Ambient Air		EPA TO-15	
130058-FD-1-0323	23C1351-04	Indoor air		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

E Reported result is estimated. Value reported over verified calibration range.

Analyte & Samples(s) Qualified:

Ethanol

23C1351-01[130058-IA-1-0323], 23C1351-02RE1[130058-IA-2-0323], 23C1351-03[130058-OA-1-0323], 23C1351-04[130058-FD-1-0323]

L-01 Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Benzyl chloride

B335600-BS1

L-03 Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Hexachlorobutadiene, Naphthalene

23C1351-01[130058-IA-1-0323], 23C1351-02[130058-IA-2-0323], 23C1351-03[130058-OA-1-0323], 23C1351-04[130058-FD-1-0323], B335600-BLK1, B335600-BS1

V-05 Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

Hexachlorobutadiene, Naphthalene

23C1351-01[130058-IA-1-0323], 23C1351-02[130058-IA-2-0323], 23C1351-03[130058-OA-1-0323], 23C1351-04[130058-FD-1-0323], B335600-BLK1, B335600-BS1, S085202-CCV1

V-20 Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

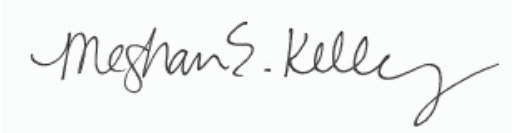
Analyte & Samples(s) Qualified:

Benzyl chloride

B335600-BS1, S085202-CCV1

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The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-IA-1-0323
Sample ID: 23C1351-01
Sample Matrix: Indoor air
Sampled: 3/7/2023 09:35

Sample Description/Location:
Sub Description/Location:
Canister ID: 1618
Canister Size: 6 liter
Flow Controller ID: 3417
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -13
Receipt Vacuum(in Hg): -12.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	8.3	1.4	0.84		20	3.3	2.0	0.696	3/23/23 14:44	CMR
Benzene	1.3	0.035	0.026		4.3	0.11	0.084	0.696	3/23/23 14:44	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.696	3/23/23 14:44	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.696	3/23/23 14:44	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.24	0.696	3/23/23 14:44	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.696	3/23/23 14:44	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.696	3/23/23 14:44	CMR
2-Butanone (MEK)	0.47	1.4	0.37	J	1.4	4.1	1.1	0.696	3/23/23 14:44	CMR
Carbon Disulfide	0.042	0.35	0.032	J	0.13	1.1	0.10	0.696	3/23/23 14:44	CMR
Carbon Tetrachloride	0.036	0.035	0.028		0.23	0.22	0.17	0.696	3/23/23 14:44	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.696	3/23/23 14:44	CMR
Chloroethane	0.068	0.035	0.031		0.18	0.092	0.081	0.696	3/23/23 14:44	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.696	3/23/23 14:44	CMR
Chloromethane	0.68	0.070	0.028		1.4	0.14	0.057	0.696	3/23/23 14:44	CMR
Cyclohexane	0.058	0.035	0.021		0.20	0.12	0.072	0.696	3/23/23 14:44	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.696	3/23/23 14:44	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.696	3/23/23 14:44	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.696	3/23/23 14:44	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.696	3/23/23 14:44	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.696	3/23/23 14:44	CMR
Dichlorodifluoromethane (Freon 12)	0.48	0.035	0.034		2.4	0.17	0.17	0.696	3/23/23 14:44	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.696	3/23/23 14:44	CMR
1,2-Dichloroethane	0.043	0.035	0.032		0.17	0.14	0.13	0.696	3/23/23 14:44	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.696	3/23/23 14:44	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.696	3/23/23 14:44	CMR
trans-1,2-Dichloroethylene	0.062	0.035	0.027		0.25	0.14	0.11	0.696	3/23/23 14:44	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.696	3/23/23 14:44	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.696	3/23/23 14:44	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.696	3/23/23 14:44	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.696	3/23/23 14:44	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.696	3/23/23 14:44	CMR
Ethanol	350	1.4	0.61	E	670	2.6	1.2	0.696	3/23/23 14:44	CMR
Ethyl Acetate	0.68	0.35	0.18		2.4	1.3	0.63	0.696	3/23/23 14:44	CMR
Ethylbenzene	0.12	0.035	0.020		0.50	0.15	0.088	0.696	3/23/23 14:44	CMR
4-Ethyltoluene	0.025	0.035	0.021	J	0.12	0.17	0.11	0.696	3/23/23 14:44	CMR
Heptane	0.43	0.035	0.022		1.8	0.14	0.091	0.696	3/23/23 14:44	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.696	3/23/23 14:44	CMR
Hexane	0.20	1.4	0.18	J	0.70	4.9	0.64	0.696	3/23/23 14:44	CMR
2-Hexanone (MBK)	ND	0.035	0.017		ND	0.14	0.071	0.696	3/23/23 14:44	CMR
Isopropanol	2.1	1.4	0.24		5.2	3.4	0.59	0.696	3/23/23 14:44	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.696	3/23/23 14:44	CMR
Methylene Chloride	0.20	0.35	0.16	J	0.71	1.2	0.56	0.696	3/23/23 14:44	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.696	3/23/23 14:44	CMR
Naphthalene	0.11	0.035	0.026	L-03, V-05	0.55	0.18	0.14	0.696	3/23/23 14:44	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.696	3/23/23 14:44	CMR
Styrene	0.21	0.035	0.018		0.90	0.15	0.078	0.696	3/23/23 14:44	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.696	3/23/23 14:44	CMR

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-IA-1-0323
Sample ID: 23C1351-01
Sample Matrix: Indoor air
Sampled: 3/7/2023 09:35

Sample Description/Location:
Sub Description/Location:
Canister ID: 1618
Canister Size: 6 liter
Flow Controller ID: 3417
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -13
Receipt Vacuum(in Hg): -12.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	4.8	0.035	0.027		32	0.24	0.18	0.696	3/23/23 14:44	CMR
Tetrahydrofuran	0.16	0.35	0.057	J	0.46	1.0	0.17	0.696	3/23/23 14:44	CMR
Toluene	0.48	0.035	0.020		1.8	0.13	0.075	0.696	3/23/23 14:44	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.696	3/23/23 14:44	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.696	3/23/23 14:44	CMR
1,1,2-Trichloroethane	ND	0.035	0.024		ND	0.19	0.13	0.696	3/23/23 14:44	CMR
Trichloroethylene	ND	0.035	0.023		ND	0.19	0.13	0.696	3/23/23 14:44	CMR
Trichlorofluoromethane (Freon 11)	0.12	0.14	0.041	J	0.67	0.78	0.23	0.696	3/23/23 14:44	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14	0.039		ND	1.1	0.30	0.696	3/23/23 14:44	CMR
1,2,4-Trimethylbenzene	0.12	0.035	0.015		0.58	0.17	0.076	0.696	3/23/23 14:44	CMR
1,3,5-Trimethylbenzene	0.029	0.035	0.018	J	0.14	0.17	0.090	0.696	3/23/23 14:44	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.696	3/23/23 14:44	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.696	3/23/23 14:44	CMR
m&p-Xylene	0.23	0.070	0.039		0.98	0.30	0.17	0.696	3/23/23 14:44	CMR
o-Xylene	0.10	0.035	0.018		0.44	0.15	0.077	0.696	3/23/23 14:44	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	108	70-130	3/23/23 14:44

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-IA-2-0323
Sample ID: 23C1351-02
Sample Matrix: Indoor air
Sampled: 3/7/2023 09:40

Sample Description/Location:
Sub Description/Location:
Canister ID: 2157
Canister Size: 6 liter
Flow Controller ID: 3731
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -14
Receipt Vacuum(in Hg): -13.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	21	1.6	0.97		50	3.8	2.3	0.8	3/23/23 15:16	CMR
Benzene	0.50	0.040	0.030		1.6	0.13	0.097	0.8	3/23/23 15:16	CMR
Benzyl chloride	ND	0.040	0.035		ND	0.21	0.18	0.8	3/23/23 15:16	CMR
Bromodichloromethane	ND	0.040	0.028		ND	0.27	0.19	0.8	3/23/23 15:16	CMR
Bromoform	ND	0.040	0.027		ND	0.41	0.28	0.8	3/23/23 15:16	CMR
Bromomethane	ND	0.040	0.027		ND	0.16	0.10	0.8	3/23/23 15:16	CMR
1,3-Butadiene	ND	0.040	0.034		ND	0.088	0.074	0.8	3/23/23 15:16	CMR
2-Butanone (MEK)	1.6	1.6	0.43	J	4.6	4.7	1.3	0.8	3/23/23 15:16	CMR
Carbon Disulfide	0.51	0.40	0.037		1.6	1.2	0.12	0.8	3/23/23 15:16	CMR
Carbon Tetrachloride	0.073	0.040	0.032		0.46	0.25	0.20	0.8	3/23/23 15:16	CMR
Chlorobenzene	ND	0.040	0.027		ND	0.18	0.12	0.8	3/23/23 15:16	CMR
Chloroethane	ND	0.040	0.035		ND	0.11	0.094	0.8	3/23/23 15:16	CMR
Chloroform	ND	0.040	0.038		ND	0.20	0.19	0.8	3/23/23 15:16	CMR
Chloromethane	0.64	0.080	0.032		1.3	0.17	0.066	0.8	3/23/23 15:16	CMR
Cyclohexane	0.051	0.040	0.024		0.18	0.14	0.083	0.8	3/23/23 15:16	CMR
Dibromochloromethane	ND	0.040	0.026		ND	0.34	0.23	0.8	3/23/23 15:16	CMR
1,2-Dibromoethane (EDB)	ND	0.040	0.024		ND	0.31	0.19	0.8	3/23/23 15:16	CMR
1,2-Dichlorobenzene	ND	0.040	0.023		ND	0.24	0.14	0.8	3/23/23 15:16	CMR
1,3-Dichlorobenzene	ND	0.040	0.022		ND	0.24	0.13	0.8	3/23/23 15:16	CMR
1,4-Dichlorobenzene	ND	0.040	0.026		ND	0.24	0.16	0.8	3/23/23 15:16	CMR
Dichlorodifluoromethane (Freon 12)	ND	0.040	0.039		ND	0.20	0.19	0.8	3/23/23 15:16	CMR
1,1-Dichloroethane	ND	0.040	0.035		ND	0.16	0.14	0.8	3/23/23 15:16	CMR
1,2-Dichloroethane	ND	0.040	0.036		ND	0.16	0.15	0.8	3/23/23 15:16	CMR
1,1-Dichloroethylene	ND	0.040	0.030		ND	0.16	0.12	0.8	3/23/23 15:16	CMR
cis-1,2-Dichloroethylene	0.74	0.040	0.029		3.0	0.16	0.12	0.8	3/23/23 15:16	CMR
trans-1,2-Dichloroethylene	ND	0.040	0.031		ND	0.16	0.12	0.8	3/23/23 15:16	CMR
1,2-Dichloropropane	ND	0.040	0.022		ND	0.18	0.10	0.8	3/23/23 15:16	CMR
cis-1,3-Dichloropropene	ND	0.040	0.021		ND	0.18	0.094	0.8	3/23/23 15:16	CMR
trans-1,3-Dichloropropene	ND	0.040	0.020		ND	0.18	0.093	0.8	3/23/23 15:16	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.040	0.039		ND	0.28	0.28	0.8	3/23/23 15:16	CMR
1,4-Dioxane	ND	0.40	0.033		ND	1.4	0.12	0.8	3/23/23 15:16	CMR
Ethanol	5800	80	35	E	11000	150	66	40	3/24/23 22:43	TPH
Ethyl Acetate	2.6	0.40	0.20		9.5	1.4	0.73	0.8	3/23/23 15:16	CMR
Ethylbenzene	0.060	0.040	0.023		0.26	0.17	0.10	0.8	3/23/23 15:16	CMR
4-Ethyltoluene	0.027	0.040	0.025	J	0.13	0.20	0.12	0.8	3/23/23 15:16	CMR
Heptane	0.18	0.040	0.026		0.76	0.16	0.10	0.8	3/23/23 15:16	CMR
Hexachlorobutadiene	ND	0.040	0.033	L-03, V-05	ND	0.43	0.35	0.8	3/23/23 15:16	CMR
Hexane	ND	1.6	0.21		ND	5.6	0.73	0.8	3/23/23 15:16	CMR
2-Hexanone (MBK)	0.28	0.040	0.020		1.1	0.16	0.082	0.8	3/23/23 15:16	CMR
Isopropanol	2.8	1.6	0.28		6.9	3.9	0.68	0.8	3/23/23 15:16	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.040	0.031		ND	0.14	0.11	0.8	3/23/23 15:16	CMR
Methylene Chloride	ND	0.40	0.19		ND	1.4	0.64	0.8	3/23/23 15:16	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.040	0.021		ND	0.16	0.088	0.8	3/23/23 15:16	CMR
Naphthalene	ND	0.040	0.030	L-03, V-05	ND	0.21	0.16	0.8	3/23/23 15:16	CMR
Propene	ND	1.6	0.35		ND	2.8	0.61	0.8	3/23/23 15:16	CMR
Styrene	0.081	0.040	0.021		0.34	0.17	0.090	0.8	3/23/23 15:16	CMR
1,1,2,2-Tetrachloroethane	ND	0.040	0.022		ND	0.27	0.15	0.8	3/23/23 15:16	CMR

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-IA-2-0323
Sample ID: 23C1351-02
Sample Matrix: Indoor air
Sampled: 3/7/2023 09:40

Sample Description/Location:
Sub Description/Location:
Canister ID: 2157
Canister Size: 6 liter
Flow Controller ID: 3731
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -14
Receipt Vacuum(in Hg): -13.7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	1.7	0.040	0.031		12	0.27	0.21	0.8	3/23/23 15:16	CMR
Tetrahydrofuran	ND	0.40	0.066		ND	1.2	0.19	0.8	3/23/23 15:16	CMR
Toluene	0.30	0.040	0.023		1.1	0.15	0.086	0.8	3/23/23 15:16	CMR
1,2,4-Trichlorobenzene	ND	0.040	0.037		ND	0.30	0.27	0.8	3/23/23 15:16	CMR
1,1,1-Trichloroethane	ND	0.040	0.031		ND	0.22	0.17	0.8	3/23/23 15:16	CMR
1,1,2-Trichloroethane	ND	0.040	0.028		ND	0.22	0.15	0.8	3/23/23 15:16	CMR
Trichloroethylene	0.046	0.040	0.027		0.25	0.21	0.14	0.8	3/23/23 15:16	CMR
Trichlorofluoromethane (Freon 11)	0.24	0.16	0.047		1.3	0.90	0.27	0.8	3/23/23 15:16	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.092	0.16	0.044	J	0.71	1.2	0.34	0.8	3/23/23 15:16	CMR
1,2,4-Trimethylbenzene	0.11	0.040	0.018		0.52	0.20	0.087	0.8	3/23/23 15:16	CMR
1,3,5-Trimethylbenzene	0.047	0.040	0.021		0.23	0.20	0.10	0.8	3/23/23 15:16	CMR
Vinyl Acetate	ND	0.80	0.21		ND	2.8	0.76	0.8	3/23/23 15:16	CMR
Vinyl Chloride	ND	0.040	0.036		ND	0.10	0.092	0.8	3/23/23 15:16	CMR
m&p-Xylene	0.15	0.080	0.045		0.64	0.35	0.19	0.8	3/23/23 15:16	CMR
o-Xylene	0.069	0.040	0.020		0.30	0.17	0.089	0.8	3/23/23 15:16	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	105	70-130	3/24/23 22:43
4-Bromofluorobenzene (1)	108	70-130	3/23/23 15:16

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-OA-1-0323
Sample ID: 23C1351-03
Sample Matrix: Ambient Air
Sampled: 3/7/2023 09:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 1073
Canister Size: 6 liter
Flow Controller ID: 3732
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -12
Receipt Vacuum(in Hg): -11.5
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	3.7	1.4	0.84		8.8	3.3	2.0	0.696	3/23/23 15:48	CMR
Benzene	0.20	0.035	0.026		0.65	0.11	0.084	0.696	3/23/23 15:48	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.696	3/23/23 15:48	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.696	3/23/23 15:48	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.24	0.696	3/23/23 15:48	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.696	3/23/23 15:48	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.696	3/23/23 15:48	CMR
2-Butanone (MEK)	0.51	1.4	0.37	J	1.5	4.1	1.1	0.696	3/23/23 15:48	CMR
Carbon Disulfide	ND	0.35	0.032		ND	1.1	0.10	0.696	3/23/23 15:48	CMR
Carbon Tetrachloride	0.065	0.035	0.028		0.41	0.22	0.17	0.696	3/23/23 15:48	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.696	3/23/23 15:48	CMR
Chloroethane	ND	0.035	0.031		ND	0.092	0.081	0.696	3/23/23 15:48	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.696	3/23/23 15:48	CMR
Chloromethane	0.62	0.070	0.028		1.3	0.14	0.057	0.696	3/23/23 15:48	CMR
Cyclohexane	0.028	0.035	0.021	J	0.096	0.12	0.072	0.696	3/23/23 15:48	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.696	3/23/23 15:48	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.696	3/23/23 15:48	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.696	3/23/23 15:48	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.696	3/23/23 15:48	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.696	3/23/23 15:48	CMR
Dichlorodifluoromethane (Freon 12)	0.64	0.035	0.034		3.2	0.17	0.17	0.696	3/23/23 15:48	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.696	3/23/23 15:48	CMR
1,2-Dichloroethane	ND	0.035	0.032		ND	0.14	0.13	0.696	3/23/23 15:48	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.696	3/23/23 15:48	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.696	3/23/23 15:48	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.696	3/23/23 15:48	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.696	3/23/23 15:48	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.696	3/23/23 15:48	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.696	3/23/23 15:48	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.696	3/23/23 15:48	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.696	3/23/23 15:48	CMR
Ethanol	66	1.4	0.61	E	120	2.6	1.2	0.696	3/23/23 15:48	CMR
Ethyl Acetate	ND	0.35	0.18		ND	1.3	0.63	0.696	3/23/23 15:48	CMR
Ethylbenzene	0.035	0.035	0.020		0.15	0.15	0.088	0.696	3/23/23 15:48	CMR
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.696	3/23/23 15:48	CMR
Heptane	0.093	0.035	0.022		0.38	0.14	0.091	0.696	3/23/23 15:48	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.696	3/23/23 15:48	CMR
Hexane	ND	1.4	0.18		ND	4.9	0.64	0.696	3/23/23 15:48	CMR
2-Hexanone (MBK)	0.079	0.035	0.017		0.32	0.14	0.071	0.696	3/23/23 15:48	CMR
Isopropanol	0.67	1.4	0.24	J	1.6	3.4	0.59	0.696	3/23/23 15:48	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.696	3/23/23 15:48	CMR
Methylene Chloride	ND	0.35	0.16		ND	1.2	0.56	0.696	3/23/23 15:48	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.696	3/23/23 15:48	CMR
Naphthalene	ND	0.035	0.026	L-03, V-05	ND	0.18	0.14	0.696	3/23/23 15:48	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.696	3/23/23 15:48	CMR
Styrene	ND	0.035	0.018		ND	0.15	0.078	0.696	3/23/23 15:48	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.696	3/23/23 15:48	CMR

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-OA-1-0323
Sample ID: 23C1351-03
Sample Matrix: Ambient Air
Sampled: 3/7/2023 09:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 1073
Canister Size: 6 liter
Flow Controller ID: 3732
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -12
Receipt Vacuum(in Hg): -11.5
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	0.053	0.035	0.027		0.36	0.24	0.18	0.696	3/23/23 15:48	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.696	3/23/23 15:48	CMR
Toluene	0.21	0.035	0.020		0.78	0.13	0.075	0.696	3/23/23 15:48	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.696	3/23/23 15:48	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.696	3/23/23 15:48	CMR
1,1,2-Trichloroethane	ND	0.035	0.024		ND	0.19	0.13	0.696	3/23/23 15:48	CMR
Trichloroethylene	ND	0.035	0.023		ND	0.19	0.13	0.696	3/23/23 15:48	CMR
Trichlorofluoromethane (Freon 11)	0.22	0.14	0.041		1.3	0.78	0.23	0.696	3/23/23 15:48	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.079	0.14	0.039	J	0.61	1.1	0.30	0.696	3/23/23 15:48	CMR
1,2,4-Trimethylbenzene	0.038	0.035	0.015		0.19	0.17	0.076	0.696	3/23/23 15:48	CMR
1,3,5-Trimethylbenzene	ND	0.035	0.018		ND	0.17	0.090	0.696	3/23/23 15:48	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.696	3/23/23 15:48	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.696	3/23/23 15:48	CMR
m&p-Xylene	0.11	0.070	0.039		0.46	0.30	0.17	0.696	3/23/23 15:48	CMR
o-Xylene	0.046	0.035	0.018		0.20	0.15	0.077	0.696	3/23/23 15:48	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	108	70-130	3/23/23 15:48

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-FD-1-0323
Sample ID: 23C1351-04
Sample Matrix: Indoor air
Sampled: 3/7/2023 09:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 2158
Canister Size: 6 liter
Flow Controller ID: 3508
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -8.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	9.9	1.4	0.84		23	3.3	2.0	0.698	3/23/23 16:20	CMR
Benzene	1.3	0.035	0.026		4.1	0.11	0.084	0.698	3/23/23 16:20	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.698	3/23/23 16:20	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.698	3/23/23 16:20	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.25	0.698	3/23/23 16:20	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.698	3/23/23 16:20	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.698	3/23/23 16:20	CMR
2-Butanone (MEK)	0.80	1.4	0.37	J	2.4	4.1	1.1	0.698	3/23/23 16:20	CMR
Carbon Disulfide	0.033	0.35	0.032	J	0.10	1.1	0.10	0.698	3/23/23 16:20	CMR
Carbon Tetrachloride	0.038	0.035	0.028		0.24	0.22	0.17	0.698	3/23/23 16:20	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.698	3/23/23 16:20	CMR
Chloroethane	0.060	0.035	0.031		0.16	0.092	0.082	0.698	3/23/23 16:20	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.698	3/23/23 16:20	CMR
Chloromethane	0.65	0.070	0.028		1.3	0.14	0.057	0.698	3/23/23 16:20	CMR
Cyclohexane	0.046	0.035	0.021		0.16	0.12	0.073	0.698	3/23/23 16:20	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.698	3/23/23 16:20	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.698	3/23/23 16:20	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.698	3/23/23 16:20	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.698	3/23/23 16:20	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.698	3/23/23 16:20	CMR
Dichlorodifluoromethane (Freon 12)	0.49	0.035	0.034		2.4	0.17	0.17	0.698	3/23/23 16:20	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.698	3/23/23 16:20	CMR
1,2-Dichloroethane	0.038	0.035	0.032		0.16	0.14	0.13	0.698	3/23/23 16:20	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 16:20	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.698	3/23/23 16:20	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 16:20	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.698	3/23/23 16:20	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.698	3/23/23 16:20	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.698	3/23/23 16:20	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.698	3/23/23 16:20	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.698	3/23/23 16:20	CMR
Ethanol	350	1.4	0.62	E	660	2.6	1.2	0.698	3/23/23 16:20	CMR
Ethyl Acetate	0.76	0.35	0.18		2.7	1.3	0.64	0.698	3/23/23 16:20	CMR
Ethylbenzene	0.087	0.035	0.020		0.38	0.15	0.088	0.698	3/23/23 16:20	CMR
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.698	3/23/23 16:20	CMR
Heptane	0.32	0.035	0.022		1.3	0.14	0.091	0.698	3/23/23 16:20	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.698	3/23/23 16:20	CMR
Hexane	ND	1.4	0.18		ND	4.9	0.64	0.698	3/23/23 16:20	CMR
2-Hexanone (MBK)	0.15	0.035	0.017		0.61	0.14	0.071	0.698	3/23/23 16:20	CMR
Isopropanol	2.5	1.4	0.24		6.1	3.4	0.59	0.698	3/23/23 16:20	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.698	3/23/23 16:20	CMR
Methylene Chloride	0.20	0.35	0.16	J	0.68	1.2	0.56	0.698	3/23/23 16:20	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.698	3/23/23 16:20	CMR
Naphthalene	ND	0.035	0.026	L-03, V-05	ND	0.18	0.14	0.698	3/23/23 16:20	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.698	3/23/23 16:20	CMR
Styrene	0.22	0.035	0.018		0.92	0.15	0.078	0.698	3/23/23 16:20	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.698	3/23/23 16:20	CMR

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ANALYTICAL RESULTS

Project Location: Franklin Square, NY
Date Received: 3/10/2023
Field Sample #: 130058-FD-1-0323
Sample ID: 23C1351-04
Sample Matrix: Indoor air
Sampled: 3/7/2023 09:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 2158
Canister Size: 6 liter
Flow Controller ID: 3508
Sample Type: 24 hr

Work Order: 23C1351
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7
Receipt Vacuum(in Hg): -8.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	4.6	0.035	0.027		31	0.24	0.18	0.698	3/23/23 16:20	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.698	3/23/23 16:20	CMR
Toluene	0.42	0.035	0.020		1.6	0.13	0.075	0.698	3/23/23 16:20	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.698	3/23/23 16:20	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.698	3/23/23 16:20	CMR
1,1,2-Trichloroethane	ND	0.035	0.025		ND	0.19	0.13	0.698	3/23/23 16:20	CMR
Trichloroethylene	ND	0.035	0.024		ND	0.19	0.13	0.698	3/23/23 16:20	CMR
Trichlorofluoromethane (Freon 11)	0.12	0.14	0.041	J	0.68	0.78	0.23	0.698	3/23/23 16:20	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.14	0.039		ND	1.1	0.30	0.698	3/23/23 16:20	CMR
1,2,4-Trimethylbenzene	0.058	0.035	0.015		0.28	0.17	0.076	0.698	3/23/23 16:20	CMR
1,3,5-Trimethylbenzene	ND	0.035	0.018		ND	0.17	0.091	0.698	3/23/23 16:20	CMR
Vinyl Acetate	0.65	0.70	0.19	J	2.3	2.5	0.66	0.698	3/23/23 16:20	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.698	3/23/23 16:20	CMR
m&p-Xylene	0.15	0.070	0.039		0.66	0.30	0.17	0.698	3/23/23 16:20	CMR
o-Xylene	0.072	0.035	0.018		0.31	0.15	0.078	0.698	3/23/23 16:20	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	109	70-130	3/23/23 16:20

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Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
23C1351-02RE1 [130058-IA-2-0323]	B335323	2	1	N/A	1000	200	10	03/24/23

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
23C1351-01 [130058-IA-1-0323]	B335600	1.74	1	N/A	1000	200	500	03/23/23
23C1351-02 [130058-IA-2-0323]	B335600	2.0	1	N/A	1000	200	500	03/23/23
23C1351-03 [130058-OA-1-0323]	B335600	1.74	1	N/A	1000	200	500	03/23/23
23C1351-04 [130058-FD-1-0323]	B335600	1.5	1	N/A	1000	200	430	03/23/23

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335323 - TO-15 Prep											
Blank (B335323-BLK1)					Prepared & Analyzed: 03/24/23						
Acetone	ND	0.80									
2-Butanone (MEK)	ND	0.80									
Ethanol	ND	0.80									
4-Ethyltoluene	ND	0.020									
Isopropanol	0.21	0.80									J
1,2,4-Trimethylbenzene	ND	0.020									
1,3,5-Trimethylbenzene	ND	0.020									
Surrogate: 4-Bromofluorobenzene (1)	*8.56*				*8.00*		*107*	*70-130*			
LCS (B335323-BS1)					Prepared & Analyzed: 03/24/23						
Acetone	4.90				5.00		98.1	70-130			
2-Butanone (MEK)	4.10				5.00		81.9	70-130			
Ethanol	4.52				5.00		90.5	70-130			
4-Ethyltoluene	4.62				5.00		92.5	70-130			
Isopropanol	3.98				5.00		79.5	70-130			
1,2,4-Trimethylbenzene	4.56				5.00		91.2	70-130			
1,3,5-Trimethylbenzene	4.58				5.00		91.5	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.60*				*8.00*		*107*	*70-130*			
Batch B335600 - TO-15 Prep											
Blank (B335600-BLK1)					Prepared & Analyzed: 03/23/23						
Acetone	ND	0.80									
Benzene	ND	0.020									
Benzyl chloride	ND	0.020									
Bromodichloromethane	ND	0.020									
Bromoform	ND	0.020									
Bromomethane	ND	0.020									
1,3-Butadiene	ND	0.020									
2-Butanone (MEK)	ND	0.80									
Carbon Disulfide	ND	0.20									
Carbon Tetrachloride	ND	0.020									
Chlorobenzene	ND	0.020									
Chloroethane	ND	0.020									
Chloroform	ND	0.020									
Chloromethane	ND	0.040									
Cyclohexane	ND	0.020									
Dibromochloromethane	ND	0.020									
1,2-Dibromoethane (EDB)	ND	0.020									
1,2-Dichlorobenzene	ND	0.020									
1,3-Dichlorobenzene	ND	0.020									
1,4-Dichlorobenzene	ND	0.020									
Dichlorodifluoromethane (Freon 12)	ND	0.020									
1,1-Dichloroethane	ND	0.020									
1,2-Dichloroethane	ND	0.020									
1,1-Dichloroethylene	ND	0.020									
cis-1,2-Dichloroethylene	ND	0.020									

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335600 - TO-15 Prep											
Blank (B335600-BLK1)					Prepared & Analyzed: 03/23/23						
trans-1,2-Dichloroethylene	ND	0.020									
1,2-Dichloropropane	ND	0.020									
cis-1,3-Dichloropropene	ND	0.020									
trans-1,3-Dichloropropene	ND	0.020									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.020									
1,4-Dioxane	ND	0.20									
Ethanol	ND	0.80									
Ethyl Acetate	ND	0.20									
Ethylbenzene	ND	0.020									
4-Ethyltoluene	ND	0.020									
Heptane	ND	0.020									
Hexachlorobutadiene	ND	0.020									L-03, V-05
Hexane	ND	0.80									
2-Hexanone (MBK)	ND	0.020									
Isopropanol	ND	0.80									
Methyl tert-Butyl Ether (MTBE)	ND	0.020									
Methylene Chloride	ND	0.20									
4-Methyl-2-pentanone (MIBK)	ND	0.020									
Naphthalene	ND	0.020									L-03, V-05
Propene	ND	0.80									
Styrene	ND	0.020									
1,1,2,2-Tetrachloroethane	ND	0.020									
Tetrachloroethylene	ND	0.020									
Tetrahydrofuran	ND	0.20									
Toluene	ND	0.020									
1,2,4-Trichlorobenzene	ND	0.020									
1,1,1-Trichloroethane	ND	0.020									
1,1,2-Trichloroethane	ND	0.020									
Trichloroethylene	ND	0.020									
Trichlorofluoromethane (Freon 11)	ND	0.080									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.080									
1,2,4-Trimethylbenzene	ND	0.020									
1,3,5-Trimethylbenzene	ND	0.020									
Vinyl Acetate	ND	0.40									
Vinyl Chloride	ND	0.020									
m&p-Xylene	ND	0.040									
o-Xylene	ND	0.020									
Surrogate: 4-Bromofluorobenzene (1)	*8.59*				*8.00*		*107*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC		%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335600 - TO-15 Prep												
LCS (B335600-BS1)					Prepared & Analyzed: 03/23/23							
Acetone	5.73				5.00		115		70-130			
Benzene	5.82				5.00		116		70-130			
Benzyl chloride	6.93				5.00		**139**	*	70-130			L-01, V-20
Bromodichloromethane	5.98				5.00		120		70-130			
Bromoform	6.33				5.00		127		70-130			
Bromomethane	5.36				5.00		107		70-130			
1,3-Butadiene	5.47				5.00		109		70-130			
2-Butanone (MEK)	4.90				5.00		97.9		70-130			
Carbon Disulfide	5.07				5.00		101		70-130			
Carbon Tetrachloride	5.49				5.00		110		70-130			
Chlorobenzene	5.39				5.00		108		70-130			
Chloroethane	5.73				5.00		115		70-130			
Chloroform	5.35				5.00		107		70-130			
Chloromethane	5.62				5.00		112		70-130			
Cyclohexane	6.10				5.00		122		70-130			
Dibromochloromethane	5.78				5.00		116		70-130			
1,2-Dibromoethane (EDB)	5.57				5.00		111		70-130			
1,2-Dichlorobenzene	5.51				5.00		110		70-130			
1,3-Dichlorobenzene	5.54				5.00		111		70-130			
1,4-Dichlorobenzene	5.89				5.00		118		70-130			
Dichlorodifluoromethane (Freon 12)	5.51				5.00		110		70-130			
1,1-Dichloroethane	5.85				5.00		117		70-130			
1,2-Dichloroethane	5.38				5.00		108		70-130			
1,1-Dichloroethylene	5.28				5.00		106		70-130			
cis-1,2-Dichloroethylene	5.44				5.00		109		70-130			
trans-1,2-Dichloroethylene	5.61				5.00		112		70-130			
1,2-Dichloropropane	6.20				5.00		124		70-130			
cis-1,3-Dichloropropene	6.11				5.00		122		70-130			
trans-1,3-Dichloropropene	6.36				5.00		127		70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.09				5.00		102		70-130			
1,4-Dioxane	6.03				5.00		121		70-130			
Ethanol	5.27				5.00		105		70-130			
Ethyl Acetate	5.10				5.00		102		70-130			
Ethylbenzene	5.52				5.00		110		70-130			
4-Ethyltoluene	5.72				5.00		114		70-130			
Heptane	6.01				5.00		120		70-130			
Hexachlorobutadiene	3.34				5.00		**66.8**	*	70-130			L-03, V-05
Hexane	5.52				5.00		110		70-130			
2-Hexanone (MBK)	5.43				5.00		109		70-130			
Isopropanol	4.70				5.00		94.0		70-130			
Methyl tert-Butyl Ether (MTBE)	5.41				5.00		108		70-130			
Methylene Chloride	4.93				5.00		98.6		70-130			
4-Methyl-2-pentanone (MIBK)	6.29				5.00		126		70-130			
Naphthalene	3.43				5.00		**68.6**	*	70-130			L-03, V-05
Propene	6.15				5.00		123		70-130			
Styrene	5.67				5.00		113		70-130			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335600 - TO-15 Prep											
LCS (B335600-BS1)					Prepared & Analyzed: 03/23/23						
1,1,2,2-Tetrachloroethane	5.65				5.00		113	70-130			
Tetrachloroethylene	5.52				5.00		110	70-130			
Tetrahydrofuran	5.16				5.00		103	70-130			
Toluene	5.55				5.00		111	70-130			
1,2,4-Trichlorobenzene	4.53				5.00		90.6	70-130			
1,1,1-Trichloroethane	5.40				5.00		108	70-130			
1,1,2-Trichloroethane	5.64				5.00		113	70-130			
Trichloroethylene	5.55				5.00		111	70-130			
Trichlorofluoromethane (Freon 11)	5.05				5.00		101	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.74				5.00		94.9	70-130			
1,2,4-Trimethylbenzene	5.59				5.00		112	70-130			
1,3,5-Trimethylbenzene	5.64				5.00		113	70-130			
Vinyl Acetate	6.07				5.00		121	70-130			
Vinyl Chloride	5.61				5.00		112	70-130			
m&p-Xylene	11.2				10.0		112	70-130			
o-Xylene	5.59				5.00		112	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.67*				*8.00*		*108*	*70-130*			

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Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
E	Reported result is estimated. Value reported over verified calibration range.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-01	Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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ANALYST

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S082540-ICV1)			Lab File ID: J23A025019.D			Analyzed: 01/26/23 00:04			
Bromochloromethane (1)	341158	2.806	341158	2.806	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1102343	3.428	1102343	3.428	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	959356	5.043	959356	5.043	100	60 - 140	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S085066-CCV1)			Lab File ID: J23A083004.D			Analyzed: 03/24/23 14:27			
Bromochloromethane (1)	341732	2.78	341732	2.78	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1001669	3.413	1001669	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	911329	5.034	911329	5.034	100	60 - 140	0.0000	+/-0.50	
LCS (B335323-BS1)			Lab File ID: J23A083005.D			Analyzed: 03/24/23 14:52			
Bromochloromethane (1)	347038	2.78	341732	2.78	102	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1006649	3.413	1001669	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	922043	5.034	911329	5.034	101	60 - 140	0.0000	+/-0.50	
Blank (B335323-BLK1)			Lab File ID: J23A083007.D			Analyzed: 03/24/23 15:48			
Bromochloromethane (1)	334553	2.764	341732	2.78	98	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	971000	3.4	1001669	3.413	97	60 - 140	-0.0130	+/-0.50	
Chlorobenzene-d5 (1)	883906	5.031	911329	5.034	97	60 - 140	-0.0030	+/-0.50	
130058-IA-2-0323 (23C1351-02RE1)			Lab File ID: J23A083022.D			Analyzed: 03/24/23 22:43			
Bromochloromethane (1)	339050	2.767	341732	2.78	99	60 - 140	-0.0130	+/-0.50	
1,4-Difluorobenzene (1)	995983	3.403	1001669	3.413	99	60 - 140	-0.0100	+/-0.50	
Chlorobenzene-d5 (1)	917023	5.03	911329	5.034	101	60 - 140	-0.0040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S085202-CCV1)			Lab File ID: J23A082005.D			Analyzed: 03/23/23 12:17			
Bromochloromethane (1)	296957	2.78	296957	2.78	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	853952	3.413	853952	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	770016	5.034	770016	5.034	100	60 - 140	0.0000	+/-0.50	
LCS (B335600-BS1)			Lab File ID: J23A082006.D			Analyzed: 03/23/23 12:42			
Bromochloromethane (1)	295090	2.78	296957	2.78	99	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	851872	3.413	853952	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	764347	5.034	770016	5.034	99	60 - 140	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B335600-BLK1)			Lab File ID: J23A082009.D			Analyzed: 03/23/23 14:11			
Bromochloromethane (1)	280704	2.761	296957	2.78	95	60 - 140	-0.0190	+/-0.50	
1,4-Difluorobenzene (1)	800850	3.401	853952	3.413	94	60 - 140	-0.0120	+/-0.50	
Chlorobenzene-d5 (1)	708726	5.031	770016	5.034	92	60 - 140	-0.0030	+/-0.50	
130058-IA-1-0323 (23C1351-01)			Lab File ID: J23A082010.D			Analyzed: 03/23/23 14:44			
Bromochloromethane (1)	294748	2.764	296957	2.78	99	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	841751	3.404	853952	3.413	99	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	757808	5.031	770016	5.034	98	60 - 140	-0.0030	+/-0.50	
130058-IA-2-0323 (23C1351-02)			Lab File ID: J23A082011.D			Analyzed: 03/23/23 15:16			
Bromochloromethane (1)	296678	2.764	296957	2.78	100	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	857771	3.401	853952	3.413	100	60 - 140	-0.0120	+/-0.50	
Chlorobenzene-d5 (1)	775908	5.031	770016	5.034	101	60 - 140	-0.0030	+/-0.50	
130058-OA-1-0323 (23C1351-03)			Lab File ID: J23A082012.D			Analyzed: 03/23/23 15:48			
Bromochloromethane (1)	294657	2.764	296957	2.78	99	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	842666	3.401	853952	3.413	99	60 - 140	-0.0120	+/-0.50	
Chlorobenzene-d5 (1)	756288	5.031	770016	5.034	98	60 - 140	-0.0030	+/-0.50	
130058-FD-1-0323 (23C1351-04)			Lab File ID: J23A082013.D			Analyzed: 03/23/23 16:20			
Bromochloromethane (1)	296879	2.764	296957	2.78	100	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	853396	3.404	853952	3.413	100	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	774403	5.031	770016	5.034	101	60 - 140	-0.0030	+/-0.50	

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CONTINUING CALIBRATION CHECK

EPA TO-15

S085066-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	4.73	0.9172061	0.868044		-5.4	30
2-Butanone (MEK)	A	5.00	4.08	1.412082	1.152421		-18.4	30
Ethanol	A	5.00	5.04	0.1626733	0.1639413		0.8	30
4-Ethyltoluene	A	5.00	4.72	1.333301	1.257199		-5.7	30
Isopropanol	A	5.00	4.73	1.0816	1.023338		-5.4	30
1,2,4-Trimethylbenzene	A	5.00	4.70	1.114566	1.047673		-6.0	30
1,3,5-Trimethylbenzene	A	5.00	4.72	1.126426	1.062262		-5.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CONTINUING CALIBRATION CHECK

EPA TO-15

S085202-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	5.33	0.9172061	0.9783504		6.7	30
Benzene	A	5.00	5.61	0.7387105	0.8286124		12.2	30
Benzyl chloride	A	5.00	6.89	0.7213395	0.9937123		37.8	30 *
Bromodichloromethane	A	5.00	5.83	0.5251533	0.61201		16.5	30
Bromoform	A	5.00	6.02	0.4277704	0.5146179		20.3	30
Bromomethane	A	5.00	5.16	0.6097815	0.6288587		3.1	30
1,3-Butadiene	A	5.00	5.41	0.4638914	0.5023003		8.3	30
2-Butanone (MEK)	A	5.00	4.60	1.412082	1.297632		-8.1	30
Carbon Disulfide	A	5.00	4.66	1.950889	1.819102		-6.8	30
Carbon Tetrachloride	A	5.00	5.54	0.4804808	0.5325358		10.8	30
Chlorobenzene	A	5.00	5.19	0.7448082	0.7734717		3.8	30
Chloroethane	A	5.00	5.32	0.3583321	0.3811892		6.4	30
Chloroform	A	5.00	5.04	1.602387	1.61354		0.7	30
Chloromethane	A	5.00	5.41	0.498645	0.5394289		8.2	30
Cyclohexane	A	5.00	5.76	0.3089687	0.3561643		15.3	30
Dibromochloromethane	A	5.00	5.56	0.5087335	0.5655779		11.2	30
1,2-Dibromoethane (EDB)	A	5.00	5.38	0.4954263	0.5332585		7.6	30
1,2-Dichlorobenzene	A	5.00	5.33	0.6000711	0.6398454		6.6	30
1,3-Dichlorobenzene	A	5.00	5.43	0.6282622	0.6819141		8.5	30
1,4-Dichlorobenzene	A	5.00	5.90	0.5785005	0.6829593		18.1	30
Dichlorodifluoromethane (Freon 12)	A	5.00	5.35	1.788333	1.912681		7.0	30
1,1-Dichloroethane	A	5.00	5.49	1.234282	1.356258		9.9	30
1,2-Dichloroethane	A	5.00	5.09	1.007865	1.025926		1.8	30
1,1-Dichloroethylene	A	5.00	4.87	1.125918	1.095905		-2.7	30
cis-1,2-Dichloroethylene	A	5.00	5.25	0.988136	1.036869		4.9	30
trans-1,2-Dichloroethylene	A	5.00	5.39	1.018061	1.097619		7.8	30
1,2-Dichloropropane	A	5.00	5.93	0.2543605	0.3014952		18.5	30
cis-1,3-Dichloropropene	A	5.00	6.08	0.3935901	0.4786911		21.6	30
trans-1,3-Dichloropropene	A	5.00	6.08	0.350459	0.4262141		21.6	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 1	A	5.00	5.22	1.768022	1.844604		4.3	30
1,4-Dioxane	A	5.00	5.74	0.1607629	0.1846736		14.9	30
Ethanol	A	5.00	5.55	0.1626733	0.1806053		11.0	30
Ethyl Acetate	A	5.00	5.20	0.2181169	0.2267641		4.0	30
Ethylbenzene	A	5.00	5.38	1.320541	1.420964		7.6	30
4-Ethyltoluene	A	5.00	5.55	1.333301	1.479759		11.0	30
Heptane	A	5.00	5.88	0.2163238	0.2543937		17.6	30
Hexachlorobutadiene	A	5.00	3.28	0.4316824	0.283219		-34.4	30 *
Hexane	L	5.00	5.27	0.7010749	0.7456702		5.4	30

con-test®
A Pace Analytical® Laboratory

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CONTINUING CALIBRATION CHECK

EPA TO-15

S085202-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	5.07	0.5317658	0.5391659		1.4	30
Isopropanol	A	5.00	5.36	1.0816	1.158837		7.1	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	5.20	2.038246	2.118454		3.9	30
Methylene Chloride	A	5.00	4.64	0.7621343	0.707658		-7.1	30
4-Methyl-2-pentanone (MIBK)	A	5.00	5.80	0.2070279	0.2403189		16.1	30
Naphthalene	A	5.00	3.23	0.9438203	0.6099572		-35.4	30 *
Propene	A	5.00	5.89	0.3658411	0.4306617		17.7	30
Styrene	A	5.00	5.48	0.7117754	0.780497		9.7	30
1,1,2,2-Tetrachloroethane	A	5.00	5.40	0.7493945	0.8094149		8.0	30
Tetrachloroethylene	A	5.00	5.40	0.3917065	0.4233242		8.1	30
Tetrahydrofuran	A	5.00	4.74	0.721119	0.6843442		-5.1	30
Toluene	A	5.00	5.28	1.018666	1.07476		5.5	30
1,2,4-Trichlorobenzene	A	5.00	4.44	0.3480916	0.3089099		-11.3	30
1,1,1-Trichloroethane	A	5.00	5.42	0.5043155	0.5468054		8.4	30
1,1,2-Trichloroethane	A	5.00	5.33	0.3354709	0.3573889		6.5	30
Trichloroethylene	A	5.00	5.34	0.332105	0.354967		6.9	30
Trichlorofluoromethane (Freon 11)	A	5.00	4.88	1.844271	1.798057		-2.5	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113	A	5.00	4.44	1.418208	1.257987		-11.3	30
1,2,4-Trimethylbenzene	A	5.00	5.50	1.114566	1.225373		9.9	30
1,3,5-Trimethylbenzene	A	5.00	5.47	1.126426	1.231972		9.4	30
Vinyl Acetate	A	5.00	5.16	1.280082	1.319965		3.1	30
Vinyl Chloride	A	5.00	5.29	0.6431254	0.6801739		5.8	30
m&p-Xylene	A	10.0	10.8	1.065519	1.154159		8.3	30
o-Xylene	A	5.00	5.36	1.040057	1.115441		7.2	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
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Email: info@contestlabs.com
http://www.contestlabs.com
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East Longmeadow, MA 01028

23C1351

CHAIN OF CUSTODY RECORD (AIR)

Company Name: EA Engineering, Science, and Technology
Address: 209 W. Jefferson St. Syracuse, NY 13202
Phone: (315) 415-7689
Project Name: ~~Taber Steel Anodizing~~ TresBon Cleaners
Project Location: ~~Niagara Falls, NY~~ Franklin Square, NY
Project Number: 16025523.0011
Project Manager: Michael Miller
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: L. Backman-Lowe

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To: michaelmiller@eaest.com
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	TO-15				" Hg			Please fill out completely, sign, date and retain the yellow copy for your records	
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☐ L/min	Code	☐ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
01	130058-IA-1-0323	1253 03/06	0935 03/07	1242		IA		X				-30	-13	-12.1	1618	3417
02	130058-IA-2-0323	1314 03/06	0940 03/07	1226		IA		X				-29	-14	-13.7	2157	3731
03	130058-OA-1-0323	1258 03/06	0936 03/07	1238		AMB		X				-29	-12	-11.5	1073	3732
04	130058-FD-1-0323	1253 03/06	0936 03/07	1243		IA		X				-28	-7	-3.0	2158	3508

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

Comments: *Cat B deliverable* requested

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature) L. Backman-Lowe	Date/Time: 03/08/23 1115	
Received by: (signature) PACE Pok	Date/Time: 3/8/23 11:18	
Relinquished by: (signature) PACE	Date/Time: 3/9/23 1410	
Received by: (signature)	Date/Time: 3/10/23	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Detection Limit Requirements
MA
CT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ Other

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NELAC and AIHA-LAP, LLC Accredited

Project Entity
☑ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

[redacted]

FedEx® Tracking

DELIVERED

Friday

3/10/2023 at 9:36 am

Signed for by: L.ARROYO

Obtain Proof of delivery

How was your delivery?

☆ ☆ ☆ ☆ ☆

DELIVERY STATUS

Delivered

TRACKING ID

771523410134

FROM
Newburgh, NY US

Label Created
3/9/2023 1:26 PM

PACKAGE RECEIVED BY FEDEX
NEWBURGH, NY
3/9/2023 4:16 PM

IN TRANSIT
WINDSOR LOCKS, CT
3/10/2023 7:26 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
3/10/2023 7:36 AM

DELIVERED
EAST LONGMEADOW, MA US

Delivered
3/10/2023 at 9:36 AM

↓ View travel history

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Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

Pace PEOPLE ADVANCING SCIENCE

Client EA Engineering, Science, and Technology

Project Tres Bon Cleaners

MCP/RCP Required ____

Deliverable Package Requirement CATB

Location Franklin Square, NY

PWSID# (When Applicable) ____

Arrival Method FedEx 7715 2341 0134

Received By / Date / Time LA 3-10-23 0935

Back-Sheet By / Date / Time TPH 3-10-23 1405

Temperature Method ____ # ____

Temp < 6° C ☐ Actual Temperature ____

Rush Samples: Yes / (No) ____ Notify ____

Short Hold: Yes / (No) ____ Notify ____

	True	False
Received on Ice	☐	☒
Received in Cooler	☐	☒
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Individually Certified Cans	☐	☒
Trip Blanks	☐	☒
COC Legible	☒	☐

Notes regarding Samples/COC outside of SOP:

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

Container	#	Size	Regulator	Duration
Summa Cans	4	6L	4	24hr
Tedlar Bags				
TO-17 Tubes				
Radiello				
Pufs/ TO-11				

Accessories			
Nut/Ferrule		IC Train	
Tubing			
T-Connector		Shipping Charges	
Syringe			
Tedlar			

Can #'s							
1	1618	9		17		25	
2	2157	10		18		26	
3	1073	11		19		27	
4	2158	12		20		28	
5		13		21		29	
6		14		22		30	
7		15		23		31	

Regs #'s							
1	3417	9		17		25	
2	3731	10		18		26	
3	3732	11		19		27	
4	3508	12		20		28	
5		13		21		29	
6		14		22		30	
7		15		23		31	

Unused Media							
1		9		17		25	
2		10		18		26	
3		11		19		27	
4		12		20		28	
5		13		21		29	
6		14		22		30	
7		15		23		31	

Pufs/TO-17's							
1		9		17		25	
2		10		18		26	
3		11		19		27	
4		12		20		28	
5		13		21		29	
6		14		22		30	
7		15		23		31	

Air Sampling Media Certificate of Analysis

Date Analyzed: 1/13/2023 **Batch #:** 23CC0028

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1618

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 3/29/23

Air Sampling Media Certificate of Analysis

Date Analyzed: 1/16/2023 **Batch #:** 23CC0029

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC2157, BC1073

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
0.05	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 3/29/23

Air Sampling Media Certificate of Analysis

Date Analyzed: 1/18/2023 **Batch #:** 23CC0038

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC2158

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 3/29/23

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March 29, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

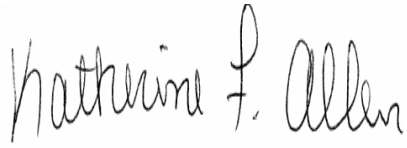
Project Location: Wappingers Falls, NY
Client Job Number:
Project Number: 1602523.0008
Laboratory Work Order Number: 23C1364

Enclosed are results of analyses for samples as received by the laboratory on March 10, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager



QA Officer
Katherine Allen



Laboratory Manager
Daren Damboragian

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 3/29/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 1602523.0008

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23C1364

The results of analyses performed on the following samples submitted to Con-Test, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Wappingers Falls, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
314058-OA-1-0323	23C1364-01	Ambient Air		EPA TO-15	
314058-IA-1-0323	23C1364-02	Indoor air		EPA TO-15	
314058-IA-2-0323	23C1364-03	Indoor air		EPA TO-15	
314058-IA-4-0323	23C1364-04	Indoor air		EPA TO-15	
314058-IA-5-0323	23C1364-05	Indoor air		EPA TO-15	
314058-FD-1-0323	23C1364-06	Indoor air		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

L-01 Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Benzyl chloride

B335600-BS1

L-03 Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Hexachlorobutadiene, Naphthalene

23C1364-01[314058-OA-1-0323], 23C1364-02[314058-IA-1-0323], 23C1364-03[314058-IA-2-0323], 23C1364-04[314058-IA-4-0323], 23C1364-05[314058-IA-5-0323], 23C1364-06[314058-FD-1-0323], B335600-BLK1, B335600-BS1

V-05 Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

Hexachlorobutadiene, Naphthalene

23C1364-01[314058-OA-1-0323], 23C1364-02[314058-IA-1-0323], 23C1364-03[314058-IA-2-0323], 23C1364-04[314058-IA-4-0323], 23C1364-05[314058-IA-5-0323], 23C1364-06[314058-FD-1-0323], B335600-BLK1, B335600-BS1, S085202-CCV1

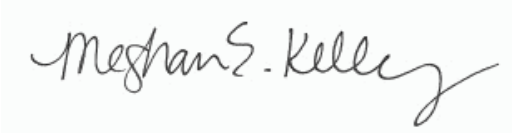
V-20 Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Benzyl chloride

B335600-BS1, S085202-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-OA-1-0323
Sample ID: 23C1364-01
Sample Matrix: Ambient Air
Sampled: 3/8/2023 09:35

Sample Description/Location:
Sub Description/Location:
Canister ID: 2923
Canister Size: 6 liter
Flow Controller ID: 4871
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -5.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	Results	RL	MDL	Flag/Qual	Results	RL	MDL	Dilution	Analyzed	Analyst
Acetone	4.1	1.4	0.84		9.7	3.3	2.0	0.698	3/23/23 16:51	CMR
Benzene	0.12	0.035	0.026		0.40	0.11	0.084	0.698	3/23/23 16:51	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.698	3/23/23 16:51	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.698	3/23/23 16:51	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.25	0.698	3/23/23 16:51	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.698	3/23/23 16:51	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.698	3/23/23 16:51	CMR
2-Butanone (MEK)	ND	1.4	0.37		ND	4.1	1.1	0.698	3/23/23 16:51	CMR
Carbon Disulfide	ND	0.35	0.032		ND	1.1	0.10	0.698	3/23/23 16:51	CMR
Carbon Tetrachloride	0.075	0.035	0.028		0.47	0.22	0.17	0.698	3/23/23 16:51	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.698	3/23/23 16:51	CMR
Chloroethane	ND	0.035	0.031		ND	0.092	0.082	0.698	3/23/23 16:51	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.698	3/23/23 16:51	CMR
Chloromethane	0.57	0.070	0.028		1.2	0.14	0.057	0.698	3/23/23 16:51	CMR
Cyclohexane	ND	0.035	0.021		ND	0.12	0.073	0.698	3/23/23 16:51	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.698	3/23/23 16:51	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.698	3/23/23 16:51	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.698	3/23/23 16:51	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.698	3/23/23 16:51	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.698	3/23/23 16:51	CMR
Dichlorodifluoromethane (Freon 12)	0.49	0.035	0.034		2.4	0.17	0.17	0.698	3/23/23 16:51	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.698	3/23/23 16:51	CMR
1,2-Dichloroethane	ND	0.035	0.032		ND	0.14	0.13	0.698	3/23/23 16:51	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 16:51	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.698	3/23/23 16:51	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 16:51	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.698	3/23/23 16:51	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.698	3/23/23 16:51	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.698	3/23/23 16:51	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.698	3/23/23 16:51	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.698	3/23/23 16:51	CMR
Ethanol	1.7	1.4	0.62		3.2	2.6	1.2	0.698	3/23/23 16:51	CMR
Ethyl Acetate	ND	0.35	0.18		ND	1.3	0.64	0.698	3/23/23 16:51	CMR
Ethylbenzene	ND	0.035	0.020		ND	0.15	0.088	0.698	3/23/23 16:51	CMR
4-Ethyltoluene	ND	0.035	0.021		ND	0.17	0.11	0.698	3/23/23 16:51	CMR
Heptane	ND	0.035	0.022		ND	0.14	0.091	0.698	3/23/23 16:51	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.698	3/23/23 16:51	CMR
Hexane	ND	1.4	0.18		ND	4.9	0.64	0.698	3/23/23 16:51	CMR
2-Hexanone (MBK)	ND	0.035	0.017		ND	0.14	0.071	0.698	3/23/23 16:51	CMR
Isopropanol	0.57	1.4	0.24	J	1.4	3.4	0.59	0.698	3/23/23 16:51	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.698	3/23/23 16:51	CMR
Methylene Chloride	ND	0.35	0.16		ND	1.2	0.56	0.698	3/23/23 16:51	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.698	3/23/23 16:51	CMR
Naphthalene	ND	0.035	0.026	L-03, V-05	ND	0.18	0.14	0.698	3/23/23 16:51	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.698	3/23/23 16:51	CMR
Styrene	ND	0.035	0.018		ND	0.15	0.078	0.698	3/23/23 16:51	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.698	3/23/23 16:51	CMR

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-OA-1-0323
Sample ID: 23C1364-01
Sample Matrix: Ambient Air
Sampled: 3/8/2023 09:35

Sample Description/Location:
Sub Description/Location:
Canister ID: 2923
Canister Size: 6 liter
Flow Controller ID: 4871
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -5.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	ND	0.035	0.027		ND	0.24	0.18	0.698	3/23/23 16:51	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.698	3/23/23 16:51	CMR
Toluene	0.049	0.035	0.020		0.18	0.13	0.075	0.698	3/23/23 16:51	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.698	3/23/23 16:51	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.698	3/23/23 16:51	CMR
1,1,2-Trichloroethane	ND	0.035	0.025		ND	0.19	0.13	0.698	3/23/23 16:51	CMR
Trichloroethylene	ND	0.035	0.024		ND	0.19	0.13	0.698	3/23/23 16:51	CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.041		1.2	0.78	0.23	0.698	3/23/23 16:51	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.063	0.14	0.039	J	0.48	1.1	0.30	0.698	3/23/23 16:51	CMR
1,2,4-Trimethylbenzene	ND	0.035	0.015		ND	0.17	0.076	0.698	3/23/23 16:51	CMR
1,3,5-Trimethylbenzene	ND	0.035	0.018		ND	0.17	0.091	0.698	3/23/23 16:51	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.698	3/23/23 16:51	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.698	3/23/23 16:51	CMR
m&p-Xylene	ND	0.070	0.039		ND	0.30	0.17	0.698	3/23/23 16:51	CMR
o-Xylene	ND	0.035	0.018		ND	0.15	0.078	0.698	3/23/23 16:51	CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	108	70-130		3/23/23 16:51

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-1-0323
Sample ID: 23C1364-02
Sample Matrix: Indoor air
Sampled: 3/8/2023 09:38

Sample Description/Location:
Sub Description/Location:
Canister ID: 2957
Canister Size: 6 liter
Flow Controller ID: 4853
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -10
Receipt Vacuum(in Hg): -7.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	1.4	0.84		ND	3.3	2.0	0.698	3/23/23 17:22	CMR
Benzene	0.28	0.035	0.026		0.89	0.11	0.084	0.698	3/23/23 17:22	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.698	3/23/23 17:22	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.698	3/23/23 17:22	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.25	0.698	3/23/23 17:22	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.698	3/23/23 17:22	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.698	3/23/23 17:22	CMR
2-Butanone (MEK)	ND	1.4	0.37		ND	4.1	1.1	0.698	3/23/23 17:22	CMR
Carbon Disulfide	ND	0.35	0.032		ND	1.1	0.10	0.698	3/23/23 17:22	CMR
Carbon Tetrachloride	0.082	0.035	0.028		0.51	0.22	0.17	0.698	3/23/23 17:22	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.698	3/23/23 17:22	CMR
Chloroethane	ND	0.035	0.031		ND	0.092	0.082	0.698	3/23/23 17:22	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.698	3/23/23 17:22	CMR
Chloromethane	0.58	0.070	0.028		1.2	0.14	0.057	0.698	3/23/23 17:22	CMR
Cyclohexane	0.24	0.035	0.021		0.84	0.12	0.073	0.698	3/23/23 17:22	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.698	3/23/23 17:22	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.698	3/23/23 17:22	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.698	3/23/23 17:22	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.698	3/23/23 17:22	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.698	3/23/23 17:22	CMR
Dichlorodifluoromethane (Freon 12)	0.52	0.035	0.034		2.6	0.17	0.17	0.698	3/23/23 17:22	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.698	3/23/23 17:22	CMR
1,2-Dichloroethane	ND	0.035	0.032		ND	0.14	0.13	0.698	3/23/23 17:22	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 17:22	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.698	3/23/23 17:22	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 17:22	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.698	3/23/23 17:22	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.698	3/23/23 17:22	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.698	3/23/23 17:22	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.698	3/23/23 17:22	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.698	3/23/23 17:22	CMR
Ethanol	11	1.4	0.62		20	2.6	1.2	0.698	3/23/23 17:22	CMR
Ethyl Acetate	ND	0.35	0.18		ND	1.3	0.64	0.698	3/23/23 17:22	CMR
Ethylbenzene	0.15	0.035	0.020		0.64	0.15	0.088	0.698	3/23/23 17:22	CMR
4-Ethyltoluene	0.048	0.035	0.021		0.24	0.17	0.11	0.698	3/23/23 17:22	CMR
Heptane	0.25	0.035	0.022		1.0	0.14	0.091	0.698	3/23/23 17:22	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.698	3/23/23 17:22	CMR
Hexane	0.57	1.4	0.18	J	2.0	4.9	0.64	0.698	3/23/23 17:22	CMR
2-Hexanone (MBK)	ND	0.035	0.017		ND	0.14	0.071	0.698	3/23/23 17:22	CMR
Isopropanol	1.5	1.4	0.24		3.7	3.4	0.59	0.698	3/23/23 17:22	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.698	3/23/23 17:22	CMR
Methylene Chloride	ND	0.35	0.16		ND	1.2	0.56	0.698	3/23/23 17:22	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.698	3/23/23 17:22	CMR
Naphthalene	ND	0.035	0.026	L-03, V-05	ND	0.18	0.14	0.698	3/23/23 17:22	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.698	3/23/23 17:22	CMR
Styrene	0.020	0.035	0.018	J	0.083	0.15	0.078	0.698	3/23/23 17:22	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.698	3/23/23 17:22	CMR

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-1-0323
Sample ID: 23C1364-02
Sample Matrix: Indoor air
Sampled: 3/8/2023 09:38

Sample Description/Location:
Sub Description/Location:
Canister ID: 2957
Canister Size: 6 liter
Flow Controller ID: 4853
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -10
Receipt Vacuum(in Hg): -7.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	ND	0.035	0.027		ND	0.24	0.18	0.698	3/23/23 17:22	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.698	3/23/23 17:22	CMR
Toluene	1.1	0.035	0.020		4.0	0.13	0.075	0.698	3/23/23 17:22	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.698	3/23/23 17:22	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.698	3/23/23 17:22	CMR
1,1,2-Trichloroethane	ND	0.035	0.025		ND	0.19	0.13	0.698	3/23/23 17:22	CMR
Trichloroethylene	ND	0.035	0.024		ND	0.19	0.13	0.698	3/23/23 17:22	CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.041		1.2	0.78	0.23	0.698	3/23/23 17:22	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.061	0.14	0.039	J	0.47	1.1	0.30	0.698	3/23/23 17:22	CMR
1,2,4-Trimethylbenzene	0.17	0.035	0.015		0.85	0.17	0.076	0.698	3/23/23 17:22	CMR
1,3,5-Trimethylbenzene	0.050	0.035	0.018		0.24	0.17	0.091	0.698	3/23/23 17:22	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.698	3/23/23 17:22	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.698	3/23/23 17:22	CMR
m&p-Xylene	0.47	0.070	0.039		2.0	0.30	0.17	0.698	3/23/23 17:22	CMR
o-Xylene	0.17	0.035	0.018		0.73	0.15	0.078	0.698	3/23/23 17:22	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	108	70-130	3/23/23 17:22

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-2-0323
Sample ID: 23C1364-03
Sample Matrix: Indoor air
Sampled: 3/8/2023 10:05

Sample Description/Location:
Sub Description/Location:
Canister ID: 2943
Canister Size: 6 liter
Flow Controller ID: 4863
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -6.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	39	8.0	4.8		92	19	11	4	3/24/23 21:07	TPH
Benzene	0.50	0.035	0.026		1.6	0.11	0.084	0.698	3/23/23 17:53	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.698	3/23/23 17:53	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.698	3/23/23 17:53	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.25	0.698	3/23/23 17:53	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.698	3/23/23 17:53	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.698	3/23/23 17:53	CMR
2-Butanone (MEK)	ND	1.4	0.37		ND	4.1	1.1	0.698	3/23/23 17:53	CMR
Carbon Disulfide	ND	0.35	0.032		ND	1.1	0.10	0.698	3/23/23 17:53	CMR
Carbon Tetrachloride	0.079	0.035	0.028		0.50	0.22	0.17	0.698	3/23/23 17:53	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.698	3/23/23 17:53	CMR
Chloroethane	ND	0.035	0.031		ND	0.092	0.082	0.698	3/23/23 17:53	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.698	3/23/23 17:53	CMR
Chloromethane	0.58	0.070	0.028		1.2	0.14	0.057	0.698	3/23/23 17:53	CMR
Cyclohexane	0.40	0.035	0.021		1.4	0.12	0.073	0.698	3/23/23 17:53	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.698	3/23/23 17:53	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.698	3/23/23 17:53	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.698	3/23/23 17:53	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.698	3/23/23 17:53	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.698	3/23/23 17:53	CMR
Dichlorodifluoromethane (Freon 12)	0.49	0.035	0.034		2.4	0.17	0.17	0.698	3/23/23 17:53	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.698	3/23/23 17:53	CMR
1,2-Dichloroethane	ND	0.035	0.032		ND	0.14	0.13	0.698	3/23/23 17:53	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 17:53	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.698	3/23/23 17:53	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 17:53	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.698	3/23/23 17:53	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.698	3/23/23 17:53	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.698	3/23/23 17:53	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.698	3/23/23 17:53	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.698	3/23/23 17:53	CMR
Ethanol	11	1.4	0.62		20	2.6	1.2	0.698	3/23/23 17:53	CMR
Ethyl Acetate	ND	0.35	0.18		ND	1.3	0.64	0.698	3/23/23 17:53	CMR
Ethylbenzene	0.28	0.035	0.020		1.2	0.15	0.088	0.698	3/23/23 17:53	CMR
4-Ethyltoluene	0.091	0.035	0.021		0.45	0.17	0.11	0.698	3/23/23 17:53	CMR
Heptane	0.41	0.035	0.022		1.7	0.14	0.091	0.698	3/23/23 17:53	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.698	3/23/23 17:53	CMR
Hexane	1.2	1.4	0.18	J	4.3	4.9	0.64	0.698	3/23/23 17:53	CMR
2-Hexanone (MBK)	ND	0.035	0.017		ND	0.14	0.071	0.698	3/23/23 17:53	CMR
Isopropanol	0.49	1.4	0.24	J	1.2	3.4	0.59	0.698	3/23/23 17:53	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.698	3/23/23 17:53	CMR
Methylene Chloride	ND	0.35	0.16		ND	1.2	0.56	0.698	3/23/23 17:53	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.698	3/23/23 17:53	CMR
Naphthalene	0.040	0.035	0.026	L-03, V-05	0.21	0.18	0.14	0.698	3/23/23 17:53	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.698	3/23/23 17:53	CMR
Styrene	1.7	0.035	0.018		7.3	0.15	0.078	0.698	3/23/23 17:53	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.698	3/23/23 17:53	CMR

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-2-0323
Sample ID: 23C1364-03
Sample Matrix: Indoor air
Sampled: 3/8/2023 10:05

Sample Description/Location:
Sub Description/Location:
Canister ID: 2943
Canister Size: 6 liter
Flow Controller ID: 4863
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -9
Receipt Vacuum(in Hg): -6.6
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	ND	0.035	0.027		ND	0.24	0.18	0.698	3/23/23 17:53	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.698	3/23/23 17:53	CMR
Toluene	1.7	0.035	0.020		6.4	0.13	0.075	0.698	3/23/23 17:53	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.698	3/23/23 17:53	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.698	3/23/23 17:53	CMR
1,1,2-Trichloroethane	ND	0.035	0.025		ND	0.19	0.13	0.698	3/23/23 17:53	CMR
Trichloroethylene	ND	0.035	0.024		ND	0.19	0.13	0.698	3/23/23 17:53	CMR
Trichlorofluoromethane (Freon 11)	0.24	0.14	0.041		1.3	0.78	0.23	0.698	3/23/23 17:53	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.063	0.14	0.039	J	0.48	1.1	0.30	0.698	3/23/23 17:53	CMR
1,2,4-Trimethylbenzene	0.39	0.035	0.015		1.9	0.17	0.076	0.698	3/23/23 17:53	CMR
1,3,5-Trimethylbenzene	0.098	0.035	0.018		0.48	0.17	0.091	0.698	3/23/23 17:53	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.698	3/23/23 17:53	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.698	3/23/23 17:53	CMR
m&p-Xylene	0.95	0.070	0.039		4.1	0.30	0.17	0.698	3/23/23 17:53	CMR
o-Xylene	0.41	0.035	0.018		1.8	0.15	0.078	0.698	3/23/23 17:53	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	106	70-130	3/24/23 21:07
4-Bromofluorobenzene (1)	109	70-130	3/23/23 17:53

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-4-0323
Sample ID: 23C1364-04
Sample Matrix: Indoor air
Sampled: 3/8/2023 09:37

Sample Description/Location:
Sub Description/Location:
Canister ID: 2946
Canister Size: 6 liter
Flow Controller ID: 4864
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7.5
Receipt Vacuum(in Hg): -7.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	1.4	0.84		ND	3.3	2.0	0.698	3/23/23 18:25	CMR
Benzene	0.41	0.035	0.026		1.3	0.11	0.084	0.698	3/23/23 18:25	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.698	3/23/23 18:25	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.698	3/23/23 18:25	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.25	0.698	3/23/23 18:25	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.698	3/23/23 18:25	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.698	3/23/23 18:25	CMR
2-Butanone (MEK)	ND	1.4	0.37		ND	4.1	1.1	0.698	3/23/23 18:25	CMR
Carbon Disulfide	ND	0.35	0.032		ND	1.1	0.10	0.698	3/23/23 18:25	CMR
Carbon Tetrachloride	0.082	0.035	0.028		0.51	0.22	0.17	0.698	3/23/23 18:25	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.698	3/23/23 18:25	CMR
Chloroethane	ND	0.035	0.031		ND	0.092	0.082	0.698	3/23/23 18:25	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.698	3/23/23 18:25	CMR
Chloromethane	0.58	0.070	0.028		1.2	0.14	0.057	0.698	3/23/23 18:25	CMR
Cyclohexane	0.56	0.035	0.021		1.9	0.12	0.073	0.698	3/23/23 18:25	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.698	3/23/23 18:25	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.698	3/23/23 18:25	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.698	3/23/23 18:25	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.698	3/23/23 18:25	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.698	3/23/23 18:25	CMR
Dichlorodifluoromethane (Freon 12)	0.59	0.035	0.034		2.9	0.17	0.17	0.698	3/23/23 18:25	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.698	3/23/23 18:25	CMR
1,2-Dichloroethane	0.077	0.035	0.032		0.31	0.14	0.13	0.698	3/23/23 18:25	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 18:25	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.698	3/23/23 18:25	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 18:25	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.698	3/23/23 18:25	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.698	3/23/23 18:25	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.698	3/23/23 18:25	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.698	3/23/23 18:25	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.698	3/23/23 18:25	CMR
Ethanol	13	1.4	0.62		24	2.6	1.2	0.698	3/23/23 18:25	CMR
Ethyl Acetate	ND	0.35	0.18		ND	1.3	0.64	0.698	3/23/23 18:25	CMR
Ethylbenzene	0.36	0.035	0.020		1.6	0.15	0.088	0.698	3/23/23 18:25	CMR
4-Ethyltoluene	0.070	0.035	0.021		0.34	0.17	0.11	0.698	3/23/23 18:25	CMR
Heptane	0.48	0.035	0.022		2.0	0.14	0.091	0.698	3/23/23 18:25	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.698	3/23/23 18:25	CMR
Hexane	0.94	1.4	0.18	J	3.3	4.9	0.64	0.698	3/23/23 18:25	CMR
2-Hexanone (MBK)	ND	0.035	0.017		ND	0.14	0.071	0.698	3/23/23 18:25	CMR
Isopropanol	0.30	1.4	0.24	J	0.74	3.4	0.59	0.698	3/23/23 18:25	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.698	3/23/23 18:25	CMR
Methylene Chloride	ND	0.35	0.16		ND	1.2	0.56	0.698	3/23/23 18:25	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.698	3/23/23 18:25	CMR
Naphthalene	0.027	0.035	0.026	L-03, V-05, J	0.14	0.18	0.14	0.698	3/23/23 18:25	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.698	3/23/23 18:25	CMR
Styrene	0.057	0.035	0.018		0.24	0.15	0.078	0.698	3/23/23 18:25	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.698	3/23/23 18:25	CMR

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-4-0323
Sample ID: 23C1364-04
Sample Matrix: Indoor air
Sampled: 3/8/2023 09:37

Sample Description/Location:
Sub Description/Location:
Canister ID: 2946
Canister Size: 6 liter
Flow Controller ID: 4864
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7.5
Receipt Vacuum(in Hg): -7.2
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	ND	0.035	0.027		ND	0.24	0.18	0.698	3/23/23 18:25	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.698	3/23/23 18:25	CMR
Toluene	2.0	0.035	0.020		7.6	0.13	0.075	0.698	3/23/23 18:25	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.698	3/23/23 18:25	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.698	3/23/23 18:25	CMR
1,1,2-Trichloroethane	ND	0.035	0.025		ND	0.19	0.13	0.698	3/23/23 18:25	CMR
Trichloroethylene	ND	0.035	0.024		ND	0.19	0.13	0.698	3/23/23 18:25	CMR
Trichlorofluoromethane (Freon 11)	0.22	0.14	0.041		1.2	0.78	0.23	0.698	3/23/23 18:25	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.063	0.14	0.039	J	0.48	1.1	0.30	0.698	3/23/23 18:25	CMR
1,2,4-Trimethylbenzene	0.25	0.035	0.015		1.2	0.17	0.076	0.698	3/23/23 18:25	CMR
1,3,5-Trimethylbenzene	0.064	0.035	0.018		0.32	0.17	0.091	0.698	3/23/23 18:25	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.698	3/23/23 18:25	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.698	3/23/23 18:25	CMR
m&p-Xylene	1.1	0.070	0.039		4.6	0.30	0.17	0.698	3/23/23 18:25	CMR
o-Xylene	0.38	0.035	0.018		1.6	0.15	0.078	0.698	3/23/23 18:25	CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	109	70-130		3/23/23 18:25

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-5-0323
Sample ID: 23C1364-05
Sample Matrix: Indoor air
Sampled: 3/8/2023 09:39

Sample Description/Location:
Sub Description/Location:
Canister ID: 2939
Canister Size: 6 liter
Flow Controller ID: 4862
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -11
Receipt Vacuum(in Hg): -7.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	1.4	0.84		ND	3.3	2.0	0.698	3/23/23 18:56	CMR
Benzene	0.32	0.035	0.026		1.0	0.11	0.084	0.698	3/23/23 18:56	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.698	3/23/23 18:56	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.698	3/23/23 18:56	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.25	0.698	3/23/23 18:56	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.698	3/23/23 18:56	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.698	3/23/23 18:56	CMR
2-Butanone (MEK)	ND	1.4	0.37		ND	4.1	1.1	0.698	3/23/23 18:56	CMR
Carbon Disulfide	ND	0.35	0.032		ND	1.1	0.10	0.698	3/23/23 18:56	CMR
Carbon Tetrachloride	0.080	0.035	0.028		0.50	0.22	0.17	0.698	3/23/23 18:56	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.698	3/23/23 18:56	CMR
Chloroethane	ND	0.035	0.031		ND	0.092	0.082	0.698	3/23/23 18:56	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.698	3/23/23 18:56	CMR
Chloromethane	0.56	0.070	0.028		1.2	0.14	0.057	0.698	3/23/23 18:56	CMR
Cyclohexane	0.29	0.035	0.021		0.99	0.12	0.073	0.698	3/23/23 18:56	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.698	3/23/23 18:56	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.698	3/23/23 18:56	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.698	3/23/23 18:56	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.698	3/23/23 18:56	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.698	3/23/23 18:56	CMR
Dichlorodifluoromethane (Freon 12)	0.54	0.035	0.034		2.7	0.17	0.17	0.698	3/23/23 18:56	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.698	3/23/23 18:56	CMR
1,2-Dichloroethane	ND	0.035	0.032		ND	0.14	0.13	0.698	3/23/23 18:56	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 18:56	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.698	3/23/23 18:56	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 18:56	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.698	3/23/23 18:56	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.698	3/23/23 18:56	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.698	3/23/23 18:56	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.698	3/23/23 18:56	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.698	3/23/23 18:56	CMR
Ethanol	13	1.4	0.62		24	2.6	1.2	0.698	3/23/23 18:56	CMR
Ethyl Acetate	ND	0.35	0.18		ND	1.3	0.64	0.698	3/23/23 18:56	CMR
Ethylbenzene	0.18	0.035	0.020		0.76	0.15	0.088	0.698	3/23/23 18:56	CMR
4-Ethyltoluene	0.057	0.035	0.021		0.28	0.17	0.11	0.698	3/23/23 18:56	CMR
Heptane	0.29	0.035	0.022		1.2	0.14	0.091	0.698	3/23/23 18:56	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.698	3/23/23 18:56	CMR
Hexane	0.65	1.4	0.18	J	2.3	4.9	0.64	0.698	3/23/23 18:56	CMR
2-Hexanone (MBK)	ND	0.035	0.017		ND	0.14	0.071	0.698	3/23/23 18:56	CMR
Isopropanol	0.35	1.4	0.24	J	0.85	3.4	0.59	0.698	3/23/23 18:56	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.698	3/23/23 18:56	CMR
Methylene Chloride	ND	0.35	0.16		ND	1.2	0.56	0.698	3/23/23 18:56	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.698	3/23/23 18:56	CMR
Naphthalene	0.43	0.035	0.026	L-03, V-05	2.3	0.18	0.14	0.698	3/23/23 18:56	CMR
Propene	1.9	1.4	0.31		3.2	2.4	0.53	0.698	3/23/23 18:56	CMR
Styrene	0.020	0.035	0.018	J	0.083	0.15	0.078	0.698	3/23/23 18:56	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.698	3/23/23 18:56	CMR

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-IA-5-0323
Sample ID: 23C1364-05
Sample Matrix: Indoor air
Sampled: 3/8/2023 09:39

Sample Description/Location:
Sub Description/Location:
Canister ID: 2939
Canister Size: 6 liter
Flow Controller ID: 4862
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -11
Receipt Vacuum(in Hg): -7.0
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	ND	0.035	0.027		ND	0.24	0.18	0.698	3/23/23 18:56	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.698	3/23/23 18:56	CMR
Toluene	1.2	0.035	0.020		4.6	0.13	0.075	0.698	3/23/23 18:56	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.698	3/23/23 18:56	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.698	3/23/23 18:56	CMR
1,1,2-Trichloroethane	ND	0.035	0.025		ND	0.19	0.13	0.698	3/23/23 18:56	CMR
Trichloroethylene	ND	0.035	0.024		ND	0.19	0.13	0.698	3/23/23 18:56	CMR
Trichlorofluoromethane (Freon 11)	0.21	0.14	0.041		1.2	0.78	0.23	0.698	3/23/23 18:56	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.061	0.14	0.039	J	0.47	1.1	0.30	0.698	3/23/23 18:56	CMR
1,2,4-Trimethylbenzene	0.21	0.035	0.015		1.0	0.17	0.076	0.698	3/23/23 18:56	CMR
1,3,5-Trimethylbenzene	0.052	0.035	0.018		0.25	0.17	0.091	0.698	3/23/23 18:56	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.698	3/23/23 18:56	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.698	3/23/23 18:56	CMR
m&p-Xylene	0.54	0.070	0.039		2.3	0.30	0.17	0.698	3/23/23 18:56	CMR
o-Xylene	0.20	0.035	0.018		0.86	0.15	0.078	0.698	3/23/23 18:56	CMR

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	108	70-130		3/23/23 18:56

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-FD-1-0323
Sample ID: 23C1364-06
Sample Matrix: Indoor air
Sampled: 3/8/2023 10:06

Sample Description/Location:
Sub Description/Location:
Canister ID: 2931
Canister Size: 6 liter
Flow Controller ID: 4866
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7.5
Receipt Vacuum(in Hg): -5.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	39	8.0	4.8		91	19	11	4	3/24/23 21:31	TPH
Benzene	0.52	0.035	0.026		1.7	0.11	0.084	0.698	3/23/23 19:27	CMR
Benzyl chloride	ND	0.035	0.031		ND	0.18	0.16	0.698	3/23/23 19:27	CMR
Bromodichloromethane	ND	0.035	0.024		ND	0.23	0.16	0.698	3/23/23 19:27	CMR
Bromoform	ND	0.035	0.024		ND	0.36	0.25	0.698	3/23/23 19:27	CMR
Bromomethane	ND	0.035	0.023		ND	0.14	0.090	0.698	3/23/23 19:27	CMR
1,3-Butadiene	ND	0.035	0.029		ND	0.077	0.065	0.698	3/23/23 19:27	CMR
2-Butanone (MEK)	ND	1.4	0.37		ND	4.1	1.1	0.698	3/23/23 19:27	CMR
Carbon Disulfide	ND	0.35	0.032		ND	1.1	0.10	0.698	3/23/23 19:27	CMR
Carbon Tetrachloride	0.080	0.035	0.028		0.50	0.22	0.17	0.698	3/23/23 19:27	CMR
Chlorobenzene	ND	0.035	0.023		ND	0.16	0.11	0.698	3/23/23 19:27	CMR
Chloroethane	ND	0.035	0.031		ND	0.092	0.082	0.698	3/23/23 19:27	CMR
Chloroform	ND	0.035	0.033		ND	0.17	0.16	0.698	3/23/23 19:27	CMR
Chloromethane	0.58	0.070	0.028		1.2	0.14	0.057	0.698	3/23/23 19:27	CMR
Cyclohexane	0.42	0.035	0.021		1.5	0.12	0.073	0.698	3/23/23 19:27	CMR
Dibromochloromethane	ND	0.035	0.023		ND	0.30	0.20	0.698	3/23/23 19:27	CMR
1,2-Dibromoethane (EDB)	ND	0.035	0.021		ND	0.27	0.16	0.698	3/23/23 19:27	CMR
1,2-Dichlorobenzene	ND	0.035	0.020		ND	0.21	0.12	0.698	3/23/23 19:27	CMR
1,3-Dichlorobenzene	ND	0.035	0.019		ND	0.21	0.12	0.698	3/23/23 19:27	CMR
1,4-Dichlorobenzene	ND	0.035	0.023		ND	0.21	0.14	0.698	3/23/23 19:27	CMR
Dichlorodifluoromethane (Freon 12)	0.50	0.035	0.034		2.5	0.17	0.17	0.698	3/23/23 19:27	CMR
1,1-Dichloroethane	ND	0.035	0.030		ND	0.14	0.12	0.698	3/23/23 19:27	CMR
1,2-Dichloroethane	ND	0.035	0.032		ND	0.14	0.13	0.698	3/23/23 19:27	CMR
1,1-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 19:27	CMR
cis-1,2-Dichloroethylene	ND	0.035	0.025		ND	0.14	0.10	0.698	3/23/23 19:27	CMR
trans-1,2-Dichloroethylene	ND	0.035	0.027		ND	0.14	0.11	0.698	3/23/23 19:27	CMR
1,2-Dichloropropane	ND	0.035	0.019		ND	0.16	0.087	0.698	3/23/23 19:27	CMR
cis-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.082	0.698	3/23/23 19:27	CMR
trans-1,3-Dichloropropene	ND	0.035	0.018		ND	0.16	0.081	0.698	3/23/23 19:27	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.035	0.034		ND	0.24	0.24	0.698	3/23/23 19:27	CMR
1,4-Dioxane	ND	0.35	0.029		ND	1.3	0.10	0.698	3/23/23 19:27	CMR
Ethanol	11	1.4	0.62		21	2.6	1.2	0.698	3/23/23 19:27	CMR
Ethyl Acetate	ND	0.35	0.18		ND	1.3	0.64	0.698	3/23/23 19:27	CMR
Ethylbenzene	0.29	0.035	0.020		1.2	0.15	0.088	0.698	3/23/23 19:27	CMR
4-Ethyltoluene	0.091	0.035	0.021		0.45	0.17	0.11	0.698	3/23/23 19:27	CMR
Heptane	0.43	0.035	0.022		1.8	0.14	0.091	0.698	3/23/23 19:27	CMR
Hexachlorobutadiene	ND	0.035	0.029	L-03, V-05	ND	0.37	0.31	0.698	3/23/23 19:27	CMR
Hexane	1.3	1.4	0.18	J	4.4	4.9	0.64	0.698	3/23/23 19:27	CMR
2-Hexanone (MBK)	ND	0.035	0.017		ND	0.14	0.071	0.698	3/23/23 19:27	CMR
Isopropanol	0.57	1.4	0.24	J	1.4	3.4	0.59	0.698	3/23/23 19:27	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.035	0.027		ND	0.13	0.097	0.698	3/23/23 19:27	CMR
Methylene Chloride	ND	0.35	0.16		ND	1.2	0.56	0.698	3/23/23 19:27	CMR
4-Methyl-2-pentanone (MIBK)	ND	0.035	0.019		ND	0.14	0.076	0.698	3/23/23 19:27	CMR
Naphthalene	0.033	0.035	0.026	L-03, V-05, J	0.17	0.18	0.14	0.698	3/23/23 19:27	CMR
Propene	ND	1.4	0.31		ND	2.4	0.53	0.698	3/23/23 19:27	CMR
Styrene	1.7	0.035	0.018		7.2	0.15	0.078	0.698	3/23/23 19:27	CMR
1,1,2,2-Tetrachloroethane	ND	0.035	0.019		ND	0.24	0.13	0.698	3/23/23 19:27	CMR

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ANALYTICAL RESULTS

Project Location: Wappingers Falls, NY
Date Received: 3/10/2023
Field Sample #: 314058-FD-1-0323
Sample ID: 23C1364-06
Sample Matrix: Indoor air
Sampled: 3/8/2023 10:06

Sample Description/Location:
Sub Description/Location:
Canister ID: 2931
Canister Size: 6 liter
Flow Controller ID: 4866
Sample Type: 24 hr

Work Order: 23C1364
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -7.5
Receipt Vacuum(in Hg): -5.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Tetrachloroethylene	ND	0.035	0.027		ND	0.24	0.18	0.698	3/23/23 19:27	CMR
Tetrahydrofuran	ND	0.35	0.057		ND	1.0	0.17	0.698	3/23/23 19:27	CMR
Toluene	1.7	0.035	0.020		6.5	0.13	0.075	0.698	3/23/23 19:27	CMR
1,2,4-Trichlorobenzene	ND	0.035	0.032		ND	0.26	0.24	0.698	3/23/23 19:27	CMR
1,1,1-Trichloroethane	ND	0.035	0.027		ND	0.19	0.15	0.698	3/23/23 19:27	CMR
1,1,2-Trichloroethane	ND	0.035	0.025		ND	0.19	0.13	0.698	3/23/23 19:27	CMR
Trichloroethylene	ND	0.035	0.024		ND	0.19	0.13	0.698	3/23/23 19:27	CMR
Trichlorofluoromethane (Freon 11)	0.24	0.14	0.041		1.4	0.78	0.23	0.698	3/23/23 19:27	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.064	0.14	0.039	J	0.49	1.1	0.30	0.698	3/23/23 19:27	CMR
1,2,4-Trimethylbenzene	0.39	0.035	0.015		1.9	0.17	0.076	0.698	3/23/23 19:27	CMR
1,3,5-Trimethylbenzene	0.096	0.035	0.018		0.47	0.17	0.091	0.698	3/23/23 19:27	CMR
Vinyl Acetate	ND	0.70	0.19		ND	2.5	0.66	0.698	3/23/23 19:27	CMR
Vinyl Chloride	ND	0.035	0.031		ND	0.089	0.080	0.698	3/23/23 19:27	CMR
m&p-Xylene	0.97	0.070	0.039		4.2	0.30	0.17	0.698	3/23/23 19:27	CMR
o-Xylene	0.41	0.035	0.018		1.8	0.15	0.078	0.698	3/23/23 19:27	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	107	70-130	3/24/23 21:31
4-Bromofluorobenzene (1)	108	70-130	3/23/23 19:27

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Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
23C1364-03RE1 [314058-IA-2-0323]	B335323	1.5	1	N/A	1000	200	75	03/24/23
23C1364-06RE1 [314058-FD-1-0323]	B335323	1.5	1	N/A	1000	200	75	03/24/23

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
23C1364-01 [314058-OA-1-0323]	B335600	1.5	1	N/A	1000	200	430	03/23/23
23C1364-02 [314058-IA-1-0323]	B335600	1.5	1	N/A	1000	200	430	03/23/23
23C1364-03 [314058-IA-2-0323]	B335600	1.5	1	N/A	1000	200	430	03/23/23
23C1364-04 [314058-IA-4-0323]	B335600	1.5	1	N/A	1000	200	430	03/23/23
23C1364-05 [314058-IA-5-0323]	B335600	1.5	1	N/A	1000	200	430	03/23/23
23C1364-06 [314058-FD-1-0323]	B335600	1.5	1	N/A	1000	200	430	03/23/23

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335323 - TO-15 Prep											
Blank (B335323-BLK1)					Prepared & Analyzed: 03/24/23						
Acetone	ND	0.80									
2-Butanone (MEK)	ND	0.80									
Ethanol	ND	0.80									
4-Ethyltoluene	ND	0.020									
Isopropanol	0.21	0.80									J
1,2,4-Trimethylbenzene	ND	0.020									
1,3,5-Trimethylbenzene	ND	0.020									
Surrogate: 4-Bromofluorobenzene (1)	*8.56*				*8.00*		*107*	*70-130*			
LCS (B335323-BS1)					Prepared & Analyzed: 03/24/23						
Acetone	4.90				5.00		98.1	70-130			
2-Butanone (MEK)	4.10				5.00		81.9	70-130			
Ethanol	4.52				5.00		90.5	70-130			
4-Ethyltoluene	4.62				5.00		92.5	70-130			
Isopropanol	3.98				5.00		79.5	70-130			
1,2,4-Trimethylbenzene	4.56				5.00		91.2	70-130			
1,3,5-Trimethylbenzene	4.58				5.00		91.5	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.60*				*8.00*		*107*	*70-130*			
Batch B335600 - TO-15 Prep											
Blank (B335600-BLK1)					Prepared & Analyzed: 03/23/23						
Acetone	ND	0.80									
Benzene	ND	0.020									
Benzyl chloride	ND	0.020									
Bromodichloromethane	ND	0.020									
Bromoform	ND	0.020									
Bromomethane	ND	0.020									
1,3-Butadiene	ND	0.020									
2-Butanone (MEK)	ND	0.80									
Carbon Disulfide	ND	0.20									
Carbon Tetrachloride	ND	0.020									
Chlorobenzene	ND	0.020									
Chloroethane	ND	0.020									
Chloroform	ND	0.020									
Chloromethane	ND	0.040									
Cyclohexane	ND	0.020									
Dibromochloromethane	ND	0.020									
1,2-Dibromoethane (EDB)	ND	0.020									
1,2-Dichlorobenzene	ND	0.020									
1,3-Dichlorobenzene	ND	0.020									
1,4-Dichlorobenzene	ND	0.020									
Dichlorodifluoromethane (Freon 12)	ND	0.020									
1,1-Dichloroethane	ND	0.020									
1,2-Dichloroethane	ND	0.020									
1,1-Dichloroethylene	ND	0.020									
cis-1,2-Dichloroethylene	ND	0.020									

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335600 - TO-15 Prep											
Blank (B335600-BLK1)					Prepared & Analyzed: 03/23/23						
trans-1,2-Dichloroethylene	ND	0.020									
1,2-Dichloropropane	ND	0.020									
cis-1,3-Dichloropropene	ND	0.020									
trans-1,3-Dichloropropene	ND	0.020									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.020									
1,4-Dioxane	ND	0.20									
Ethanol	ND	0.80									
Ethyl Acetate	ND	0.20									
Ethylbenzene	ND	0.020									
4-Ethyltoluene	ND	0.020									
Heptane	ND	0.020									
Hexachlorobutadiene	ND	0.020									L-03, V-05
Hexane	ND	0.80									
2-Hexanone (MBK)	ND	0.020									
Isopropanol	ND	0.80									
Methyl tert-Butyl Ether (MTBE)	ND	0.020									
Methylene Chloride	ND	0.20									
4-Methyl-2-pentanone (MIBK)	ND	0.020									
Naphthalene	ND	0.020									L-03, V-05
Propene	ND	0.80									
Styrene	ND	0.020									
1,1,2,2-Tetrachloroethane	ND	0.020									
Tetrachloroethylene	ND	0.020									
Tetrahydrofuran	ND	0.20									
Toluene	ND	0.020									
1,2,4-Trichlorobenzene	ND	0.020									
1,1,1-Trichloroethane	ND	0.020									
1,1,2-Trichloroethane	ND	0.020									
Trichloroethylene	ND	0.020									
Trichlorofluoromethane (Freon 11)	ND	0.080									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.080									
1,2,4-Trimethylbenzene	ND	0.020									
1,3,5-Trimethylbenzene	ND	0.020									
Vinyl Acetate	ND	0.40									
Vinyl Chloride	ND	0.020									
m&p-Xylene	ND	0.040									
o-Xylene	ND	0.020									
Surrogate: 4-Bromofluorobenzene (1)	*8.59*				*8.00*		*107*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC		%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335600 - TO-15 Prep												
LCS (B335600-BS1)					Prepared & Analyzed: 03/23/23							
Acetone	5.73				5.00		115		70-130			
Benzene	5.82				5.00		116		70-130			
Benzyl chloride	6.93				5.00		**139**	*	70-130			L-01, V-20
Bromodichloromethane	5.98				5.00		120		70-130			
Bromoform	6.33				5.00		127		70-130			
Bromomethane	5.36				5.00		107		70-130			
1,3-Butadiene	5.47				5.00		109		70-130			
2-Butanone (MEK)	4.90				5.00		97.9		70-130			
Carbon Disulfide	5.07				5.00		101		70-130			
Carbon Tetrachloride	5.49				5.00		110		70-130			
Chlorobenzene	5.39				5.00		108		70-130			
Chloroethane	5.73				5.00		115		70-130			
Chloroform	5.35				5.00		107		70-130			
Chloromethane	5.62				5.00		112		70-130			
Cyclohexane	6.10				5.00		122		70-130			
Dibromochloromethane	5.78				5.00		116		70-130			
1,2-Dibromoethane (EDB)	5.57				5.00		111		70-130			
1,2-Dichlorobenzene	5.51				5.00		110		70-130			
1,3-Dichlorobenzene	5.54				5.00		111		70-130			
1,4-Dichlorobenzene	5.89				5.00		118		70-130			
Dichlorodifluoromethane (Freon 12)	5.51				5.00		110		70-130			
1,1-Dichloroethane	5.85				5.00		117		70-130			
1,2-Dichloroethane	5.38				5.00		108		70-130			
1,1-Dichloroethylene	5.28				5.00		106		70-130			
cis-1,2-Dichloroethylene	5.44				5.00		109		70-130			
trans-1,2-Dichloroethylene	5.61				5.00		112		70-130			
1,2-Dichloropropane	6.20				5.00		124		70-130			
cis-1,3-Dichloropropene	6.11				5.00		122		70-130			
trans-1,3-Dichloropropene	6.36				5.00		127		70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.09				5.00		102		70-130			
1,4-Dioxane	6.03				5.00		121		70-130			
Ethanol	5.27				5.00		105		70-130			
Ethyl Acetate	5.10				5.00		102		70-130			
Ethylbenzene	5.52				5.00		110		70-130			
4-Ethyltoluene	5.72				5.00		114		70-130			
Heptane	6.01				5.00		120		70-130			
Hexachlorobutadiene	3.34				5.00		**66.8**	*	70-130			L-03, V-05
Hexane	5.52				5.00		110		70-130			
2-Hexanone (MBK)	5.43				5.00		109		70-130			
Isopropanol	4.70				5.00		94.0		70-130			
Methyl tert-Butyl Ether (MTBE)	5.41				5.00		108		70-130			
Methylene Chloride	4.93				5.00		98.6		70-130			
4-Methyl-2-pentanone (MIBK)	6.29				5.00		126		70-130			
Naphthalene	3.43				5.00		**68.6**	*	70-130			L-03, V-05
Propene	6.15				5.00		123		70-130			
Styrene	5.67				5.00		113		70-130			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B335600 - TO-15 Prep											
LCS (B335600-BS1)					Prepared & Analyzed: 03/23/23						
1,1,2,2-Tetrachloroethane	5.65				5.00		113	70-130			
Tetrachloroethylene	5.52				5.00		110	70-130			
Tetrahydrofuran	5.16				5.00		103	70-130			
Toluene	5.55				5.00		111	70-130			
1,2,4-Trichlorobenzene	4.53				5.00		90.6	70-130			
1,1,1-Trichloroethane	5.40				5.00		108	70-130			
1,1,2-Trichloroethane	5.64				5.00		113	70-130			
Trichloroethylene	5.55				5.00		111	70-130			
Trichlorofluoromethane (Freon 11)	5.05				5.00		101	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.74				5.00		94.9	70-130			
1,2,4-Trimethylbenzene	5.59				5.00		112	70-130			
1,3,5-Trimethylbenzene	5.64				5.00		113	70-130			
Vinyl Acetate	6.07				5.00		121	70-130			
Vinyl Chloride	5.61				5.00		112	70-130			
m&p-Xylene	11.2				10.0		112	70-130			
o-Xylene	5.59				5.00		112	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.67*				*8.00*		*108*	*70-130*			

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Note: Blank Subtraction is not performed unless otherwise noted

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-01	Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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ANALYST

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (S082540-ICV1)			Lab File ID: J23A025019.D			Analyzed: 01/26/23 00:04			
Bromochloromethane (1)	341158	2.806	341158	2.806	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1102343	3.428	1102343	3.428	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	959356	5.043	959356	5.043	100	60 - 140	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S085066-CCV1)			Lab File ID: J23A083004.D			Analyzed: 03/24/23 14:27			
Bromochloromethane (1)	341732	2.78	341732	2.78	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1001669	3.413	1001669	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	911329	5.034	911329	5.034	100	60 - 140	0.0000	+/-0.50	
LCS (B335323-BS1)			Lab File ID: J23A083005.D			Analyzed: 03/24/23 14:52			
Bromochloromethane (1)	347038	2.78	341732	2.78	102	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	1006649	3.413	1001669	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	922043	5.034	911329	5.034	101	60 - 140	0.0000	+/-0.50	
Blank (B335323-BLK1)			Lab File ID: J23A083007.D			Analyzed: 03/24/23 15:48			
Bromochloromethane (1)	334553	2.764	341732	2.78	98	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	971000	3.4	1001669	3.413	97	60 - 140	-0.0130	+/-0.50	
Chlorobenzene-d5 (1)	883906	5.031	911329	5.034	97	60 - 140	-0.0030	+/-0.50	
314058-IA-2-0323 (23C1364-03RE1)			Lab File ID: J23A083018.D			Analyzed: 03/24/23 21:07			
Bromochloromethane (1)	334957	2.767	341732	2.78	98	60 - 140	-0.0130	+/-0.50	
1,4-Difluorobenzene (1)	983643	3.404	1001669	3.413	98	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	899410	5.031	911329	5.034	99	60 - 140	-0.0030	+/-0.50	
314058-FD-1-0323 (23C1364-06RE1)			Lab File ID: J23A083019.D			Analyzed: 03/24/23 21:31			
Bromochloromethane (1)	342355	2.767	341732	2.78	100	60 - 140	-0.0130	+/-0.50	
1,4-Difluorobenzene (1)	1007573	3.404	1001669	3.413	101	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	917974	5.031	911329	5.034	101	60 - 140	-0.0030	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S085202-CCV1)			Lab File ID: J23A082005.D			Analyzed: 03/23/23 12:17			
Bromochloromethane (1)	296957	2.78	296957	2.78	100	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	853952	3.413	853952	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	770016	5.034	770016	5.034	100	60 - 140	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B335600-BS1)			Lab File ID: J23A082006.D			Analyzed: 03/23/23 12:42			
Bromochloromethane (1)	295090	2.78	296957	2.78	99	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	851872	3.413	853952	3.413	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	764347	5.034	770016	5.034	99	60 - 140	0.0000	+/-0.50	
Blank (B335600-BLK1)			Lab File ID: J23A082009.D			Analyzed: 03/23/23 14:11			
Bromochloromethane (1)	280704	2.761	296957	2.78	95	60 - 140	-0.0190	+/-0.50	
1,4-Difluorobenzene (1)	800850	3.401	853952	3.413	94	60 - 140	-0.0120	+/-0.50	
Chlorobenzene-d5 (1)	708726	5.031	770016	5.034	92	60 - 140	-0.0030	+/-0.50	
314058-OA-1-0323 (23C1364-01)			Lab File ID: J23A082014.D			Analyzed: 03/23/23 16:51			
Bromochloromethane (1)	296549	2.764	296957	2.78	100	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	847190	3.404	853952	3.413	99	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	757423	5.031	770016	5.034	98	60 - 140	-0.0030	+/-0.50	
314058-IA-1-0323 (23C1364-02)			Lab File ID: J23A082015.D			Analyzed: 03/23/23 17:22			
Bromochloromethane (1)	296230	2.764	296957	2.78	100	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	845528	3.404	853952	3.413	99	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	760548	5.031	770016	5.034	99	60 - 140	-0.0030	+/-0.50	
314058-IA-2-0323 (23C1364-03)			Lab File ID: J23A082016.D			Analyzed: 03/23/23 17:53			
Bromochloromethane (1)	296139	2.764	296957	2.78	100	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	848918	3.404	853952	3.413	99	60 - 140	-0.0090	+/-0.50	
Chlorobenzene-d5 (1)	757226	5.031	770016	5.034	98	60 - 140	-0.0030	+/-0.50	
314058-IA-4-0323 (23C1364-04)			Lab File ID: J23A082017.D			Analyzed: 03/23/23 18:25			
Bromochloromethane (1)	290115	2.764	296957	2.78	98	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	834675	3.4	853952	3.413	98	60 - 140	-0.0130	+/-0.50	
Chlorobenzene-d5 (1)	752445	5.031	770016	5.034	98	60 - 140	-0.0030	+/-0.50	
314058-IA-5-0323 (23C1364-05)			Lab File ID: J23A082018.D			Analyzed: 03/23/23 18:56			
Bromochloromethane (1)	294360	2.764	296957	2.78	99	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	844766	3.4	853952	3.413	99	60 - 140	-0.0130	+/-0.50	
Chlorobenzene-d5 (1)	758702	5.031	770016	5.034	99	60 - 140	-0.0030	+/-0.50	
314058-FD-1-0323 (23C1364-06)			Lab File ID: J23A082019.D			Analyzed: 03/23/23 19:27			
Bromochloromethane (1)	290692	2.764	296957	2.78	98	60 - 140	-0.0160	+/-0.50	
1,4-Difluorobenzene (1)	837514	3.401	853952	3.413	98	60 - 140	-0.0120	+/-0.50	
Chlorobenzene-d5 (1)	751855	5.031	770016	5.034	98	60 - 140	-0.0030	+/-0.50	

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CONTINUING CALIBRATION CHECK

EPA TO-15

S085066-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	4.73	0.9172061	0.868044		-5.4	30
2-Butanone (MEK)	A	5.00	4.08	1.412082	1.152421		-18.4	30
Ethanol	A	5.00	5.04	0.1626733	0.1639413		0.8	30
4-Ethyltoluene	A	5.00	4.72	1.333301	1.257199		-5.7	30
Isopropanol	A	5.00	4.73	1.0816	1.023338		-5.4	30
1,2,4-Trimethylbenzene	A	5.00	4.70	1.114566	1.047673		-6.0	30
1,3,5-Trimethylbenzene	A	5.00	4.72	1.126426	1.062262		-5.7	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CONTINUING CALIBRATION CHECK

EPA TO-15

S085202-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	5.33	0.9172061	0.9783504		6.7	30
Benzene	A	5.00	5.61	0.7387105	0.8286124		12.2	30
Benzyl chloride	A	5.00	6.89	0.7213395	0.9937123		37.8	30 *
Bromodichloromethane	A	5.00	5.83	0.5251533	0.61201		16.5	30
Bromoform	A	5.00	6.02	0.4277704	0.5146179		20.3	30
Bromomethane	A	5.00	5.16	0.6097815	0.6288587		3.1	30
1,3-Butadiene	A	5.00	5.41	0.4638914	0.5023003		8.3	30
2-Butanone (MEK)	A	5.00	4.60	1.412082	1.297632		-8.1	30
Carbon Disulfide	A	5.00	4.66	1.950889	1.819102		-6.8	30
Carbon Tetrachloride	A	5.00	5.54	0.4804808	0.5325358		10.8	30
Chlorobenzene	A	5.00	5.19	0.7448082	0.7734717		3.8	30
Chloroethane	A	5.00	5.32	0.3583321	0.3811892		6.4	30
Chloroform	A	5.00	5.04	1.602387	1.61354		0.7	30
Chloromethane	A	5.00	5.41	0.498645	0.5394289		8.2	30
Cyclohexane	A	5.00	5.76	0.3089687	0.3561643		15.3	30
Dibromochloromethane	A	5.00	5.56	0.5087335	0.5655779		11.2	30
1,2-Dibromoethane (EDB)	A	5.00	5.38	0.4954263	0.5332585		7.6	30
1,2-Dichlorobenzene	A	5.00	5.33	0.6000711	0.6398454		6.6	30
1,3-Dichlorobenzene	A	5.00	5.43	0.6282622	0.6819141		8.5	30
1,4-Dichlorobenzene	A	5.00	5.90	0.5785005	0.6829593		18.1	30
Dichlorodifluoromethane (Freon 12)	A	5.00	5.35	1.788333	1.912681		7.0	30
1,1-Dichloroethane	A	5.00	5.49	1.234282	1.356258		9.9	30
1,2-Dichloroethane	A	5.00	5.09	1.007865	1.025926		1.8	30
1,1-Dichloroethylene	A	5.00	4.87	1.125918	1.095905		-2.7	30
cis-1,2-Dichloroethylene	A	5.00	5.25	0.988136	1.036869		4.9	30
trans-1,2-Dichloroethylene	A	5.00	5.39	1.018061	1.097619		7.8	30
1,2-Dichloropropane	A	5.00	5.93	0.2543605	0.3014952		18.5	30
cis-1,3-Dichloropropene	A	5.00	6.08	0.3935901	0.4786911		21.6	30
trans-1,3-Dichloropropene	A	5.00	6.08	0.350459	0.4262141		21.6	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 1	A	5.00	5.22	1.768022	1.844604		4.3	30
1,4-Dioxane	A	5.00	5.74	0.1607629	0.1846736		14.9	30
Ethanol	A	5.00	5.55	0.1626733	0.1806053		11.0	30
Ethyl Acetate	A	5.00	5.20	0.2181169	0.2267641		4.0	30
Ethylbenzene	A	5.00	5.38	1.320541	1.420964		7.6	30
4-Ethyltoluene	A	5.00	5.55	1.333301	1.479759		11.0	30
Heptane	A	5.00	5.88	0.2163238	0.2543937		17.6	30
Hexachlorobutadiene	A	5.00	3.28	0.4316824	0.283219		-34.4	30 *
Hexane	L	5.00	5.27	0.7010749	0.7456702		5.4	30

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CONTINUING CALIBRATION CHECK

EPA TO-15

S085202-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT		
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
2-Hexanone (MBK)	A	5.00	5.07	0.5317658	0.5391659		1.4	30	
Isopropanol	A	5.00	5.36	1.0816	1.158837		7.1	30	
Methyl tert-Butyl Ether (MTBE)	A	5.00	5.20	2.038246	2.118454		3.9	30	
Methylene Chloride	A	5.00	4.64	0.7621343	0.707658		-7.1	30	
4-Methyl-2-pentanone (MIBK)	A	5.00	5.80	0.2070279	0.2403189		16.1	30	
Naphthalene	A	5.00	3.23	0.9438203	0.6099572		-35.4	30	*
Propene	A	5.00	5.89	0.3658411	0.4306617		17.7	30	
Styrene	A	5.00	5.48	0.7117754	0.780497		9.7	30	
1,1,2,2-Tetrachloroethane	A	5.00	5.40	0.7493945	0.8094149		8.0	30	
Tetrachloroethylene	A	5.00	5.40	0.3917065	0.4233242		8.1	30	
Tetrahydrofuran	A	5.00	4.74	0.721119	0.6843442		-5.1	30	
Toluene	A	5.00	5.28	1.018666	1.07476		5.5	30	
1,2,4-Trichlorobenzene	A	5.00	4.44	0.3480916	0.3089099		-11.3	30	
1,1,1-Trichloroethane	A	5.00	5.42	0.5043155	0.5468054		8.4	30	
1,1,2-Trichloroethane	A	5.00	5.33	0.3354709	0.3573889		6.5	30	
Trichloroethylene	A	5.00	5.34	0.332105	0.354967		6.9	30	
Trichlorofluoromethane (Freon 11)	A	5.00	4.88	1.844271	1.798057		-2.5	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113	A	5.00	4.44	1.418208	1.257987		-11.3	30	
1,2,4-Trimethylbenzene	A	5.00	5.50	1.114566	1.225373		9.9	30	
1,3,5-Trimethylbenzene	A	5.00	5.47	1.126426	1.231972		9.4	30	
Vinyl Acetate	A	5.00	5.16	1.280082	1.319965		3.1	30	
Vinyl Chloride	A	5.00	5.29	0.6431254	0.6801739		5.8	30	
m&p-Xylene	A	10.0	10.8	1.065519	1.154159		8.3	30	
o-Xylene	A	5.00	5.36	1.040057	1.115441		7.2	30	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Acetone	AIHA,NY,ME,NH
Benzene	AIHA,FL,NJ,NY,ME,NH,VA
Benzyl chloride	AIHA,FL,NJ,NY,ME,NH,VA
Bromodichloromethane	AIHA,NJ,NY,ME,NH,VA
Bromoform	AIHA,NJ,NY,ME,NH,VA
Bromomethane	AIHA,FL,NJ,NY,ME,NH
1,3-Butadiene	AIHA,NJ,NY,ME,NH,VA
2-Butanone (MEK)	AIHA,FL,NJ,NY,ME,NH,VA
Carbon Disulfide	AIHA,NJ,NY,ME,NH,VA
Carbon Tetrachloride	AIHA,FL,NJ,NY,ME,NH,VA
Chlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Chloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Chloroform	AIHA,FL,NJ,NY,ME,NH,VA
Chloromethane	AIHA,FL,NJ,NY,ME,NH,VA
Cyclohexane	AIHA,NJ,NY,ME,NH,VA
Dibromochloromethane	AIHA,NY,ME,NH
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME,NH
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
1,3-Dichlorobenzene	AIHA,NJ,NY,ME,NH
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME,NH
1,1-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,2-Dichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1-Dichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,2-Dichloroethylene	AIHA,FL,NY,ME,NH,VA
trans-1,2-Dichloroethylene	AIHA,NJ,NY,ME,NH,VA
1,2-Dichloropropane	AIHA,FL,NJ,NY,ME,NH,VA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,ME,NH,VA
trans-1,3-Dichloropropene	AIHA,NY,ME,NH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,ME,NH,VA
1,4-Dioxane	AIHA,NJ,NY,ME,NH,VA
Ethanol	AIHA
Ethyl Acetate	AIHA
Ethylbenzene	AIHA,FL,NJ,NY,ME,NH,VA
4-Ethyltoluene	AIHA
Heptane	AIHA,NJ,NY,ME,NH,VA
Hexachlorobutadiene	AIHA,NJ,NY,ME,NH,VA
Hexane	AIHA,FL,NJ,NY,ME,NH,VA
2-Hexanone (MBK)	AIHA
Isopropanol	AIHA,NY,ME,NH
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,ME,NH,VA
Methylene Chloride	AIHA,FL,NJ,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY,ME,NH
Naphthalene	NY,ME,NH
Propene	AIHA
Styrene	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Tetrachloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Tetrahydrofuran	AIHA
Toluene	AIHA,FL,NJ,NY,ME,NH,VA
1,2,4-Trichlorobenzene	AIHA,NJ,NY,ME,NH,VA
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,ME,NH,VA
Trichloroethylene	AIHA,FL,NJ,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME,NH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,ME,NH,VA
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME,NH
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME,NH
Vinyl Acetate	AIHA,FL,NJ,NY,ME,NH,VA
Vinyl Chloride	AIHA,FL,NJ,NY,ME,NH,VA
m&p-Xylene	AIHA,FL,NJ,NY,ME,NH,VA
o-Xylene	AIHA,FL,NJ,NY,ME,NH,VA

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
http://www.contestlabs.com
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East Longmeadow, MA 01028

23C1364

CHAIN OF CUSTODY RECORD (AIR)

Company Name: EA Engineering, Science, and Technology
Address: 269 W. Jefferson St. Syracuse, NY 13202
Phone: (315) 415-7689
Project Name: Three Star Anodizing
Project Location: Wappingers Falls, NY
Project Number: 16025523.0008
Project Manager: Michael Miller
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: L. Backman-Lowe

Requested Turnaround Time
7-Day ☐ 10-Day ☒
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To: michaelmiller@eaest.com
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	TO-15				" Hg			Please fill out completely, sign, date and retain the yellow copy for your records. Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply. For summa canister and flow controller information please refer to Con-Test's Air Media Agreement	
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☐ L/min	Code	☐ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
01	314058-OA-1-0323	1339 03/07	0935 03/08	1196		AMB		X				-30	-9	5.5	2923	4871
02	314058-IA-1-0323	1347 03/07	0938 03/08	1191		IA		X				-30	-10	7.6	2957	4853
03	314058-IA-2-0323	1414 03/07	1005 03/08	1191		IA		X				-30	-9	6.6	2943	4863
04	314058-IA-4-0323	1349 03/07	0937 03/08	1188		IA		X				-28	-7.5	7.2	2946	4864
05	314058-IA-5-0323	1344 03/07	0939 03/08	1195		IA		X				-30	-11	7.0	2939	4862
06	314058-FD-1-0323	1414 03/07	1006 03/08	1192		IA		X				-28	-7.5	5.1	2931	4866

Comments: * Cat B deliverable * requested

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature)	Date/Time: 03/08/23 1115	Detection Limit Requirements: MA: CT: Other:
Received by: (signature) PACE Pdc	Date/Time: 3/8/23 1118	Special Requirements: ☐ MA MCP Required; MCP Certification Form Required; ☐ CT RCP Required; RCP Certification Form Required; ☐ Other
Relinquished by: (signature) PACE	Date/Time: 3/9/23 1410	
Received by: (signature)	Date/Time: 3/10/23 936	
Relinquished by: (signature)	Date/Time: 3-10-23 936	
Received by: (signature)	Date/Time:	

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NELAC and AIHA-LAP, LLC Accredited

Project Entity
☒ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

[redacted]

FedEx® Tracking

DELIVERED

Friday

3/10/2023 at 9:36 am

Signed for by: L.ARROYO

Obtain Proof of delivery

How was your delivery?

DELIVERY STATUS

Delivered

Shipment is 1 of 2 pieces

TRACKING ID

771523456765

FROM
Newburgh, NY US

Label Created
3/9/2023 1:31 PM

PACKAGE RECEIVED BY FEDEX
NEWBURGH, NY
3/9/2023 4:16 PM

IN TRANSIT
WINDSOR LOCKS, CT
3/10/2023 7:24 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
3/10/2023 7:33 AM

DELIVERED
EAST LONGMEADOW, MA US

Delivered
3/10/2023 at 9:36 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

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SUBMIT

MORE OPTIONS

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East Longmeadow, MA. 01028
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Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

Pace® PEOPLE ADVANCING SCIENCE

Client EA Engineering, Science and Technology

Project Three Star Anodizing

MCP/RCP Required

Deliverable Package Requirement

Location Wappingers Falls, NY

PWSID# (When Applicable)

Arrival Method FedEx 7715 2345 6765

Received By / Date / Time LA 3-10-23 0935

Back-Sheet By / Date / Time TPH 3-10-23 1451

Temperature Method #

Temp < 6° C ☐ Actual Temperature

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

	True	False
Received on Ice	☐	☒
Received in Cooler	☐	☒
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Individually Certified Cans	☐	☒
Trip Blanks	☐	☒
COC Legible	☒	☐

Notes regarding Samples/COC outside of SOP:

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☒

Project ☒ IDs ☒ Collection Date/Time ☒

Container	#	Size	Regulator	Duration	Accessories			
Summa Cans	6	6L	6	24hr	Nut/Ferrule		IC Train	
Tedlar Bags					Tubing			
TO-17 Tubes					T-Connector		Shipping Charges	
Radiello					Syringe			
Pufs/ TO-11					Tedlar			

Can #'s								Regs #'s							
1	2923	8		16		24		1	4871	8		16		24	
2	2957	9		17		25		2	4853	9		17		25	
3	2943	10		18		26		3	4863	10		18		26	
4	2946	11		19		27		4	4864	11		19		27	
5	2939	12		20		28		5	4862	12		20		28	
6	2931	13		21		29		6	4866	13		21		29	
7		14		22		30		7		14		22		30	
		15		23		31				15		23		31	
Unused Media								**Pufs/TO-17's**							
1		8		16		24		1		8		16		24	
2		9		17		25		2		9		17		25	
3		10		18		26		3		10		18		26	
4		11		19		27		4		11		19		27	
5		12		20		28		5		12		20		28	
6		13		21		29		6		13		21		29	
7		14		22		30		7		14		22		30	
		15		23		31				15		23			

Air Sampling Media Certificate of Analysis

Date Analyzed: 12/27/2022 **Batch #:** 22CC1081

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs:			
	BC2943		
	BC2931		
	BC2923		
	BC2957		
	BC2939		
	BC2946		

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: CMR 3/29/23

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 8, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

Project Location: Wappingers Falls, NY
Client Job Number:
Project Number: 314058
Laboratory Work Order Number: 23H2240

Enclosed are results of analyses for samples as received by the laboratory on August 15, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 9/8/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 314058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H2240

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Wappingers Falls, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
314058-MW-3-08142023	23H2240-01	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-4-08142023	23H2240-02	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-5-08142023	23H2240-03	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-9R-08142023	23H2240-04	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-11-08142023	23H2240-05	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-15D-08142023	23H2240-06	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-16-08142023	23H2240-07	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-FD-1	23H2240-08	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-EB-01	23H2240-09	Equipment Blank Water		SW-846 8260D	
314058-FB-01	23H2240-10	Field Blank		SW-846 8260D	
310458-TB-01	23H2240-11	Trip Blank Water		SW-846 8260D	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 6010D

Qualifications:

B

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:

Sodium
23H2240-01[314058-MW-3-08142023], 23H2240-02[314058-MW-4-08142023], 23H2240-03[314058-MW-5-08142023], 23H2240-04[314058-MW-9R-08142023], 23H2240-05[314058-MW-11-08142023], 23H2240-06[314058-MW-15D-08142023], 23H2240-07[314058-MW-16-08142023], 23H2240-08[314058-FD-1], B349123-BLK3

SW-846 8081B

Qualifications:

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

23H2240-01RE1[314058-MW-3-08142023]

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

23H2240-01RE1[314058-MW-3-08142023], B350765-BLK1, B350765-BS1, B350765-BSD1

S-10

Sample was re-extracted outside of holding time since surrogate standard recovery was outside of control limits. Data from analysis performed outside of holding time is also reported since surrogate recovery is acceptable.

Analyte & Samples(s) Qualified:

Tetrachloro-m-xylene
23H2240-01[314058-MW-3-08142023]

Tetrachloro-m-xylene [2C]
23H2240-01[314058-MW-3-08142023]

S-26

Surrogate outside of control limits.

Analyte & Samples(s) Qualified:

Tetrachloro-m-xylene
B350765-BS1

Tetrachloro-m-xylene [2C]
B350765-BS1

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

4,4'-DDD [2C]
B350765-BS1, B350765-BSD1

Hexachlorobenzene [2C]
B349687-BS1, B349687-BSD1, B349687-MS1, B349687-MSD1

SW-846 8260D

Qualifications:

MS-24

Either matrix spike or matrix spike duplicate is outside of control limits, but the other is within limits. Analysis is in control based on laboratory fortified blank recovery.

Analyte & Samples(s) Qualified:

Carbon Disulfide
B349323-MSD1

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RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

23H2240-06[314058-MW-15D-08142023], 23H2240-07[314058-MW-16-08142023], 23H2240-08[314058-FD-1]

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

Bromomethane

23H2240-01[314058-MW-3-08142023], 23H2240-02[314058-MW-4-08142023], 23H2240-03[314058-MW-5-08142023], 23H2240-04[314058-MW-9R-08142023], 23H2240-05[314058-MW-11-08142023], 23H2240-06[314058-MW-15D-08142023], 23H2240-07[314058-MW-16-08142023], 23H2240-08[314058-FD-1], 23H2240-09[314058-EB-01], 23H2240-10[314058-FB-01], 23H2240-11[310458-TB-01], B349323-BLK1, B349323-BS1, B349323-BSD1, B349323-MS1, B349323-MSD1, S092205-CCV1

Chloromethane

23H2240-01[314058-MW-3-08142023], 23H2240-02[314058-MW-4-08142023], 23H2240-03[314058-MW-5-08142023], 23H2240-04[314058-MW-9R-08142023], 23H2240-05[314058-MW-11-08142023], 23H2240-06[314058-MW-15D-08142023], 23H2240-07[314058-MW-16-08142023], 23H2240-08[314058-FD-1], 23H2240-09[314058-EB-01], 23H2240-10[314058-FB-01], 23H2240-11[310458-TB-01], B349323-BLK1, B349323-BS1, B349323-BSD1, B349323-MS1, B349323-MSD1, S092205-CCV1

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

Chloroethane

23H2240-06[314058-MW-15D-08142023], B349323-BS1, B349323-BSD1, B349323-MS1, B349323-MSD1, S092205-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromochloromethane

B349323-BS1, B349323-BSD1, B349323-MS1, B349323-MSD1, S092205-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

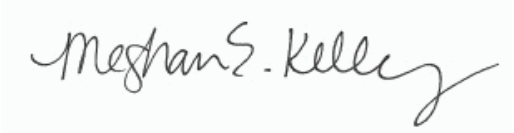
Bromomethane

23H2240-01[314058-MW-3-08142023], 23H2240-02[314058-MW-4-08142023], 23H2240-03[314058-MW-5-08142023], 23H2240-04[314058-MW-9R-08142023], 23H2240-05[314058-MW-11-08142023], 23H2240-06[314058-MW-15D-08142023], 23H2240-07[314058-MW-16-08142023], 23H2240-08[314058-FD-1], 23H2240-09[314058-EB-01], 23H2240-10[314058-FB-01], 23H2240-11[310458-TB-01], B349323-BLK1, B349323-BS1, B349323-BSD1, B349323-MS1, B349323-MSD1, S092205-CCV1

Chloromethane

23H2240-01[314058-MW-3-08142023], 23H2240-02[314058-MW-4-08142023], 23H2240-03[314058-MW-5-08142023], 23H2240-04[314058-MW-9R-08142023], 23H2240-05[314058-MW-11-08142023], 23H2240-06[314058-MW-15D-08142023], 23H2240-07[314058-MW-16-08142023], 23H2240-08[314058-FD-1], 23H2240-09[314058-EB-01], 23H2240-10[314058-FB-01], 23H2240-11[310458-TB-01], B349323-BLK1, B349323-BS1, B349323-BSD1, B349323-MS1, B349323-MSD1, S092205-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2240-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 12:38	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 12:38	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
cis-1,2-Dichloroethylene	0.50	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 12:38	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2240-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Tetrachloroethylene	0.78	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Trichloroethylene	1.2	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:38	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.6	70-130		8/17/23 12:38
Toluene-d8	102	70-130		8/17/23 12:38
4-Bromofluorobenzene	97.9	70-130		8/17/23 12:38

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2240-01

Sample Matrix: Ground Water

Sample Flags: H-06, R-05

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Aldrin [1]	ND	0.047	0.0068	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Aldrin [1]	ND	0.047	0.0068	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
alpha-BHC [1]	ND	0.047	0.0035	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
alpha-BHC [1]	ND	0.047	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
beta-BHC [1]	ND	0.047	0.0078	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
beta-BHC [1]	ND	0.047	0.0078	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
delta-BHC [1]	ND	0.047	0.0056	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
delta-BHC [1]	ND	0.047	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0039	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
4,4'-DDE [1]	ND	0.038	0.0047	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
4,4'-DDE [1]	ND	0.038	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
4,4'-DDT [1]	ND	0.038	0.0057	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
4,4'-DDT [1]	ND	0.038	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Dieldrin [1]	ND	0.0019	0.00096	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Dieldrin [1]	ND	0.0019	0.00096	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Endosulfan I [1]	ND	0.047	0.0049	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Endosulfan I [1]	ND	0.047	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Endosulfan II [1]	ND	0.075	0.0036	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Endosulfan II [1]	ND	0.075	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Endosulfan sulfate [1]	ND	0.075	0.0061	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Endosulfan sulfate [1]	ND	0.075	0.0061	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Endrin [1]	ND	0.075	0.0039	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Endrin [1]	ND	0.075	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Endrin aldehyde [1]	ND	0.075	0.0042	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Endrin aldehyde [1]	ND	0.075	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Endrin ketone [1]	ND	0.075	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Endrin ketone [1]	ND	0.075	0.0037	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Heptachlor [1]	ND	0.047	0.0057	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Heptachlor [1]	ND	0.047	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Heptachlor epoxide [1]	ND	0.047	0.0065	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Heptachlor epoxide [1]	ND	0.047	0.0065	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Hexachlorobenzene [1]	ND	0.047	0.027	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Hexachlorobenzene [1]	ND	0.047	0.027	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Methoxychlor [1]	ND	0.47	0.0098	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Methoxychlor [1]	ND	0.47	0.0098	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG
Toxaphene [1]	ND	0.94	0.63	µg/L	1		SW-846 8081B	8/31/23	9/7/23 22:54	TG
Toxaphene [1]	ND	0.94	0.63	µg/L	1		SW-846 8081B	8/21/23	8/29/23 16:47	TG

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2240-01

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surrogates		**% Recovery**		**Recovery Limits**		**Flag/Qual**				
Decachlorobiphenyl [1]		76.3		30-150					9/7/23 22:54	
Decachlorobiphenyl [1]		32.0		30-150					8/29/23 16:47	
Decachlorobiphenyl [2]		88.4		30-150					9/7/23 22:54	
Decachlorobiphenyl [2]		34.1		30-150					8/29/23 16:47	
Tetrachloro-m-xylene [1]		49.0		30-150					9/7/23 22:54	
Tetrachloro-m-xylene [1]		**27.9**	*	30-150		S-10			8/29/23 16:47	
Tetrachloro-m-xylene [2]		59.1		30-150					9/7/23 22:54	
Tetrachloro-m-xylene [2]		**27.6**	*	30-150		S-10			8/29/23 16:47	

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2240-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.020	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:41	ATP
Barium	0.016	0.050	0.0057	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Calcium	68	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:41	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Iron	ND	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:41	ATP
Magnesium	11	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Manganese	ND	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:41	ATP
Potassium	1.4	2.0	0.33	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:41	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:41	ATP
Sodium	26	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 17:52	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:41	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:15	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 17:52	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2240-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Benzene	0.20	1.0	0.18	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Chlorobenzene	0.57	1.0	0.12	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
2-Chlorotoluene	0.19	1.0	0.15	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2-Dichlorobenzene	0.95	1.0	0.13	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1-Dichloroethane	0.83	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
cis-1,2-Dichloroethylene	2.6	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
trans-1,2-Dichloroethylene	0.83	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2240-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Trichloroethylene	0.25	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.36	1.0	0.21	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
Vinyl Chloride	11	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:06	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		8/17/23 13:06
Toluene-d8	101	70-130		8/17/23 13:06
4-Bromofluorobenzene	97.0	70-130		8/17/23 13:06

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2240-02

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Aldrin [1]	ND	0.046	0.0067	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
alpha-BHC [1]	ND	0.046	0.0034	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
beta-BHC [1]	ND	0.046	0.0077	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
delta-BHC [1]	ND	0.046	0.0055	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Chlordane [1]	ND	0.19	0.031	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
4,4'-DDD [1]	ND	0.037	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
4,4'-DDE [1]	ND	0.037	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
4,4'-DDT [1]	ND	0.037	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Dieldrin [1]	ND	0.0019	0.00094	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Endosulfan I [1]	ND	0.046	0.0048	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Endosulfan II [1]	ND	0.074	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Endosulfan sulfate [1]	ND	0.074	0.0059	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Endrin [1]	ND	0.074	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Endrin aldehyde [1]	ND	0.074	0.0041	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Endrin ketone [1]	ND	0.074	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Heptachlor [1]	ND	0.046	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Heptachlor epoxide [1]	ND	0.046	0.0064	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Hexachlorobenzene [1]	ND	0.046	0.026	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Methoxychlor [1]	ND	0.46	0.0096	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG
Toxaphene [1]	ND	0.93	0.62	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:12	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.9	30-150		8/29/23 20:12
Decachlorobiphenyl [2]	81.8	30-150		8/29/23 20:12
Tetrachloro-m-xylene [1]	70.1	30-150		8/29/23 20:12
Tetrachloro-m-xylene [2]	68.9	30-150		8/29/23 20:12

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2240-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.020	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:48	ATP
Barium	0.14	0.050	0.0057	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Calcium	41	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:48	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Iron	1.1	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:48	ATP
Magnesium	8.7	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Manganese	0.087	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:48	ATP
Potassium	1.6	2.0	0.33	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:48	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:48	ATP
Sodium	29	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 17:58	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:48	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:21	HNN
Zinc	0.028	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 17:58	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2240-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 13:33	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 13:33	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2240-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 13:33	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		8/17/23 13:33
Toluene-d8	102	70-130		8/17/23 13:33
4-Bromofluorobenzene	97.6	70-130		8/17/23 13:33

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2240-03

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Aldrin [1]	ND	0.047	0.0068	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
alpha-BHC [1]	ND	0.047	0.0034	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
beta-BHC [1]	ND	0.047	0.0077	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
delta-BHC [1]	ND	0.047	0.0055	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
4,4'-DDD [1]	ND	0.037	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
4,4'-DDE [1]	ND	0.037	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
4,4'-DDT [1]	ND	0.037	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Dieldrin [1]	ND	0.0019	0.00095	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Endosulfan I [1]	ND	0.047	0.0048	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Endosulfan II [1]	ND	0.075	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Endosulfan sulfate [1]	ND	0.075	0.0060	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Endrin [1]	ND	0.075	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Endrin aldehyde [1]	ND	0.075	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Endrin ketone [1]	ND	0.075	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Heptachlor [1]	ND	0.047	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Heptachlor epoxide [1]	ND	0.047	0.0064	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Hexachlorobenzene [1]	ND	0.047	0.026	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Methoxychlor [1]	ND	0.47	0.0097	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG
Toxaphene [1]	ND	0.93	0.62	µg/L	1		SW-846 8081B	8/21/23	8/29/23 20:38	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.0	30-150		8/29/23 20:38
Decachlorobiphenyl [2]	89.7	30-150		8/29/23 20:38
Tetrachloro-m-xylene [1]	70.2	30-150		8/29/23 20:38
Tetrachloro-m-xylene [2]	62.3	30-150		8/29/23 20:38

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2240-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.041	0.050	0.020	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:53	ATP
Barium	0.067	0.050	0.0057	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Calcium	92	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:53	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Iron	ND	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:53	ATP
Magnesium	16	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Manganese	0.031	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:53	ATP
Potassium	2.1	2.0	0.33	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:53	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:53	ATP
Sodium	32	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 18:03	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 18:53	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:26	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 18:03	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2240-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 14:00	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Chlorobenzene	19	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 14:00	EEH
2-Chlorotoluene	0.81	1.0	0.15	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 14:00	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2-Dichlorobenzene	4.2	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,3-Dichlorobenzene	0.97	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,4-Dichlorobenzene	4.6	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1-Dichloroethane	0.67	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
cis-1,2-Dichloroethylene	53	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
trans-1,2-Dichloroethylene	1.3	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2240-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Ethylbenzene	6.6	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Tetrachloroethylene	3.9	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Toluene	0.51	1.0	0.22	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Trichloroethylene	2.8	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	20	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
Vinyl Chloride	24	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
m+p Xylene	2.9	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH
o-Xylene	1.5	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:00	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		8/17/23 14:00
Toluene-d8	101	70-130		8/17/23 14:00
4-Bromofluorobenzene	98.4	70-130		8/17/23 14:00

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2240-04

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.18	0.034	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Aldrin [1]	ND	0.045	0.0066	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
alpha-BHC [1]	ND	0.045	0.0033	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
beta-BHC [1]	ND	0.045	0.0075	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
delta-BHC [1]	ND	0.045	0.0054	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
gamma-BHC (Lindane) [1]	ND	0.027	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Chlordane [1]	ND	0.18	0.031	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
4,4'-DDD [1]	ND	0.036	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
4,4'-DDE [1]	ND	0.036	0.0046	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
4,4'-DDT [1]	ND	0.036	0.0055	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Dieldrin [1]	ND	0.0018	0.00092	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Endosulfan I [1]	ND	0.045	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Endosulfan II [1]	ND	0.073	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Endosulfan sulfate [1]	ND	0.073	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Endrin [1]	ND	0.073	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Endrin aldehyde [1]	ND	0.073	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Endrin ketone [1]	ND	0.073	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Heptachlor [1]	ND	0.045	0.0055	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Heptachlor epoxide [1]	ND	0.045	0.0063	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Hexachlorobenzene [1]	ND	0.045	0.026	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Methoxychlor [1]	ND	0.45	0.0094	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG
Toxaphene [1]	ND	0.91	0.60	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:00	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	70.5	30-150		8/29/23 21:00
Decachlorobiphenyl [2]	74.5	30-150		8/29/23 21:00
Tetrachloro-m-xylene [1]	71.0	30-150		8/29/23 21:00
Tetrachloro-m-xylene [2]	63.0	30-150		8/29/23 21:00

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2240-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	1.6	0.050	0.020	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:00	ATP
Barium	0.070	0.050	0.0057	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Calcium	72	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:00	ATP
Chromium	0.028	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Cobalt	0.0017	0.010	0.0017	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Iron	9.1	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Lead	0.015	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:00	ATP
Magnesium	14	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Manganese	2.4	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Nickel	0.0027	0.010	0.0024	mg/L	1	J	SW-846 6010D	8/15/23	8/21/23 19:00	ATP
Potassium	3.0	2.0	0.33	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:00	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:00	ATP
Sodium	52	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 18:09	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:00	ATP
Vanadium	0.0072	0.010	0.0071	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:32	HNN
Zinc	0.027	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 18:09	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2240-04

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.020	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Antimony	0.016	0.050	0.011	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/19/23 19:22	MJH
Barium	0.043	0.050	0.0057	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Calcium	68	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/19/23 19:22	MJH
Iron	4.9	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Magnesium	14	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Manganese	1.9	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Potassium	3.5	2.0	0.33	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/19/23 19:22	MJH
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Sodium	53	2.0	0.74	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/19/23 19:22	MJH
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:23	MJH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 | Sampled: 8/14/2023 15:48

Sample ID: 23H2240-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 14:28	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 14:28	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 | Sampled: 8/14/2023 15:48

Sample ID: 23H2240-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 14:28	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		8/17/23 14:28
Toluene-d8	99.9	70-130		8/17/23 14:28
4-Bromofluorobenzene	98.8	70-130		8/17/23 14:28

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 | Sampled: 8/14/2023 15:48

Sample ID: 23H2240-05

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Aldrin [1]	ND	0.047	0.0068	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
alpha-BHC [1]	ND	0.047	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
beta-BHC [1]	ND	0.047	0.0078	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
delta-BHC [1]	ND	0.047	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
4,4'-DDE [1]	ND	0.038	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
4,4'-DDT [1]	ND	0.038	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Dieldrin [1]	ND	0.0019	0.00096	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Endosulfan I [1]	ND	0.047	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Endosulfan II [1]	ND	0.075	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Endosulfan sulfate [1]	ND	0.075	0.0061	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Endrin [1]	ND	0.075	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Endrin aldehyde [1]	ND	0.075	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Endrin ketone [1]	ND	0.075	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Heptachlor [1]	ND	0.047	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Heptachlor epoxide [1]	ND	0.047	0.0065	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Hexachlorobenzene [1]	ND	0.047	0.027	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Methoxychlor [1]	ND	0.47	0.0098	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG
Toxaphene [1]	ND	0.94	0.63	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	75.4	30-150		8/29/23 21:22
Decachlorobiphenyl [2]	77.3	30-150		8/29/23 21:22
Tetrachloro-m-xylene [1]	79.0	30-150		8/29/23 21:22
Tetrachloro-m-xylene [2]	64.4	30-150		8/29/23 21:22

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 | Sampled: 8/14/2023 15:48

Sample ID: 23H2240-05

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.020	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Arsenic	0.14	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:05	ATP
Barium	0.099	0.050	0.0057	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Cadmium	0.0053	0.0040	0.0013	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Calcium	140	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:05	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Iron	18	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:05	ATP
Magnesium	18	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Manganese	0.41	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:05	ATP
Potassium	5.9	2.0	0.33	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:05	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:05	ATP
Sodium	4.2	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 18:15	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:05	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:38	HNN
Zinc	0.016	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 18:15	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 | Sampled: 8/14/2023 12:15

Sample ID: 23H2240-06

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	100	4.0	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Acrylonitrile	ND	10	0.93	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
tert-Amyl Methyl Ether (TAME)	ND	1.0	0.26	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Benzene	3.8	2.0	0.37	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Bromobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Bromochloromethane	ND	2.0	0.57	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Bromodichloromethane	ND	1.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Bromoform	ND	2.0	0.82	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Bromomethane	ND	4.0	2.6	µg/L	2	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
2-Butanone (MEK)	ND	40	3.4	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
tert-Butyl Alcohol (TBA)	ND	40	8.5	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
n-Butylbenzene	0.68	2.0	0.30	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
sec-Butylbenzene	1.7	2.0	0.25	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
tert-Butylbenzene	0.88	2.0	0.28	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Carbon Disulfide	ND	10	3.1	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Chlorobenzene	270	2.0	0.24	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Chlorodibromomethane	ND	1.0	0.40	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Chloroethane	0.94	4.0	0.68	µg/L	2	V-06, J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Chloroform	ND	4.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Chloromethane	ND	4.0	1.0	µg/L	2	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
2-Chlorotoluene	25	2.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
4-Chlorotoluene	9.7	2.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.7	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Dibromomethane	ND	2.0	0.64	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2-Dichlorobenzene	15	2.0	0.26	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,3-Dichlorobenzene	2.6	2.0	0.27	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,4-Dichlorobenzene	8.2	2.0	0.26	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
trans-1,4-Dichloro-2-butene	ND	4.0	3.0	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1-Dichloroethane	9.4	2.0	0.27	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2-Dichloroethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
cis-1,2-Dichloroethylene	33	2.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
trans-1,2-Dichloroethylene	5.8	2.0	0.34	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2-Dichloropropane	ND	2.0	0.39	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,3-Dichloropropane	ND	1.0	0.23	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
2,2-Dichloropropane	ND	2.0	0.70	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1-Dichloropropene	ND	4.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
cis-1,3-Dichloropropene	ND	1.0	0.33	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
trans-1,3-Dichloropropene	ND	1.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Diethyl Ether	ND	4.0	0.29	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 | Sampled: 8/14/2023 12:15

Sample ID: 23H2240-06

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	1.0	0.40	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,4-Dioxane	ND	100	36	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Ethylbenzene	120	2.0	0.44	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Hexachlorobutadiene	ND	1.2	0.94	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
2-Hexanone (MBK)	ND	20	2.4	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Isopropylbenzene (Cumene)	1.6	2.0	0.30	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
p-Isopropyltoluene (p-Cymene)	0.44	2.0	0.25	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Methyl Acetate	ND	2.0	1.2	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Methyl Cyclohexane	0.62	2.0	0.31	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Methylene Chloride	ND	10	0.35	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Naphthalene	1.4	4.0	0.76	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
n-Propylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Styrene	ND	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.27	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Tetrachloroethylene	0.42	2.0	0.34	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Tetrahydrofuran	16	20	0.98	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Toluene	19	2.0	0.45	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2,3-Trichlorobenzene	ND	10	0.68	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.60	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,3,5-Trichlorobenzene	ND	2.0	0.42	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1,1-Trichloroethane	2.9	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1,2-Trichloroethane	ND	2.0	0.38	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Trichloroethylene	ND	2.0	0.35	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2,3-Trichloropropane	ND	4.0	0.55	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	1.6	2.0	0.42	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,2,4-Trimethylbenzene	13	2.0	0.40	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
1,3,5-Trimethylbenzene	1.7	2.0	0.30	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:23	EEH
Vinyl Chloride	120	4.0	0.47	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
m+p Xylene	51	4.0	0.98	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH
o-Xylene	44	2.0	0.49	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:23	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	100	70-130		8/17/23 15:23
Toluene-d8	101	70-130		8/17/23 15:23
4-Bromofluorobenzene	95.8	70-130		8/17/23 15:23

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 | Sampled: 8/14/2023 12:15

Sample ID: 23H2240-06

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Aldrin [1]	ND	0.048	0.0070	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
alpha-BHC [1]	ND	0.048	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
beta-BHC [1]	ND	0.048	0.0079	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
delta-BHC [1]	ND	0.048	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
gamma-BHC (Lindane) [1]	ND	0.029	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
4,4'-DDE [1]	ND	0.038	0.0048	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
4,4'-DDT [1]	ND	0.038	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Dieldrin [1]	ND	0.0019	0.00098	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Endosulfan I [1]	ND	0.048	0.0050	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Endosulfan II [1]	ND	0.077	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Endosulfan sulfate [1]	ND	0.077	0.0062	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Endrin [1]	ND	0.077	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Endrin aldehyde [1]	ND	0.077	0.0043	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Endrin ketone [1]	ND	0.077	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Heptachlor [1]	ND	0.048	0.0059	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Heptachlor epoxide [1]	ND	0.048	0.0066	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Hexachlorobenzene [1]	ND	0.048	0.027	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Methoxychlor [1]	ND	0.48	0.010	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG
Toxaphene [1]	ND	0.96	0.64	µg/L	1		SW-846 8081B	8/21/23	8/29/23 21:43	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	64.1	30-150		8/29/23 21:43
Decachlorobiphenyl [2]	66.9	30-150		8/29/23 21:43
Tetrachloro-m-xylene [1]	72.3	30-150		8/29/23 21:43
Tetrachloro-m-xylene [2]	59.1	30-150		8/29/23 21:43

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 | Sampled: 8/14/2023 12:15

Sample ID: 23H2240-06

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.020	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Arsenic	0.012	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:10	ATP
Barium	0.14	0.050	0.0057	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Cadmium	0.0014	0.0040	0.0013	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Calcium	96	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:10	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Iron	8.1	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:10	ATP
Magnesium	12	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Manganese	7.5	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:10	ATP
Potassium	4.8	2.0	0.33	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:10	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:10	ATP
Sodium	86	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 18:20	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:10	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 20:56	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 18:20	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2240-07

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	100	4.0	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Acrylonitrile	ND	10	0.93	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
tert-Amyl Methyl Ether (TAME)	ND	1.0	0.26	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Benzene	ND	2.0	0.37	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Bromobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Bromochloromethane	ND	2.0	0.57	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Bromodichloromethane	ND	1.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Bromoform	ND	2.0	0.82	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Bromomethane	ND	4.0	2.6	µg/L	2	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
2-Butanone (MEK)	ND	40	3.4	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
tert-Butyl Alcohol (TBA)	ND	40	8.5	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
n-Butylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
sec-Butylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
tert-Butylbenzene	ND	2.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Carbon Disulfide	ND	10	3.1	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Chlorobenzene	16	2.0	0.24	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Chlorodibromomethane	ND	1.0	0.40	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Chloroethane	ND	4.0	0.68	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Chloroform	ND	4.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Chloromethane	ND	4.0	1.0	µg/L	2	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
2-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
4-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.7	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Dibromomethane	ND	2.0	0.64	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2-Dichlorobenzene	3.0	2.0	0.26	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,3-Dichlorobenzene	ND	2.0	0.27	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,4-Dichlorobenzene	1.5	2.0	0.26	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
trans-1,4-Dichloro-2-butene	ND	4.0	3.0	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1-Dichloroethane	7.4	2.0	0.27	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2-Dichloroethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1-Dichloroethylene	0.48	2.0	0.28	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
cis-1,2-Dichloroethylene	210	2.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
trans-1,2-Dichloroethylene	3.4	2.0	0.34	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2-Dichloropropane	ND	2.0	0.39	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,3-Dichloropropane	ND	1.0	0.23	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
2,2-Dichloropropane	ND	2.0	0.70	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1-Dichloropropene	ND	4.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
cis-1,3-Dichloropropene	ND	1.0	0.33	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
trans-1,3-Dichloropropene	ND	1.0	0.28	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Diethyl Ether	ND	4.0	0.29	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2240-07

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	1.0	0.40	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,4-Dioxane	ND	100	36	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Ethylbenzene	1.0	2.0	0.44	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Hexachlorobutadiene	ND	1.2	0.94	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
2-Hexanone (MBK)	ND	20	2.4	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Isopropylbenzene (Cumene)	ND	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
p-Isopropyltoluene (p-Cymene)	ND	2.0	0.25	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Methyl Acetate	ND	2.0	1.2	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Methyl Cyclohexane	ND	2.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Methylene Chloride	ND	10	0.35	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Naphthalene	ND	4.0	0.76	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
n-Propylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Styrene	ND	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.27	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Tetrachloroethylene	1.6	2.0	0.34	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Tetrahydrofuran	ND	20	0.98	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Toluene	1.0	2.0	0.45	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2,3-Trichlorobenzene	ND	10	0.68	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.60	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,3,5-Trichlorobenzene	ND	2.0	0.42	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1,1-Trichloroethane	0.66	2.0	0.30	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1,2-Trichloroethane	ND	2.0	0.38	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Trichloroethylene	1.6	2.0	0.35	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.31	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2,3-Trichloropropane	ND	4.0	0.55	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.76	2.0	0.42	µg/L	2	J	SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,2,4-Trimethylbenzene	ND	2.0	0.40	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
1,3,5-Trimethylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
Vinyl Chloride	260	4.0	0.47	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
m+p Xylene	ND	4.0	0.98	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH
o-Xylene	2.3	2.0	0.49	µg/L	2		SW-846 8260D	8/17/23	8/17/23 15:50	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		8/17/23 15:50
Toluene-d8	101	70-130		8/17/23 15:50
4-Bromofluorobenzene	99.8	70-130		8/17/23 15:50

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2240-07

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Aldrin [1]	ND	0.047	0.0068	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
alpha-BHC [1]	ND	0.047	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
beta-BHC [1]	ND	0.047	0.0078	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
delta-BHC [1]	ND	0.047	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
4,4'-DDE [1]	ND	0.038	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
4,4'-DDT [1]	ND	0.038	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Dieldrin [1]	ND	0.0019	0.00096	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Endosulfan I [1]	ND	0.047	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Endosulfan II [1]	ND	0.075	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Endosulfan sulfate [1]	ND	0.075	0.0061	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Endrin [1]	ND	0.075	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Endrin aldehyde [1]	ND	0.075	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Endrin ketone [1]	ND	0.075	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Heptachlor [1]	ND	0.047	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Heptachlor epoxide [1]	ND	0.047	0.0065	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Hexachlorobenzene [1]	ND	0.047	0.027	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Methoxychlor [1]	ND	0.47	0.0098	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG
Toxaphene [1]	ND	0.94	0.63	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:05	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.8	30-150		8/29/23 22:05
Decachlorobiphenyl [2]	72.9	30-150		8/29/23 22:05
Tetrachloro-m-xylene [1]	64.8	30-150		8/29/23 22:05
Tetrachloro-m-xylene [2]	52.4	30-150		8/29/23 22:05

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2240-07

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.026	0.050	0.020	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Arsenic	0.011	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:16	ATP
Barium	0.29	0.050	0.0057	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Calcium	85	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:16	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Iron	6.0	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:16	ATP
Magnesium	19	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Manganese	3.4	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:16	ATP
Potassium	3.5	2.0	0.33	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:16	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:16	ATP
Sodium	56	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 18:26	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:16	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:02	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 18:26	HNN

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-FD-1 | Sampled: 8/14/2023 00:00

Sample ID: 23H2240-08

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	200	8.0	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Acrylonitrile	ND	20	1.9	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.0	0.53	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Benzene	ND	4.0	0.74	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Bromobenzene	ND	4.0	0.59	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Bromochloromethane	ND	4.0	1.1	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Bromodichloromethane	ND	2.0	0.63	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Bromoform	ND	4.0	1.6	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Bromomethane	ND	8.0	5.3	µg/L	4	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
2-Butanone (MEK)	ND	80	6.7	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
tert-Butyl Alcohol (TBA)	ND	80	17	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
n-Butylbenzene	ND	4.0	0.60	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
sec-Butylbenzene	ND	4.0	0.51	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
tert-Butylbenzene	ND	4.0	0.57	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	2.0	0.62	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Carbon Disulfide	ND	20	6.2	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Carbon Tetrachloride	ND	20	0.65	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Chlorobenzene	25	4.0	0.48	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Chlorodibromomethane	ND	2.0	0.80	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Chloroethane	ND	8.0	1.4	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Chloroform	ND	8.0	0.56	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Chloromethane	ND	8.0	2.0	µg/L	4	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
2-Chlorotoluene	ND	4.0	0.62	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
4-Chlorotoluene	ND	4.0	0.62	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	20	3.4	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2-Dibromoethane (EDB)	ND	2.0	0.64	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Dibromomethane	ND	4.0	1.3	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2-Dichlorobenzene	5.0	4.0	0.52	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,3-Dichlorobenzene	ND	4.0	0.55	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,4-Dichlorobenzene	2.2	4.0	0.51	µg/L	4	J	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
trans-1,4-Dichloro-2-butene	ND	8.0	6.0	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Dichlorodifluoromethane (Freon 12)	ND	8.0	0.64	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1-Dichloroethane	12	4.0	0.55	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2-Dichloroethane	ND	4.0	1.2	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1-Dichloroethylene	0.76	4.0	0.56	µg/L	4	J	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
cis-1,2-Dichloroethylene	310	4.0	0.56	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
trans-1,2-Dichloroethylene	5.0	4.0	0.69	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2-Dichloropropane	ND	4.0	0.77	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,3-Dichloropropane	ND	2.0	0.46	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
2,2-Dichloropropane	ND	4.0	1.4	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1-Dichloropropene	ND	8.0	0.60	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
cis-1,3-Dichloropropene	ND	2.0	0.65	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
trans-1,3-Dichloropropene	ND	2.0	0.57	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Diethyl Ether	ND	8.0	0.58	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-FD-1 | Sampled: 8/14/2023 00:00

Sample ID: 23H2240-08

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	2.0	0.81	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,4-Dioxane	ND	200	72	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Ethylbenzene	ND	4.0	0.88	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Hexachlorobutadiene	ND	2.4	1.9	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
2-Hexanone (MBK)	ND	40	4.8	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Isopropylbenzene (Cumene)	ND	4.0	0.60	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
p-Isopropyltoluene (p-Cymene)	ND	4.0	0.51	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Methyl Acetate	ND	4.0	2.4	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Methyl tert-Butyl Ether (MTBE)	ND	4.0	0.68	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Methyl Cyclohexane	ND	4.0	0.62	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Methylene Chloride	ND	20	0.71	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
4-Methyl-2-pentanone (MIBK)	ND	40	5.3	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Naphthalene	ND	8.0	1.5	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
n-Propylbenzene	ND	4.0	0.50	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Styrene	ND	4.0	0.60	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1,1,2-Tetrachloroethane	ND	4.0	0.65	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1,2,2-Tetrachloroethane	ND	2.0	0.55	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Tetrachloroethylene	2.0	4.0	0.67	µg/L	4	J	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Tetrahydrofuran	ND	40	2.0	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Toluene	1.5	4.0	0.89	µg/L	4	J	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2,3-Trichlorobenzene	ND	20	1.4	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2,4-Trichlorobenzene	ND	4.0	1.2	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,3,5-Trichlorobenzene	ND	4.0	0.83	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1,1-Trichloroethane	0.92	4.0	0.60	µg/L	4	J	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1,2-Trichloroethane	ND	4.0	0.76	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Trichloroethylene	1.4	4.0	0.70	µg/L	4	J	SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Trichlorofluoromethane (Freon 11)	ND	8.0	0.62	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2,3-Trichloropropane	ND	8.0	1.1	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	4.0	0.83	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,2,4-Trimethylbenzene	ND	4.0	0.80	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
1,3,5-Trimethylbenzene	ND	4.0	0.60	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
Vinyl Chloride	400	8.0	0.95	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
m+p Xylene	ND	8.0	2.0	µg/L	4		SW-846 8260D	8/17/23	8/17/23 16:17	EEH
o-Xylene	3.7	4.0	0.97	µg/L	4	J	SW-846 8260D	8/17/23	8/17/23 16:17	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		8/17/23 16:17
Toluene-d8	103	70-130		8/17/23 16:17
4-Bromofluorobenzene	98.4	70-130		8/17/23 16:17

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-FD-1 | Sampled: 8/14/2023 00:00

Sample ID: 23H2240-08

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Aldrin [1]	ND	0.048	0.0069	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
alpha-BHC [1]	ND	0.048	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
beta-BHC [1]	ND	0.048	0.0079	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
delta-BHC [1]	ND	0.048	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
gamma-BHC (Lindane) [1]	ND	0.029	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
4,4'-DDE [1]	ND	0.038	0.0048	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
4,4'-DDT [1]	ND	0.038	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Dieldrin [1]	ND	0.0019	0.00097	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Endosulfan I [1]	ND	0.048	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Endosulfan II [1]	ND	0.076	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Endosulfan sulfate [1]	ND	0.076	0.0061	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Endrin [1]	ND	0.076	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Endrin aldehyde [1]	ND	0.076	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Endrin ketone [1]	ND	0.076	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Heptachlor [1]	ND	0.048	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Heptachlor epoxide [1]	ND	0.048	0.0065	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Hexachlorobenzene [1]	ND	0.048	0.027	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Methoxychlor [1]	ND	0.48	0.0099	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG
Toxaphene [1]	ND	0.95	0.63	µg/L	1		SW-846 8081B	8/21/23	8/29/23 22:27	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.0	30-150		8/29/23 22:27
Decachlorobiphenyl [2]	75.0	30-150		8/29/23 22:27
Tetrachloro-m-xylene [1]	64.4	30-150		8/29/23 22:27
Tetrachloro-m-xylene [2]	59.5	30-150		8/29/23 22:27

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-FD-1 | Sampled: 8/14/2023 00:00

Sample ID: 23H2240-08

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.023	0.050	0.020	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Arsenic	0.011	0.010	0.0073	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:21	ATP
Barium	0.14	0.050	0.0057	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Cadmium	0.0015	0.0040	0.0013	mg/L	1	J	SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Calcium	95	0.50	0.091	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:21	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Iron	8.1	0.050	0.047	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:21	ATP
Magnesium	12	0.050	0.016	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Manganese	6.9	0.010	0.0028	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:21	ATP
Potassium	5.3	2.0	0.33	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:21	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:21	ATP
Sodium	73	2.0	0.74	mg/L	1	B	SW-846 6010D	8/15/23	8/22/23 18:31	HNN
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/15/23	8/21/23 19:21	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/15/23	8/17/23 21:07	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/15/23	8/22/23 18:31	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-EB-01 | Sampled: 8/14/2023 17:30

Sample ID: 23H2240-09

Sample Matrix: Equipment Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 11:16	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 11:16	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-EB-01 | Sampled: 8/14/2023 17:30

Sample ID: 23H2240-09

Sample Matrix: Equipment Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:16	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	100	70-130		8/17/23 11:16
Toluene-d8	101	70-130		8/17/23 11:16
4-Bromofluorobenzene	97.4	70-130		8/17/23 11:16

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-FB-01 | Sampled: 8/14/2023 17:25

Sample ID: 23H2240-10

Sample Matrix: Field Blank

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	3.5	50	2.0	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 11:44	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 11:44	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 314058-FB-01 | Sampled: 8/14/2023 17:25

Sample ID: 23H2240-10

Sample Matrix: Field Blank

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 11:44	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.4	70-130		8/17/23 11:44
Toluene-d8	101	70-130		8/17/23 11:44
4-Bromofluorobenzene	95.5	70-130		8/17/23 11:44

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 310458-TB-01 | Sampled: 8/14/2023 00:00

Sample ID: 23H2240-11

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	2.4	50	2.0	µg/L	1	J	SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 12:11	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/17/23 12:11	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2240

Date Received: 8/15/2023

Field Sample #: 310458-TB-01 | Sampled: 8/14/2023 00:00

Sample ID: 23H2240-11

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/17/23 12:11	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	100	70-130		8/17/23 12:11
Toluene-d8	102	70-130		8/17/23 12:11
4-Bromofluorobenzene	97.3	70-130		8/17/23 12:11

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Sample Extraction Data

Prep Method:SW-846 3005A Dissolved **Analytical Method:SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2240-04 [314058-MW-9R-08142023]	B349121	50.0	50.0	08/15/23

Prep Method:SW-846 3005A **Analytical Method:SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2240-01 [314058-MW-3-08142023]	B349123	50.0	50.0	08/15/23
23H2240-02 [314058-MW-4-08142023]	B349123	50.0	50.0	08/15/23
23H2240-03 [314058-MW-5-08142023]	B349123	50.0	50.0	08/15/23
23H2240-04 [314058-MW-9R-08142023]	B349123	50.0	50.0	08/15/23
23H2240-05 [314058-MW-11-08142023]	B349123	50.0	50.0	08/15/23
23H2240-06 [314058-MW-15D-08142023]	B349123	50.0	50.0	08/15/23
23H2240-07 [314058-MW-16-08142023]	B349123	50.0	50.0	08/15/23
23H2240-08 [314058-FD-1]	B349123	50.0	50.0	08/15/23

Prep Method:SW-846 3510C **Analytical Method:SW-846 8081B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2240-01 [314058-MW-3-08142023]	B349687	106	2.00	08/21/23
23H2240-02 [314058-MW-4-08142023]	B349687	108	2.00	08/21/23
23H2240-03 [314058-MW-5-08142023]	B349687	107	2.00	08/21/23
23H2240-04 [314058-MW-9R-08142023]	B349687	110	2.00	08/21/23
23H2240-05 [314058-MW-11-08142023]	B349687	106	2.00	08/21/23
23H2240-06 [314058-MW-15D-08142023]	B349687	104	2.00	08/21/23
23H2240-07 [314058-MW-16-08142023]	B349687	106	2.00	08/21/23
23H2240-08 [314058-FD-1]	B349687	105	2.00	08/21/23

Prep Method:SW-846 3510C **Analytical Method:SW-846 8081B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2240-01RE1 [314058-MW-3-08142023]	B350765	106	2.00	08/31/23

Prep Method:SW-846 5030B **Analytical Method:SW-846 8260D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2240-01 [314058-MW-3-08142023]	B349323	5	5.00	08/17/23
23H2240-02 [314058-MW-4-08142023]	B349323	5	5.00	08/17/23
23H2240-03 [314058-MW-5-08142023]	B349323	5	5.00	08/17/23
23H2240-04 [314058-MW-9R-08142023]	B349323	5	5.00	08/17/23
23H2240-05 [314058-MW-11-08142023]	B349323	5	5.00	08/17/23
23H2240-06 [314058-MW-15D-08142023]	B349323	2.5	5.00	08/17/23
23H2240-07 [314058-MW-16-08142023]	B349323	2.5	5.00	08/17/23
23H2240-08 [314058-FD-1]	B349323	1.25	5.00	08/17/23
23H2240-09 [314058-EB-01]	B349323	5	5.00	08/17/23
23H2240-10 [314058-FB-01]	B349323	5	5.00	08/17/23
23H2240-11 [310458-TB-01]	B349323	5	5.00	08/17/23

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349323 - SW-846 5030B										
Blank (B349323-BLK1)				Prepared & Analyzed: 08/17/23						
Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							V-05, V-34
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							V-05, V-34
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl Acetate	ND	1.0	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B349323 - SW-846 5030B											
Blank (B349323-BLK1)				Prepared & Analyzed: 08/17/23							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L								
Methyl Cyclohexane	ND	1.0	µg/L								
Methylene Chloride	ND	5.0	µg/L								
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L								
Naphthalene	ND	2.0	µg/L								
n-Propylbenzene	ND	1.0	µg/L								
Styrene	ND	1.0	µg/L								
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L								
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L								
Tetrachloroethylene	ND	1.0	µg/L								
Tetrahydrofuran	ND	10	µg/L								
Toluene	ND	1.0	µg/L								
1,2,3-Trichlorobenzene	ND	5.0	µg/L								
1,2,4-Trichlorobenzene	ND	1.0	µg/L								
1,3,5-Trichlorobenzene	ND	1.0	µg/L								
1,1,1-Trichloroethane	ND	1.0	µg/L								
1,1,2-Trichloroethane	ND	1.0	µg/L								
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,2,3-Trichloropropane	ND	2.0	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L								
1,2,4-Trimethylbenzene	ND	1.0	µg/L								
1,3,5-Trimethylbenzene	ND	1.0	µg/L								
Vinyl Chloride	ND	2.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*25.3*		µg/L	25.0		101	70-130				
Surrogate: Toluene-d8	*25.1*		µg/L	25.0		100	70-130				
Surrogate: 4-Bromofluorobenzene	*24.1*		µg/L	25.0		96.3	70-130				
LCS (B349323-BS1)				Prepared & Analyzed: 08/17/23							
Acetone	103	50	µg/L	100		103	70-160				†
Acrylonitrile	10.6	5.0	µg/L	10.0		106	70-130				
tert-Amyl Methyl Ether (TAME)	9.92	0.50	µg/L	10.0		99.2	70-130				
Benzene	11.0	1.0	µg/L	10.0		110	70-130				
Bromobenzene	10.9	1.0	µg/L	10.0		109	70-130				
Bromochloromethane	11.7	1.0	µg/L	10.0		117	70-130			V-20	
Bromodichloromethane	11.0	0.50	µg/L	10.0		110	70-130				
Bromoform	9.80	1.0	µg/L	10.0		98.0	70-130				
Bromomethane	7.92	2.0	µg/L	10.0		79.2	40-160			V-05, V-34	†
2-Butanone (MEK)	110	20	µg/L	100		110	40-160				†
tert-Butyl Alcohol (TBA)	102	20	µg/L	100		102	40-160				†
n-Butylbenzene	10.7	1.0	µg/L	10.0		107	70-130				
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
tert-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130				
tert-Butyl Ethyl Ether (TBEE)	10.1	0.50	µg/L	10.0		101	70-130				
Carbon Disulfide	102	5.0	µg/L	100		102	70-130				
Carbon Tetrachloride	11.3	5.0	µg/L	10.0		113	70-130				
Chlorobenzene	10.7	1.0	µg/L	10.0		107	70-130				
Chlorodibromomethane	11.1	0.50	µg/L	10.0		111	70-130				
Chloroethane	9.83	2.0	µg/L	10.0		98.3	70-130			V-06	
Chloroform	10.7	2.0	µg/L	10.0		107	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B349323 - SW-846 5030B											
LCS (B349323-BS1)				Prepared & Analyzed: 08/17/23							
Chloromethane	8.02	2.0	µg/L	10.0		80.2	40-160			V-05, V-34	†
2-Chlorotoluene	9.11	1.0	µg/L	10.0		91.1	70-130				
4-Chlorotoluene	10.8	1.0	µg/L	10.0		108	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	10.5	5.0	µg/L	10.0		105	70-130				
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111	70-130				
Dibromomethane	10.8	1.0	µg/L	10.0		108	70-130				
1,2-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130				
1,3-Dichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130				
1,4-Dichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130				
trans-1,4-Dichloro-2-butene	9.60	2.0	µg/L	10.0		96.0	70-130				
Dichlorodifluoromethane (Freon 12)	10.6	2.0	µg/L	10.0		106	40-160				†
1,1-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130				
1,2-Dichloroethane	9.95	1.0	µg/L	10.0		99.5	70-130				
1,1-Dichloroethylene	10.9	1.0	µg/L	10.0		109	70-130				
cis-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130				
trans-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130				
1,2-Dichloropropane	10.3	1.0	µg/L	10.0		103	70-130				
1,3-Dichloropropane	10.7	0.50	µg/L	10.0		107	70-130				
2,2-Dichloropropane	9.65	1.0	µg/L	10.0		96.5	40-130				†
1,1-Dichloropropene	11.1	2.0	µg/L	10.0		111	70-130				
cis-1,3-Dichloropropene	10.3	0.50	µg/L	10.0		103	70-130				
trans-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101	70-130				
Diethyl Ether	11.4	2.0	µg/L	10.0		114	70-130				
Diisopropyl Ether (DIPE)	10.9	0.50	µg/L	10.0		109	70-130				
1,4-Dioxane	96.8	50	µg/L	100		96.8	40-130				†
Ethylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
Hexachlorobutadiene	10.6	0.60	µg/L	10.0		106	70-130				
2-Hexanone (MBK)	113	10	µg/L	100		113	70-160				†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106	70-130				
p-Isopropyltoluene (p-Cymene)	10.9	1.0	µg/L	10.0		109	70-130				
Methyl Acetate	8.34	1.0	µg/L	10.0		83.4	70-130				
Methyl tert-Butyl Ether (MTBE)	10.7	1.0	µg/L	10.0		107	70-130				
Methyl Cyclohexane	10.5	1.0	µg/L	10.0		105	70-130				
Methylene Chloride	10.4	5.0	µg/L	10.0		104	70-130				
4-Methyl-2-pentanone (MIBK)	114	10	µg/L	100		114	70-160				†
Naphthalene	11.7	2.0	µg/L	10.0		117	40-130				†
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
Styrene	10.8	1.0	µg/L	10.0		108	70-130				
1,1,1,2-Tetrachloroethane	10.6	1.0	µg/L	10.0		106	70-130				
1,1,2,2-Tetrachloroethane	10.9	0.50	µg/L	10.0		109	70-130				
Tetrachloroethylene	10.5	1.0	µg/L	10.0		105	70-130				
Tetrahydrofuran	10.5	10	µg/L	10.0		105	70-130				
Toluene	10.3	1.0	µg/L	10.0		103	70-130				
1,2,3-Trichlorobenzene	10.6	5.0	µg/L	10.0		106	70-130				
1,2,4-Trichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130				
1,3,5-Trichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130				
1,1,1-Trichloroethane	10.9	1.0	µg/L	10.0		109	70-130				
1,1,2-Trichloroethane	10.5	1.0	µg/L	10.0		105	70-130				
Trichloroethylene	11.0	1.0	µg/L	10.0		110	70-130				
Trichlorofluoromethane (Freon 11)	11.4	2.0	µg/L	10.0		114	70-130				
1,2,3-Trichloropropane	11.1	2.0	µg/L	10.0		111	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B349323 - SW-846 5030B											
LCS (B349323-BS1)				Prepared & Analyzed: 08/17/23							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.8	1.0	µg/L	10.0		108	70-130				
1,2,4-Trimethylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
1,3,5-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
Vinyl Chloride	11.3	2.0	µg/L	10.0		113	40-160				†
m+p Xylene	21.5	2.0	µg/L	20.0		108	70-130				
o-Xylene	10.8	1.0	µg/L	10.0		108	70-130				
Surrogate: 1,2-Dichloroethane-d4	*27.0*		µg/L	25.0		108	70-130				
Surrogate: Toluene-d8	*24.9*		µg/L	25.0		99.7	70-130				
Surrogate: 4-Bromofluorobenzene	*24.3*		µg/L	25.0		97.4	70-130				
LCS Dup (B349323-BSD1)				Prepared & Analyzed: 08/17/23							
Acetone	111	50	µg/L	100		111	70-160	7.52	25		†
Acrylonitrile	10.6	5.0	µg/L	10.0		106	70-130	0.473	25		
tert-Amyl Methyl Ether (TAME)	9.92	0.50	µg/L	10.0		99.2	70-130	0.00	25		
Benzene	11.1	1.0	µg/L	10.0		111	70-130	0.543	25		
Bromobenzene	11.3	1.0	µg/L	10.0		113	70-130	4.15	25		
Bromochloromethane	11.6	1.0	µg/L	10.0		116	70-130	0.514	25	V-20	
Bromodichloromethane	10.9	0.50	µg/L	10.0		109	70-130	0.549	25		
Bromoform	11.2	1.0	µg/L	10.0		112	70-130	13.0	25		
Bromomethane	9.07	2.0	µg/L	10.0		90.7	40-160	13.5	25	V-05, V-34	†
2-Butanone (MEK)	106	20	µg/L	100		106	40-160	3.40	25		†
tert-Butyl Alcohol (TBA)	103	20	µg/L	100		103	40-160	0.793	25		†
n-Butylbenzene	11.5	1.0	µg/L	10.0		115	70-130	7.02	25		
sec-Butylbenzene	11.3	1.0	µg/L	10.0		113	70-130	6.01	25		
tert-Butylbenzene	11.3	1.0	µg/L	10.0		113	70-130	6.69	25		
tert-Butyl Ethyl Ether (TBEE)	10.0	0.50	µg/L	10.0		100	70-130	0.596	25		
Carbon Disulfide	127	5.0	µg/L	100		127	70-130	22.3	25		
Carbon Tetrachloride	11.9	5.0	µg/L	10.0		119	70-130	4.84	25		
Chlorobenzene	11.3	1.0	µg/L	10.0		113	70-130	5.73	25		
Chlorodibromomethane	11.0	0.50	µg/L	10.0		110	70-130	1.09	25		
Chloroethane	10.6	2.0	µg/L	10.0		106	70-130	7.16	25	V-06	
Chloroform	10.9	2.0	µg/L	10.0		109	70-130	2.04	25		
Chloromethane	9.28	2.0	µg/L	10.0		92.8	40-160	14.6	25	V-05, V-34	†
2-Chlorotoluene	9.70	1.0	µg/L	10.0		97.0	70-130	6.27	25		
4-Chlorotoluene	11.2	1.0	µg/L	10.0		112	70-130	4.45	25		
1,2-Dibromo-3-chloropropane (DBCP)	10.8	5.0	µg/L	10.0		108	70-130	2.92	25		
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111	70-130	0.00	25		
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130	2.48	25		
1,2-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130	5.05	25		
1,3-Dichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130	5.42	25		
1,4-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	4.54	25		
trans-1,4-Dichloro-2-butene	10.2	2.0	µg/L	10.0		102	70-130	5.86	25		
Dichlorodifluoromethane (Freon 12)	10.9	2.0	µg/L	10.0		109	40-160	2.71	25		†
1,1-Dichloroethane	10.9	1.0	µg/L	10.0		109	70-130	2.42	25		
1,2-Dichloroethane	10.3	1.0	µg/L	10.0		103	70-130	3.26	25		
1,1-Dichloroethylene	11.3	1.0	µg/L	10.0		113	70-130	3.15	25		
cis-1,2-Dichloroethylene	11.0	1.0	µg/L	10.0		110	70-130	1.19	25		
trans-1,2-Dichloroethylene	11.1	1.0	µg/L	10.0		111	70-130	2.37	25		
1,2-Dichloropropane	10.5	1.0	µg/L	10.0		105	70-130	1.54	25		
1,3-Dichloropropane	11.0	0.50	µg/L	10.0		110	70-130	2.75	25		
2,2-Dichloropropane	9.99	1.0	µg/L	10.0		99.9	40-130	3.46	25		†
1,1-Dichloropropene	11.2	2.0	µg/L	10.0		112	70-130	1.61	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349323 - SW-846 5030B										
LCS Dup (B349323-BSD1)				Prepared & Analyzed: 08/17/23						
cis-1,3-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130	2.11	25	
trans-1,3-Dichloropropene	10.2	0.50	µg/L	10.0		102	70-130	1.08	25	
Diethyl Ether	11.2	2.0	µg/L	10.0		112	70-130	2.21	25	
Diisopropyl Ether (DIPE)	11.0	0.50	µg/L	10.0		110	70-130	0.456	25	
1,4-Dioxane	111	50	µg/L	100		111	40-130	13.3	50	† ‡
Ethylbenzene	11.4	1.0	µg/L	10.0		114	70-130	5.03	25	
Hexachlorobutadiene	11.4	0.60	µg/L	10.0		114	70-130	6.92	25	
2-Hexanone (MBK)	115	10	µg/L	100		115	70-160	2.01	25	†
Isopropylbenzene (Cumene)	11.3	1.0	µg/L	10.0		113	70-130	6.59	25	
p-Isopropyltoluene (p-Cymene)	11.4	1.0	µg/L	10.0		114	70-130	5.03	25	
Methyl Acetate	10.7	1.0	µg/L	10.0		107	70-130	24.6	25	
Methyl tert-Butyl Ether (MTBE)	10.5	1.0	µg/L	10.0		105	70-130	2.27	25	
Methyl Cyclohexane	10.6	1.0	µg/L	10.0		106	70-130	1.23	25	
Methylene Chloride	10.2	5.0	µg/L	10.0		102	70-130	1.46	25	
4-Methyl-2-pentanone (MIBK)	115	10	µg/L	100		115	70-160	1.47	25	†
Naphthalene	12.3	2.0	µg/L	10.0		123	40-130	5.33	25	†
n-Propylbenzene	11.2	1.0	µg/L	10.0		112	70-130	5.57	25	
Styrene	11.1	1.0	µg/L	10.0		111	70-130	2.28	25	
1,1,1,2-Tetrachloroethane	11.2	1.0	µg/L	10.0		112	70-130	5.58	25	
1,1,2,2-Tetrachloroethane	11.4	0.50	µg/L	10.0		114	70-130	5.20	25	
Tetrachloroethylene	11.1	1.0	µg/L	10.0		111	70-130	5.64	25	
Tetrahydrofuran	9.80	10	µg/L	10.0		98.0	70-130	6.71	25	J
Toluene	10.8	1.0	µg/L	10.0		108	70-130	4.74	25	
1,2,3-Trichlorobenzene	11.5	5.0	µg/L	10.0		115	70-130	7.59	25	
1,2,4-Trichlorobenzene	11.7	1.0	µg/L	10.0		117	70-130	9.33	25	
1,3,5-Trichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130	7.90	25	
1,1,1-Trichloroethane	11.2	1.0	µg/L	10.0		112	70-130	2.17	25	
1,1,2-Trichloroethane	11.1	1.0	µg/L	10.0		111	70-130	4.81	25	
Trichloroethylene	11.3	1.0	µg/L	10.0		113	70-130	2.69	25	
Trichlorofluoromethane (Freon 11)	11.6	2.0	µg/L	10.0		116	70-130	1.30	25	
1,2,3-Trichloropropane	11.4	2.0	µg/L	10.0		114	70-130	3.19	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	12.0	1.0	µg/L	10.0		120	70-130	10.5	25	
1,2,4-Trimethylbenzene	11.3	1.0	µg/L	10.0		113	70-130	4.79	25	
1,3,5-Trimethylbenzene	11.2	1.0	µg/L	10.0		112	70-130	5.22	25	
Vinyl Chloride	11.5	2.0	µg/L	10.0		115	40-160	1.93	25	†
m+p Xylene	22.8	2.0	µg/L	20.0		114	70-130	5.65	25	
o-Xylene	11.1	1.0	µg/L	10.0		111	70-130	3.20	25	
Surrogate: 1,2-Dichloroethane-d4	*26.2*		µg/L	25.0		105	70-130			
Surrogate: Toluene-d8	*25.1*		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	*24.8*		µg/L	25.0		99.2	70-130			
Matrix Spike (B349323-MS1)	**Source: 23H2240-06**			Prepared & Analyzed: 08/17/23						
Acetone	200	100	µg/L	200	ND	100	70-130			
Acrylonitrile	19.7	10	µg/L	20.0	ND	98.5	70-130			
tert-Amyl Methyl Ether (TAME)	18.3	1.0	µg/L	20.0	ND	91.6	70-130			
Benzene	26.3	2.0	µg/L	20.0	3.78	113	70-130			
Bromobenzene	22.4	2.0	µg/L	20.0	ND	112	70-130			
Bromochloromethane	24.7	2.0	µg/L	20.0	ND	123	70-130			V-20
Bromodichloromethane	22.2	1.0	µg/L	20.0	ND	111	70-130			
Bromoform	21.3	2.0	µg/L	20.0	ND	106	70-130			
Bromomethane	14.5	4.0	µg/L	20.0	ND	72.4	70-130			V-05, V-34
2-Butanone (MEK)	203	40	µg/L	200	ND	102	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349323 - SW-846 5030B										
Matrix Spike (B349323-MS1)		**Source: 23H2240-06**		Prepared & Analyzed: 08/17/23						
tert-Butyl Alcohol (TBA)	181	40	µg/L	200	ND	90.3	70-130			
n-Butylbenzene	22.5	2.0	µg/L	20.0	0.680	109	70-130			
sec-Butylbenzene	24.3	2.0	µg/L	20.0	1.72	113	70-130			
tert-Butylbenzene	23.2	2.0	µg/L	20.0	0.880	111	70-130			
tert-Butyl Ethyl Ether (TBEE)	19.7	1.0	µg/L	20.0	ND	98.4	70-130			
Carbon Disulfide	248	10	µg/L	200	ND	124	70-130			
Carbon Tetrachloride	25.3	10	µg/L	20.0	ND	127	70-130			
Chlorobenzene	294	2.0	µg/L	20.0	275	96.9	70-130			
Chlorodibromomethane	22.6	1.0	µg/L	20.0	ND	113	70-130			
Chloroethane	23.7	4.0	µg/L	20.0	0.940	114	70-130			V-06
Chloroform	22.4	4.0	µg/L	20.0	ND	112	70-130			
Chloromethane	15.2	4.0	µg/L	20.0	ND	75.9	70-130			V-05, V-34
2-Chlorotoluene	44.4	2.0	µg/L	20.0	25.4	94.8	70-130			
4-Chlorotoluene	31.9	2.0	µg/L	20.0	9.70	111	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	19.0	10	µg/L	20.0	ND	94.8	70-130			
1,2-Dibromoethane (EDB)	22.8	1.0	µg/L	20.0	ND	114	70-130			
Dibromomethane	22.4	2.0	µg/L	20.0	ND	112	70-130			
1,2-Dichlorobenzene	36.3	2.0	µg/L	20.0	15.2	106	70-130			
1,3-Dichlorobenzene	24.0	2.0	µg/L	20.0	2.64	107	70-130			
1,4-Dichlorobenzene	28.9	2.0	µg/L	20.0	8.22	104	70-130			
trans-1,4-Dichloro-2-butene	19.0	4.0	µg/L	20.0	ND	95.1	70-130			
Dichlorodifluoromethane (Freon 12)	21.9	4.0	µg/L	20.0	ND	109	70-130			
1,1-Dichloroethane	31.5	2.0	µg/L	20.0	9.44	110	70-130			
1,2-Dichloroethane	20.3	2.0	µg/L	20.0	ND	102	70-130			
1,1-Dichloroethylene	23.5	2.0	µg/L	20.0	ND	117	70-130			
cis-1,2-Dichloroethylene	55.7	2.0	µg/L	20.0	33.1	113	70-130			
trans-1,2-Dichloroethylene	28.2	2.0	µg/L	20.0	5.76	112	70-130			
1,2-Dichloropropane	20.8	2.0	µg/L	20.0	ND	104	70-130			
1,3-Dichloropropane	21.6	1.0	µg/L	20.0	ND	108	70-130			
2,2-Dichloropropane	16.2	2.0	µg/L	20.0	ND	81.1	70-130			
1,1-Dichloropropene	22.9	4.0	µg/L	20.0	ND	114	70-130			
cis-1,3-Dichloropropene	21.0	1.0	µg/L	20.0	ND	105	70-130			
trans-1,3-Dichloropropene	19.4	1.0	µg/L	20.0	ND	97.2	70-130			
Diethyl Ether	22.6	4.0	µg/L	20.0	ND	113	70-130			
Diisopropyl Ether (DIPE)	22.0	1.0	µg/L	20.0	ND	110	70-130			
1,4-Dioxane	177	100	µg/L	200	ND	88.4	70-130			
Ethylbenzene	147	2.0	µg/L	20.0	123	117	70-130			
Hexachlorobutadiene	20.3	1.2	µg/L	20.0	ND	102	70-130			
2-Hexanone (MBK)	211	20	µg/L	200	ND	106	70-130			
Isopropylbenzene (Cumene)	24.3	2.0	µg/L	20.0	1.56	114	70-130			
p-Isopropyltoluene (p-Cymene)	22.7	2.0	µg/L	20.0	0.440	112	70-130			
Methyl Acetate	18.9	2.0	µg/L	20.0	ND	94.5	70-130			
Methyl tert-Butyl Ether (MTBE)	20.1	2.0	µg/L	20.0	ND	100	70-130			
Methyl Cyclohexane	22.6	2.0	µg/L	20.0	0.620	110	70-130			
Methylene Chloride	21.5	10	µg/L	20.0	ND	108	70-130			
4-Methyl-2-pentanone (MIBK)	219	20	µg/L	200	ND	110	70-130			
Naphthalene	20.8	4.0	µg/L	20.0	1.38	97.2	70-130			
n-Propylbenzene	24.6	2.0	µg/L	20.0	ND	123	70-130			
Styrene	22.3	2.0	µg/L	20.0	ND	111	70-130			
1,1,1,2-Tetrachloroethane	22.3	2.0	µg/L	20.0	ND	112	70-130			
1,1,2,2-Tetrachloroethane	21.4	1.0	µg/L	20.0	ND	107	70-130			
Tetrachloroethylene	23.3	2.0	µg/L	20.0	0.420	114	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B349323 - SW-846 5030B											
Matrix Spike (B349323-MS1)	**Source: 23H2240-06**			Prepared & Analyzed: 08/17/23							
Tetrahydrofuran	35.9	20	µg/L	20.0	16.2	98.4		70-130			
Toluene	40.7	2.0	µg/L	20.0	18.7	110		70-130			
1,2,3-Trichlorobenzene	18.9	10	µg/L	20.0	ND	94.4		70-130			
1,2,4-Trichlorobenzene	20.0	2.0	µg/L	20.0	ND	100		70-130			
1,3,5-Trichlorobenzene	20.6	2.0	µg/L	20.0	ND	103		70-130			
1,1,1-Trichloroethane	26.3	2.0	µg/L	20.0	2.86	117		70-130			
1,1,2-Trichloroethane	22.3	2.0	µg/L	20.0	ND	112		70-130			
Trichloroethylene	22.5	2.0	µg/L	20.0	ND	112		70-130			
Trichlorofluoromethane (Freon 11)	24.1	4.0	µg/L	20.0	ND	120		70-130			
1,2,3-Trichloropropane	21.8	4.0	µg/L	20.0	ND	109		70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	26.3	2.0	µg/L	20.0	1.62	124		70-130			
1,2,4-Trimethylbenzene	36.6	2.0	µg/L	20.0	12.6	120		70-130			
1,3,5-Trimethylbenzene	23.7	2.0	µg/L	20.0	1.68	110		70-130			
Vinyl Chloride	145	4.0	µg/L	20.0	122	113		70-130			
m+p Xylene	94.8	4.0	µg/L	40.0	51.0	110		70-130			
o-Xylene	66.0	2.0	µg/L	20.0	44.1	109		70-130			
Surrogate: 1,2-Dichloroethane-d4	*25.8*		µg/L	25.0		103		70-130			
Surrogate: Toluene-d8	*25.3*		µg/L	25.0		101		70-130			
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.3		70-130			
Matrix Spike Dup (B349323-MSD1)	**Source: 23H2240-06**			Prepared & Analyzed: 08/17/23							
Acetone	198	100	µg/L	200	ND	98.8		70-130	1.28	30	
Acrylonitrile	20.3	10	µg/L	20.0	ND	102		70-130	3.20	30	
tert-Amyl Methyl Ether (TAME)	18.5	1.0	µg/L	20.0	ND	92.6		70-130	1.09	30	
Benzene	26.3	2.0	µg/L	20.0	3.78	112		70-130	0.152	30	
Bromobenzene	22.9	2.0	µg/L	20.0	ND	115		70-130	2.29	30	
Bromochloromethane	24.0	2.0	µg/L	20.0	ND	120		70-130	2.80	30	V-20
Bromodichloromethane	22.2	1.0	µg/L	20.0	ND	111		70-130	0.180	30	
Bromoform	21.4	2.0	µg/L	20.0	ND	107		70-130	0.562	30	
Bromomethane	19.0	4.0	µg/L	20.0	ND	94.9		70-130	26.9	30	V-05, V-34
2-Butanone (MEK)	196	40	µg/L	200	ND	97.9		70-130	3.70	30	
tert-Butyl Alcohol (TBA)	179	40	µg/L	200	ND	89.4		70-130	0.990	30	
n-Butylbenzene	22.9	2.0	µg/L	20.0	0.680	111		70-130	1.50	30	
sec-Butylbenzene	24.6	2.0	µg/L	20.0	1.72	115		70-130	1.22	30	
tert-Butylbenzene	23.8	2.0	µg/L	20.0	0.880	114		70-130	2.56	30	
tert-Butyl Ethyl Ether (TBEE)	19.2	1.0	µg/L	20.0	ND	95.9		70-130	2.57	30	
Carbon Disulfide	263	10	µg/L	200	ND	**131**	*	70-130	5.79	30	MS-24
Carbon Tetrachloride	25.1	10	µg/L	20.0	ND	126		70-130	0.872	30	
Chlorobenzene	294	2.0	µg/L	20.0	275	97.5		70-130	0.0408	30	
Chlorodibromomethane	22.6	1.0	µg/L	20.0	ND	113		70-130	0.00	30	
Chloroethane	21.8	4.0	µg/L	20.0	0.940	104		70-130	8.25	30	V-06
Chloroform	21.9	4.0	µg/L	20.0	ND	109		70-130	2.53	30	
Chloromethane	19.7	4.0	µg/L	20.0	ND	98.7		70-130	26.1	30	V-05, V-34
2-Chlorotoluene	46.3	2.0	µg/L	20.0	25.4	104		70-130	4.15	30	
4-Chlorotoluene	32.7	2.0	µg/L	20.0	9.70	115		70-130	2.47	30	
1,2-Dibromo-3-chloropropane (DBCP)	20.6	10	µg/L	20.0	ND	103		70-130	8.48	30	
1,2-Dibromoethane (EDB)	21.8	1.0	µg/L	20.0	ND	109		70-130	4.39	30	
Dibromomethane	22.8	2.0	µg/L	20.0	ND	114		70-130	1.59	30	
1,2-Dichlorobenzene	37.4	2.0	µg/L	20.0	15.2	111		70-130	2.93	30	
1,3-Dichlorobenzene	25.0	2.0	µg/L	20.0	2.64	112		70-130	3.92	30	
1,4-Dichlorobenzene	30.1	2.0	µg/L	20.0	8.22	109		70-130	4.00	30	
trans-1,4-Dichloro-2-butene	16.6	4.0	µg/L	20.0	ND	82.9		70-130	13.7	30	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349323 - SW-846 5030B										
Matrix Spike Dup (B349323-MSD1)	**Source: 23H2240-06**			Prepared & Analyzed: 08/17/23						
Dichlorodifluoromethane (Freon 12)	21.9	4.0	µg/L	20.0	ND	110	70-130	0.274	30	
1,1-Dichloroethane	30.7	2.0	µg/L	20.0	9.44	106	70-130	2.70	30	
1,2-Dichloroethane	20.3	2.0	µg/L	20.0	ND	101	70-130	0.0986	30	
1,1-Dichloroethylene	23.6	2.0	µg/L	20.0	ND	118	70-130	0.679	30	
cis-1,2-Dichloroethylene	54.3	2.0	µg/L	20.0	33.1	106	70-130	2.55	30	
trans-1,2-Dichloroethylene	26.8	2.0	µg/L	20.0	5.76	105	70-130	5.16	30	
1,2-Dichloropropane	21.3	2.0	µg/L	20.0	ND	106	70-130	2.09	30	
1,3-Dichloropropane	22.4	1.0	µg/L	20.0	ND	112	70-130	3.64	30	
2,2-Dichloropropane	16.0	2.0	µg/L	20.0	ND	79.9	70-130	1.49	30	
1,1-Dichloropropene	23.0	4.0	µg/L	20.0	ND	115	70-130	0.610	30	
cis-1,3-Dichloropropene	20.7	1.0	µg/L	20.0	ND	103	70-130	1.54	30	
trans-1,3-Dichloropropene	19.5	1.0	µg/L	20.0	ND	97.7	70-130	0.513	30	
Diethyl Ether	22.7	4.0	µg/L	20.0	ND	114	70-130	0.265	30	
Diisopropyl Ether (DIPE)	22.1	1.0	µg/L	20.0	ND	111	70-130	0.544	30	
1,4-Dioxane	166	100	µg/L	200	ND	82.9	70-130	6.53	30	
Ethylbenzene	146	2.0	µg/L	20.0	123	113	70-130	0.506	30	
Hexachlorobutadiene	20.4	1.2	µg/L	20.0	ND	102	70-130	0.491	30	
2-Hexanone (MBK)	216	20	µg/L	200	ND	108	70-130	2.30	30	
Isopropylbenzene (Cumene)	24.2	2.0	µg/L	20.0	1.56	113	70-130	0.577	30	
p-Isopropyltoluene (p-Cymene)	23.2	2.0	µg/L	20.0	0.440	114	70-130	2.09	30	
Methyl Acetate	20.4	2.0	µg/L	20.0	ND	102	70-130	7.83	30	
Methyl tert-Butyl Ether (MTBE)	20.3	2.0	µg/L	20.0	ND	102	70-130	1.19	30	
Methyl Cyclohexane	22.3	2.0	µg/L	20.0	0.620	108	70-130	1.16	30	
Methylene Chloride	20.8	10	µg/L	20.0	ND	104	70-130	3.50	30	
4-Methyl-2-pentanone (MIBK)	223	20	µg/L	200	ND	111	70-130	1.60	30	
Naphthalene	24.4	4.0	µg/L	20.0	1.38	115	70-130	15.8	30	
n-Propylbenzene	24.3	2.0	µg/L	20.0	ND	122	70-130	1.15	30	
Styrene	22.6	2.0	µg/L	20.0	ND	113	70-130	1.34	30	
1,1,1,2-Tetrachloroethane	22.8	2.0	µg/L	20.0	ND	114	70-130	2.13	30	
1,1,2,2-Tetrachloroethane	22.0	1.0	µg/L	20.0	ND	110	70-130	2.76	30	
Tetrachloroethylene	22.9	2.0	µg/L	20.0	0.420	112	70-130	1.82	30	
Tetrahydrofuran	33.9	20	µg/L	20.0	16.2	88.3	70-130	5.79	30	
Toluene	40.2	2.0	µg/L	20.0	18.7	107	70-130	1.33	30	
1,2,3-Trichlorobenzene	22.1	10	µg/L	20.0	ND	110	70-130	15.6	30	
1,2,4-Trichlorobenzene	21.7	2.0	µg/L	20.0	ND	109	70-130	8.14	30	
1,3,5-Trichlorobenzene	22.0	2.0	µg/L	20.0	ND	110	70-130	6.29	30	
1,1,1-Trichloroethane	25.6	2.0	µg/L	20.0	2.86	114	70-130	2.77	30	
1,1,2-Trichloroethane	21.7	2.0	µg/L	20.0	ND	109	70-130	2.54	30	
Trichloroethylene	21.9	2.0	µg/L	20.0	ND	110	70-130	2.61	30	
Trichlorofluoromethane (Freon 11)	24.2	4.0	µg/L	20.0	ND	121	70-130	0.498	30	
1,2,3-Trichloropropane	22.2	4.0	µg/L	20.0	ND	111	70-130	2.00	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	25.8	2.0	µg/L	20.0	1.62	121	70-130	1.92	30	
1,2,4-Trimethylbenzene	36.5	2.0	µg/L	20.0	12.6	120	70-130	0.164	30	
1,3,5-Trimethylbenzene	24.3	2.0	µg/L	20.0	1.68	113	70-130	2.66	30	
Vinyl Chloride	142	4.0	µg/L	20.0	122	101	70-130	1.67	30	
m+p Xylene	93.8	4.0	µg/L	40.0	51.0	107	70-130	1.04	20	
o-Xylene	66.4	2.0	µg/L	20.0	44.1	111	70-130	0.634	30	
Surrogate: 1,2-Dichloroethane-d4	*25.4*		µg/L	25.0		102	70-130			
Surrogate: Toluene-d8	*25.2*		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.5	70-130			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
Blank (B349687-BLK1)				Prepared: 08/21/23 Analyzed: 08/29/23						
alpha-Chlordane	ND	0.050	µg/L							
alpha-Chlordane [2C]	ND	0.050	µg/L							
gamma-Chlordane	ND	0.050	µg/L							
gamma-Chlordane [2C]	ND	0.050	µg/L							
Alachlor	ND	0.20	µg/L							
Alachlor [2C]	ND	0.20	µg/L							
Aldrin	ND	0.050	µg/L							
Aldrin [2C]	ND	0.050	µg/L							
alpha-BHC	ND	0.050	µg/L							
alpha-BHC [2C]	ND	0.050	µg/L							
beta-BHC	ND	0.050	µg/L							
beta-BHC [2C]	ND	0.050	µg/L							
delta-BHC	ND	0.050	µg/L							
delta-BHC [2C]	ND	0.050	µg/L							
gamma-BHC (Lindane)	ND	0.030	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.030	µg/L							
Chlordane	ND	0.20	µg/L							
Chlordane [2C]	ND	0.20	µg/L							
4,4'-DDD	ND	0.040	µg/L							
4,4'-DDD [2C]	ND	0.040	µg/L							
4,4'-DDE	ND	0.040	µg/L							
4,4'-DDE [2C]	ND	0.040	µg/L							
4,4'-DDT	ND	0.040	µg/L							
4,4'-DDT [2C]	ND	0.040	µg/L							
Dieldrin	ND	0.0020	µg/L							
Dieldrin [2C]	ND	0.0020	µg/L							
Endosulfan I	ND	0.050	µg/L							
Endosulfan I [2C]	ND	0.050	µg/L							
Endosulfan II	ND	0.080	µg/L							
Endosulfan II [2C]	ND	0.080	µg/L							
Endosulfan Sulfate	ND	0.080	µg/L							
Endosulfan Sulfate [2C]	ND	0.080	µg/L							
Endrin	ND	0.080	µg/L							
Endrin [2C]	ND	0.080	µg/L							
Endrin Aldehyde	ND	0.080	µg/L							
Endrin Aldehyde [2C]	ND	0.080	µg/L							
Endrin Ketone	ND	0.080	µg/L							
Endrin Ketone [2C]	ND	0.080	µg/L							
Heptachlor	ND	0.050	µg/L							
Heptachlor [2C]	ND	0.050	µg/L							
Heptachlor Epoxide	ND	0.050	µg/L							
Heptachlor Epoxide [2C]	ND	0.050	µg/L							
Hexachlorobenzene	ND	0.050	µg/L							
Hexachlorobenzene [2C]	ND	0.050	µg/L							
Methoxychlor	ND	0.50	µg/L							
Methoxychlor [2C]	ND	0.50	µg/L							
Toxaphene	ND	1.0	µg/L							
Toxaphene [2C]	ND	1.0	µg/L							
Surrogate: Decachlorobiphenyl	*2.75*		µg/L	4.00		68.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.22*		µg/L	4.00		80.5	30-150			
Surrogate: Tetrachloro-m-xylene	*2.02*		µg/L	4.00		50.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.03*		µg/L	4.00		50.7	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
LCS (B349687-BS1)				Prepared: 08/21/23 Analyzed: 08/29/23						
alpha-Chlordane	1.9	0.050	µg/L	2.00		96.6	0-200			
alpha-Chlordane [2C]	1.9	0.050	µg/L	2.00		93.2	0-200			
gamma-Chlordane	1.9	0.050	µg/L	2.00		94.1	0-200			
gamma-Chlordane [2C]	1.9	0.050	µg/L	2.00		95.2	0-200			
Alachlor	1.9	0.20	µg/L	2.00		94.9	40-140			
Alachlor [2C]	1.9	0.20	µg/L	2.00		97.2	40-140			
Aldrin	1.4	0.050	µg/L	2.00		72.4	40-140			
Aldrin [2C]	1.4	0.050	µg/L	2.00		68.0	40-140			
alpha-BHC	2.0	0.050	µg/L	2.00		99.7	40-140			
alpha-BHC [2C]	1.7	0.050	µg/L	2.00		87.5	40-140			
beta-BHC	2.0	0.050	µg/L	2.00		100	40-140			
beta-BHC [2C]	1.8	0.050	µg/L	2.00		90.6	40-140			
delta-BHC	2.0	0.050	µg/L	2.00		101	40-140			
delta-BHC [2C]	1.9	0.050	µg/L	2.00		94.4	40-140			
gamma-BHC (Lindane)	2.0	0.030	µg/L	2.00		98.8	40-140			
gamma-BHC (Lindane) [2C]	1.8	0.030	µg/L	2.00		90.5	40-140			
4,4'-DDD	2.1	0.040	µg/L	2.00		106	40-140			
4,4'-DDD [2C]	2.3	0.040	µg/L	2.00		117	40-140			
4,4'-DDE	2.0	0.040	µg/L	2.00		99.5	40-140			
4,4'-DDE [2C]	2.1	0.040	µg/L	2.00		106	40-140			
4,4'-DDT	2.0	0.040	µg/L	2.00		97.9	40-140			
4,4'-DDT [2C]	2.1	0.040	µg/L	2.00		104	40-140			
Dieldrin	2.0	0.0020	µg/L	2.00		98.2	40-140			
Dieldrin [2C]	2.1	0.0020	µg/L	2.00		104	40-140			
Endosulfan I	2.0	0.050	µg/L	2.00		101	40-140			
Endosulfan I [2C]	2.0	0.050	µg/L	2.00		98.1	40-140			
Endosulfan II	1.9	0.080	µg/L	2.00		94.6	40-140			
Endosulfan II [2C]	2.1	0.080	µg/L	2.00		104	40-140			
Endosulfan Sulfate	1.9	0.080	µg/L	2.00		97.0	40-140			
Endosulfan Sulfate [2C]	2.1	0.080	µg/L	2.00		106	40-140			
Endrin	2.1	0.080	µg/L	2.00		103	40-140			
Endrin [2C]	2.1	0.080	µg/L	2.00		105	40-140			
Endrin Aldehyde	1.8	0.080	µg/L	2.00		90.3	40-140			
Endrin Aldehyde [2C]	2.1	0.080	µg/L	2.00		107	40-140			
Endrin Ketone	1.9	0.080	µg/L	2.00		96.3	40-140			
Endrin Ketone [2C]	2.0	0.080	µg/L	2.00		101	40-140			
Heptachlor	1.6	0.050	µg/L	2.00		80.6	40-140			
Heptachlor [2C]	1.5	0.050	µg/L	2.00		74.4	40-140			
Heptachlor Epoxide	2.0	0.050	µg/L	2.00		100	40-140			
Heptachlor Epoxide [2C]	1.9	0.050	µg/L	2.00		93.2	40-140			
Hexachlorobenzene	1.7	0.050	µg/L	2.00		84.8	40-140			
Hexachlorobenzene [2C]	1.8	0.050	µg/L	2.00		92.2	40-140			V-06
Methoxychlor	1.8	0.50	µg/L	2.00		88.3	40-140			
Methoxychlor [2C]	1.9	0.50	µg/L	2.00		93.9	40-140			
Surrogate: Decachlorobiphenyl	*3.08*		µg/L	4.00		77.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.48*		µg/L	4.00		86.9	30-150			
Surrogate: Tetrachloro-m-xylene	*2.57*		µg/L	4.00		64.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.32*		µg/L	4.00		57.9	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
LCS Dup (B349687-BSD1)				Prepared: 08/21/23 Analyzed: 08/29/23						
alpha-Chlordane	2.0	0.050	µg/L	2.00		97.9	0-200	1.31		
alpha-Chlordane [2C]	1.9	0.050	µg/L	2.00		94.3	0-200	1.21		
gamma-Chlordane	1.9	0.050	µg/L	2.00		94.5	0-200	0.419		
gamma-Chlordane [2C]	1.9	0.050	µg/L	2.00		94.9	0-200	0.329		
Alachlor	2.0	0.20	µg/L	2.00		98.1	40-140	3.36	20	
Alachlor [2C]	2.0	0.20	µg/L	2.00		98.9	40-140	1.75	20	
Aldrin	1.4	0.050	µg/L	2.00		68.1	40-140	6.15	20	
Aldrin [2C]	1.3	0.050	µg/L	2.00		62.9	40-140	7.82	20	
alpha-BHC	1.9	0.050	µg/L	2.00		94.1	40-140	5.80	20	
alpha-BHC [2C]	1.6	0.050	µg/L	2.00		78.7	40-140	10.6	20	
beta-BHC	2.0	0.050	µg/L	2.00		98.8	40-140	1.42	20	
beta-BHC [2C]	1.8	0.050	µg/L	2.00		92.2	40-140	1.66	20	
delta-BHC	2.1	0.050	µg/L	2.00		104	40-140	3.21	20	
delta-BHC [2C]	1.9	0.050	µg/L	2.00		96.1	40-140	1.72	20	
gamma-BHC (Lindane)	1.9	0.030	µg/L	2.00		95.8	40-140	3.08	20	
gamma-BHC (Lindane) [2C]	1.7	0.030	µg/L	2.00		83.3	40-140	8.31	20	
4,4'-DDD	2.2	0.040	µg/L	2.00		110	40-140	3.79	20	
4,4'-DDD [2C]	2.5	0.040	µg/L	2.00		123	40-140	5.41	20	
4,4'-DDE	2.1	0.040	µg/L	2.00		104	40-140	4.02	20	
4,4'-DDE [2C]	2.1	0.040	µg/L	2.00		103	40-140	2.52	20	
4,4'-DDT	2.1	0.040	µg/L	2.00		104	40-140	6.03	20	
4,4'-DDT [2C]	2.2	0.040	µg/L	2.00		108	40-140	4.63	20	
Dieldrin	2.0	0.0020	µg/L	2.00		102	40-140	3.59	20	
Dieldrin [2C]	2.1	0.0020	µg/L	2.00		106	40-140	2.48	20	
Endosulfan I	2.1	0.050	µg/L	2.00		104	40-140	2.67	20	
Endosulfan I [2C]	2.0	0.050	µg/L	2.00		100	40-140	2.26	20	
Endosulfan II	2.0	0.080	µg/L	2.00		100	40-140	6.06	20	
Endosulfan II [2C]	2.2	0.080	µg/L	2.00		109	40-140	5.05	20	
Endosulfan Sulfate	2.1	0.080	µg/L	2.00		104	40-140	7.13	20	
Endosulfan Sulfate [2C]	2.2	0.080	µg/L	2.00		112	40-140	5.54	20	
Endrin	2.2	0.080	µg/L	2.00		108	40-140	4.41	20	
Endrin [2C]	2.2	0.080	µg/L	2.00		108	40-140	2.86	20	
Endrin Aldehyde	1.9	0.080	µg/L	2.00		97.4	40-140	7.55	20	
Endrin Aldehyde [2C]	2.3	0.080	µg/L	2.00		113	40-140	5.07	20	
Endrin Ketone	2.0	0.080	µg/L	2.00		102	40-140	6.05	20	
Endrin Ketone [2C]	2.1	0.080	µg/L	2.00		107	40-140	5.71	20	
Heptachlor	1.5	0.050	µg/L	2.00		75.6	40-140	6.33	20	
Heptachlor [2C]	1.4	0.050	µg/L	2.00		68.1	40-140	8.91	20	
Heptachlor Epoxide	2.0	0.050	µg/L	2.00		101	40-140	1.11	20	
Heptachlor Epoxide [2C]	1.9	0.050	µg/L	2.00		93.3	40-140	0.111	20	
Hexachlorobenzene	1.5	0.050	µg/L	2.00		76.0	40-140	11.0	20	
Hexachlorobenzene [2C]	1.6	0.050	µg/L	2.00		80.3	40-140	13.8	20	V-06
Methoxychlor	1.9	0.50	µg/L	2.00		94.3	40-140	6.51	20	
Methoxychlor [2C]	2.0	0.50	µg/L	2.00		100	40-140	6.67	20	
Surrogate: Decachlorobiphenyl	*2.84*		µg/L	4.00		71.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.28*		µg/L	4.00		82.0	30-150			
Surrogate: Tetrachloro-m-xylene	*1.93*		µg/L	4.00		48.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.68*		µg/L	4.00		42.1	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
Matrix Spike (B349687-MS1)	**Source: 23H2240-06**			Prepared: 08/21/23 Analyzed: 08/29/23						
Alachlor	2.0	0.19	µg/L	1.94	ND	102	30-150			
Alachlor [2C]	2.2	0.19	µg/L	1.94	ND	112	30-150			
Aldrin	1.5	0.049	µg/L	1.94	ND	78.4	30-150			
Aldrin [2C]	1.4	0.049	µg/L	1.94	ND	70.7	30-150			
alpha-BHC	2.0	0.049	µg/L	1.94	ND	103	30-150			
alpha-BHC [2C]	1.7	0.049	µg/L	1.94	ND	86.0	30-150			
beta-BHC	1.9	0.049	µg/L	1.94	ND	95.5	30-150			
beta-BHC [2C]	1.7	0.049	µg/L	1.94	ND	87.2	30-150			
delta-BHC	2.0	0.049	µg/L	1.94	ND	102	30-150			
delta-BHC [2C]	1.8	0.049	µg/L	1.94	ND	91.7	30-150			
gamma-BHC (Lindane)	1.9	0.029	µg/L	1.94	ND	100	30-150			
gamma-BHC (Lindane) [2C]	1.6	0.029	µg/L	1.94	ND	84.9	30-150			
4,4'-DDD	2.0	0.039	µg/L	1.94	ND	105	30-150			
4,4'-DDD [2C]	2.2	0.039	µg/L	1.94	ND	112	30-150			
4,4'-DDE	1.9	0.039	µg/L	1.94	ND	100	30-150			
4,4'-DDE [2C]	2.0	0.039	µg/L	1.94	ND	101	30-150			
4,4'-DDT	1.9	0.039	µg/L	1.94	ND	98.7	30-150			
4,4'-DDT [2C]	2.0	0.039	µg/L	1.94	ND	105	30-150			
Dieldrin	1.9	0.0019	µg/L	1.94	ND	99.4	30-150			
Dieldrin [2C]	1.9	0.0019	µg/L	1.94	ND	98.8	30-150			
Endosulfan I	1.9	0.049	µg/L	1.94	ND	99.4	30-150			
Endosulfan I [2C]	1.8	0.049	µg/L	1.94	ND	91.3	30-150			
Endosulfan II	1.9	0.078	µg/L	1.94	ND	98.9	30-150			
Endosulfan II [2C]	1.9	0.078	µg/L	1.94	ND	100	30-150			
Endosulfan Sulfate	2.0	0.078	µg/L	1.94	ND	102	30-150			
Endosulfan Sulfate [2C]	2.1	0.078	µg/L	1.94	ND	106	30-150			
Endrin	2.1	0.078	µg/L	1.94	ND	107	30-150			
Endrin [2C]	1.9	0.078	µg/L	1.94	ND	100	30-150			
Endrin Aldehyde	1.4	0.078	µg/L	1.94	ND	74.1	30-150			
Endrin Aldehyde [2C]	1.6	0.078	µg/L	1.94	ND	82.2	30-150			
Endrin Ketone	2.0	0.078	µg/L	1.94	ND	101	30-150			
Endrin Ketone [2C]	2.0	0.078	µg/L	1.94	ND	104	30-150			
Heptachlor	1.7	0.049	µg/L	1.94	ND	88.3	30-150			
Heptachlor [2C]	1.5	0.049	µg/L	1.94	ND	74.8	30-150			
Heptachlor Epoxide	1.9	0.049	µg/L	1.94	ND	97.0	30-150			
Heptachlor Epoxide [2C]	1.8	0.049	µg/L	1.94	ND	90.8	30-150			
Hexachlorobenzene	2.0	0.049	µg/L	1.94	ND	103	30-150			
Hexachlorobenzene [2C]	1.8	0.049	µg/L	1.94	ND	93.5	30-150			V-06
Methoxychlor	1.8	0.49	µg/L	1.94	ND	94.3	30-150			
Methoxychlor [2C]	1.9	0.49	µg/L	1.94	ND	99.8	30-150			
Surrogate: Decachlorobiphenyl	*2.25*		µg/L	3.88		57.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.35*		µg/L	3.88		60.4	30-150			
Surrogate: Tetrachloro-m-xylene	*2.79*		µg/L	3.88		71.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.36*		µg/L	3.88		60.8	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
Matrix Spike Dup (B349687-MSD1)	**Source: 23H2240-06**			Prepared: 08/21/23 Analyzed: 08/29/23						
Alachlor	2.0	0.19	µg/L	1.89	ND	106	30-150	1.04	30	
Alachlor [2C]	2.2	0.19	µg/L	1.89	ND	116	30-150	1.19	30	
Aldrin	1.6	0.047	µg/L	1.89	ND	84.5	30-150	4.59	30	
Aldrin [2C]	1.4	0.047	µg/L	1.89	ND	75.1	30-150	3.08	30	
alpha-BHC	1.9	0.047	µg/L	1.89	ND	103	30-150	3.29	30	
alpha-BHC [2C]	1.8	0.047	µg/L	1.89	ND	93.8	30-150	5.81	30	
beta-BHC	1.9	0.047	µg/L	1.89	ND	99.2	30-150	0.869	30	
beta-BHC [2C]	1.7	0.047	µg/L	1.89	ND	88.1	30-150	1.82	30	
delta-BHC	2.0	0.047	µg/L	1.89	ND	107	30-150	1.37	30	
delta-BHC [2C]	1.7	0.047	µg/L	1.89	ND	92.3	30-150	2.27	30	
gamma-BHC (Lindane)	1.9	0.028	µg/L	1.89	ND	102	30-150	1.00	30	
gamma-BHC (Lindane) [2C]	1.7	0.028	µg/L	1.89	ND	89.8	30-150	2.74	30	
4,4'-DDD	2.1	0.038	µg/L	1.89	ND	109	30-150	1.61	30	
4,4'-DDD [2C]	2.2	0.038	µg/L	1.89	ND	115	30-150	0.222	30	
4,4'-DDE	2.0	0.038	µg/L	1.89	ND	105	30-150	1.85	30	
4,4'-DDE [2C]	2.0	0.038	µg/L	1.89	ND	104	30-150	0.571	30	
4,4'-DDT	2.0	0.038	µg/L	1.89	ND	104	30-150	2.67	30	
4,4'-DDT [2C]	2.1	0.038	µg/L	1.89	ND	109	30-150	1.08	30	
Dieldrin	2.0	0.0019	µg/L	1.89	ND	104	30-150	1.21	30	
Dieldrin [2C]	1.9	0.0019	µg/L	1.89	ND	98.8	30-150	2.85	30	
Endosulfan I	2.0	0.047	µg/L	1.89	ND	104	30-150	1.56	30	
Endosulfan I [2C]	1.7	0.047	µg/L	1.89	ND	91.0	30-150	3.11	30	
Endosulfan II	1.9	0.075	µg/L	1.89	ND	102	30-150	0.642	30	
Endosulfan II [2C]	1.9	0.075	µg/L	1.89	ND	103	30-150	0.266	30	
Endosulfan Sulfate	2.0	0.075	µg/L	1.89	ND	106	30-150	1.30	30	
Endosulfan Sulfate [2C]	2.1	0.075	µg/L	1.89	ND	109	30-150	0.220	30	
Endrin	2.1	0.075	µg/L	1.89	ND	111	30-150	0.920	30	
Endrin [2C]	1.9	0.075	µg/L	1.89	ND	102	30-150	1.18	30	
Endrin Aldehyde	1.4	0.075	µg/L	1.89	ND	73.2	30-150	4.09	30	
Endrin Aldehyde [2C]	1.5	0.075	µg/L	1.89	ND	79.9	30-150	5.71	30	
Endrin Ketone	2.0	0.075	µg/L	1.89	ND	107	30-150	2.32	30	
Endrin Ketone [2C]	2.0	0.075	µg/L	1.89	ND	107	30-150	0.579	30	
Heptachlor	1.8	0.047	µg/L	1.89	ND	93.5	30-150	2.83	30	
Heptachlor [2C]	1.5	0.047	µg/L	1.89	ND	80.7	30-150	4.75	30	
Heptachlor Epoxide	1.9	0.047	µg/L	1.89	ND	102	30-150	1.84	30	
Heptachlor Epoxide [2C]	1.7	0.047	µg/L	1.89	ND	91.6	30-150	2.04	30	
Hexachlorobenzene	2.2	0.047	µg/L	1.89	ND	118	30-150	10.5	30	
Hexachlorobenzene [2C]	1.9	0.047	µg/L	1.89	ND	103	30-150	7.12	30	V-06
Methoxychlor	1.9	0.47	µg/L	1.89	ND	99.0	30-150	1.93	30	
Methoxychlor [2C]	2.0	0.47	µg/L	1.89	ND	104	30-150	0.957	30	
Surrogate: Decachlorobiphenyl	*2.33*		µg/L	3.77		61.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.34*		µg/L	3.77		62.1	30-150			
Surrogate: Tetrachloro-m-xylene	*2.79*		µg/L	3.77		73.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.66*		µg/L	3.77		70.5	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350765 - SW-846 3510C										
Blank (B350765-BLK1)				Prepared: 08/31/23 Analyzed: 09/07/23						**R-05**
alpha-Chlordane	ND	0.050	µg/L							
alpha-Chlordane [2C]	ND	0.050	µg/L							
gamma-Chlordane	ND	0.050	µg/L							
gamma-Chlordane [2C]	ND	0.050	µg/L							
Alachlor	ND	0.20	µg/L							
Alachlor [2C]	ND	0.20	µg/L							
Aldrin	ND	0.050	µg/L							
Aldrin [2C]	ND	0.050	µg/L							
alpha-BHC	ND	0.050	µg/L							
alpha-BHC [2C]	ND	0.050	µg/L							
beta-BHC	ND	0.050	µg/L							
beta-BHC [2C]	ND	0.050	µg/L							
delta-BHC	ND	0.050	µg/L							
delta-BHC [2C]	ND	0.050	µg/L							
gamma-BHC (Lindane)	ND	0.030	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.030	µg/L							
Chlordane	ND	0.20	µg/L							
Chlordane [2C]	ND	0.20	µg/L							
4,4'-DDD	ND	0.040	µg/L							
4,4'-DDD [2C]	ND	0.040	µg/L							
4,4'-DDE	ND	0.040	µg/L							
4,4'-DDE [2C]	ND	0.040	µg/L							
4,4'-DDT	ND	0.040	µg/L							
4,4'-DDT [2C]	ND	0.040	µg/L							
Dieldrin	ND	0.0020	µg/L							
Dieldrin [2C]	ND	0.0020	µg/L							
Endosulfan I	ND	0.050	µg/L							
Endosulfan I [2C]	ND	0.050	µg/L							
Endosulfan II	ND	0.080	µg/L							
Endosulfan II [2C]	ND	0.080	µg/L							
Endosulfan Sulfate	ND	0.080	µg/L							
Endosulfan Sulfate [2C]	ND	0.080	µg/L							
Endrin	ND	0.080	µg/L							
Endrin [2C]	ND	0.080	µg/L							
Endrin Aldehyde	ND	0.080	µg/L							
Endrin Aldehyde [2C]	ND	0.080	µg/L							
Endrin Ketone	ND	0.080	µg/L							
Endrin Ketone [2C]	ND	0.080	µg/L							
Heptachlor	ND	0.050	µg/L							
Heptachlor [2C]	ND	0.050	µg/L							
Heptachlor Epoxide	ND	0.050	µg/L							
Heptachlor Epoxide [2C]	ND	0.050	µg/L							
Hexachlorobenzene	ND	0.050	µg/L							
Hexachlorobenzene [2C]	ND	0.050	µg/L							
Methoxychlor	ND	0.50	µg/L							
Methoxychlor [2C]	ND	0.50	µg/L							
Toxaphene	ND	1.0	µg/L							
Toxaphene [2C]	ND	1.0	µg/L							
Surrogate: Decachlorobiphenyl	*2.78*		µg/L	4.00		69.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.27*		µg/L	4.00		81.8	30-150			
Surrogate: Tetrachloro-m-xylene	*2.61*		µg/L	4.00		65.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.97*		µg/L	4.00		74.2	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B350765 - SW-846 3510C											
LCS (B350765-BS1)				Prepared: 08/31/23 Analyzed: 09/07/23							**R-05**
alpha-Chlordane	1.2	0.050	µg/L	2.00		59.6		0-200			
alpha-Chlordane [2C]	1.3	0.050	µg/L	2.00		63.6		0-200			
gamma-Chlordane	1.2	0.050	µg/L	2.00		60.4		0-200			
gamma-Chlordane [2C]	1.2	0.050	µg/L	2.00		62.0		0-200			
Alachlor	1.3	0.20	µg/L	2.00		62.8		40-140			
Alachlor [2C]	1.3	0.20	µg/L	2.00		66.5		40-140			
Aldrin	0.98	0.050	µg/L	2.00		49.2		40-140			
Aldrin [2C]	0.97	0.050	µg/L	2.00		48.6		40-140			
alpha-BHC	1.2	0.050	µg/L	2.00		57.9		40-140			
alpha-BHC [2C]	1.1	0.050	µg/L	2.00		54.9		40-140			
beta-BHC	1.3	0.050	µg/L	2.00		63.8		40-140			
beta-BHC [2C]	1.2	0.050	µg/L	2.00		61.1		40-140			
delta-BHC	1.2	0.050	µg/L	2.00		60.0		40-140			
delta-BHC [2C]	1.1	0.050	µg/L	2.00		55.5		40-140			
gamma-BHC (Lindane)	1.2	0.030	µg/L	2.00		61.0		40-140			
gamma-BHC (Lindane) [2C]	1.2	0.030	µg/L	2.00		58.1		40-140			
4,4'-DDD	1.5	0.040	µg/L	2.00		75.5		40-140			
4,4'-DDD [2C]	1.6	0.040	µg/L	2.00		78.5		40-140			V-06
4,4'-DDE	1.3	0.040	µg/L	2.00		67.2		40-140			
4,4'-DDE [2C]	1.4	0.040	µg/L	2.00		71.9		40-140			
4,4'-DDT	1.5	0.040	µg/L	2.00		77.3		40-140			
4,4'-DDT [2C]	1.5	0.040	µg/L	2.00		74.9		40-140			
Dieldrin	1.3	0.0020	µg/L	2.00		64.1		40-140			
Dieldrin [2C]	1.4	0.0020	µg/L	2.00		68.0		40-140			
Endosulfan I	1.3	0.050	µg/L	2.00		66.4		40-140			
Endosulfan I [2C]	1.3	0.050	µg/L	2.00		66.5		40-140			
Endosulfan II	1.3	0.080	µg/L	2.00		64.7		40-140			
Endosulfan II [2C]	1.4	0.080	µg/L	2.00		70.2		40-140			
Endosulfan Sulfate	1.4	0.080	µg/L	2.00		69.4		40-140			
Endosulfan Sulfate [2C]	1.4	0.080	µg/L	2.00		71.8		40-140			
Endrin	1.4	0.080	µg/L	2.00		69.9		40-140			
Endrin [2C]	1.4	0.080	µg/L	2.00		69.5		40-140			
Endrin Aldehyde	1.2	0.080	µg/L	2.00		61.8		40-140			
Endrin Aldehyde [2C]	1.4	0.080	µg/L	2.00		67.7		40-140			
Endrin Ketone	1.5	0.080	µg/L	2.00		74.8		40-140			
Endrin Ketone [2C]	1.5	0.080	µg/L	2.00		73.6		40-140			
Heptachlor	1.0	0.050	µg/L	2.00		50.0		40-140			
Heptachlor [2C]	1.0	0.050	µg/L	2.00		51.2		40-140			
Heptachlor Epoxide	1.3	0.050	µg/L	2.00		62.6		40-140			
Heptachlor Epoxide [2C]	1.3	0.050	µg/L	2.00		63.7		40-140			
Hexachlorobenzene	0.88	0.050	µg/L	2.00		43.9		40-140			
Hexachlorobenzene [2C]	0.86	0.050	µg/L	2.00		43.2		40-140			
Methoxychlor	1.4	0.50	µg/L	2.00		72.2		40-140			
Methoxychlor [2C]	1.5	0.50	µg/L	2.00		73.1		40-140			
Surrogate: Decachlorobiphenyl	*1.80*		µg/L	4.00		45.0		30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.22*		µg/L	4.00		55.4		30-150			
Surrogate: Tetrachloro-m-xylene	*1.06*		µg/L	4.00		**26.4**	*	30-150			S-26
Surrogate: Tetrachloro-m-xylene [2C]	*1.03*		µg/L	4.00		**25.8**	*	30-150			S-26

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B350765 - SW-846 3510C											
LCS Dup (B350765-BSD1)				Prepared: 08/31/23 Analyzed: 09/07/23							**R-05**
alpha-Chlordane	1.5	0.050	µg/L	2.00		76.5	0-200	24.9			
alpha-Chlordane [2C]	1.9	0.050	µg/L	2.00		96.9	0-200	41.6			
gamma-Chlordane	1.5	0.050	µg/L	2.00		74.8	0-200	21.2			
gamma-Chlordane [2C]	1.9	0.050	µg/L	2.00		96.6	0-200	43.5			
Alachlor	1.5	0.20	µg/L	2.00		75.9	40-140	18.9		20	
Alachlor [2C]	2.1	0.20	µg/L	2.00		104	40-140	**44.3**	*	20	
Aldrin	1.2	0.050	µg/L	2.00		60.4	40-140	**20.4**	*	20	
Aldrin [2C]	1.6	0.050	µg/L	2.00		77.6	40-140	**46.0**	*	20	
alpha-BHC	1.8	0.050	µg/L	2.00		89.4	40-140	**42.7**	*	20	
alpha-BHC [2C]	2.2	0.050	µg/L	2.00		110	40-140	**66.6**	*	20	
beta-BHC	1.8	0.050	µg/L	2.00		90.4	40-140	**34.5**	*	20	
beta-BHC [2C]	2.0	0.050	µg/L	2.00		102	40-140	**49.7**	*	20	
delta-BHC	1.5	0.050	µg/L	2.00		74.1	40-140	**21.0**	*	20	
delta-BHC [2C]	1.9	0.050	µg/L	2.00		95.7	40-140	**53.2**	*	20	
gamma-BHC (Lindane)	1.7	0.030	µg/L	2.00		85.8	40-140	**33.8**	*	20	
gamma-BHC (Lindane) [2C]	2.3	0.030	µg/L	2.00		114	40-140	**64.6**	*	20	
4,4'-DDD	2.1	0.040	µg/L	2.00		105	40-140	**32.6**	*	20	
4,4'-DDD [2C]	2.3	0.040	µg/L	2.00		115	40-140	**37.6**	*	20	V-06
4,4'-DDE	1.8	0.040	µg/L	2.00		89.8	40-140	**28.8**	*	20	
4,4'-DDE [2C]	2.2	0.040	µg/L	2.00		108	40-140	**39.9**	*	20	
4,4'-DDT	2.2	0.040	µg/L	2.00		108	40-140	**33.0**	*	20	
4,4'-DDT [2C]	2.2	0.040	µg/L	2.00		108	40-140	**35.8**	*	20	
Dieldrin	1.6	0.0020	µg/L	2.00		80.4	40-140	**22.6**	*	20	
Dieldrin [2C]	2.1	0.0020	µg/L	2.00		104	40-140	**42.0**	*	20	
Endosulfan I	1.7	0.050	µg/L	2.00		83.1	40-140	**22.5**	*	20	
Endosulfan I [2C]	2.1	0.050	µg/L	2.00		103	40-140	**43.0**	*	20	
Endosulfan II	1.8	0.080	µg/L	2.00		88.1	40-140	**30.6**	*	20	
Endosulfan II [2C]	2.0	0.080	µg/L	2.00		102	40-140	**36.7**	*	20	
Endosulfan Sulfate	1.9	0.080	µg/L	2.00		94.0	40-140	**30.1**	*	20	
Endosulfan Sulfate [2C]	2.1	0.080	µg/L	2.00		103	40-140	**35.2**	*	20	
Endrin	1.8	0.080	µg/L	2.00		89.4	40-140	**24.4**	*	20	
Endrin [2C]	2.1	0.080	µg/L	2.00		103	40-140	**39.2**	*	20	
Endrin Aldehyde	1.8	0.080	µg/L	2.00		90.9	40-140	**38.1**	*	20	
Endrin Aldehyde [2C]	2.2	0.080	µg/L	2.00		109	40-140	**46.9**	*	20	
Endrin Ketone	2.1	0.080	µg/L	2.00		104	40-140	**32.2**	*	20	
Endrin Ketone [2C]	2.1	0.080	µg/L	2.00		103	40-140	**33.1**	*	20	
Heptachlor	1.3	0.050	µg/L	2.00		65.7	40-140	**27.2**	*	20	
Heptachlor [2C]	1.7	0.050	µg/L	2.00		86.4	40-140	**51.1**	*	20	
Heptachlor Epoxide	1.6	0.050	µg/L	2.00		79.5	40-140	**23.8**	*	20	
Heptachlor Epoxide [2C]	2.0	0.050	µg/L	2.00		102	40-140	**46.6**	*	20	
Hexachlorobenzene	1.4	0.050	µg/L	2.00		69.9	40-140	**45.8**	*	20	
Hexachlorobenzene [2C]	1.8	0.050	µg/L	2.00		87.8	40-140	**68.1**	*	20	
Methoxychlor	2.0	0.50	µg/L	2.00		99.9	40-140	**32.2**	*	20	
Methoxychlor [2C]	2.0	0.50	µg/L	2.00		101	40-140	**31.7**	*	20	
Surrogate: Decachlorobiphenyl	*2.82*		µg/L	4.00		70.5	30-150				
Surrogate: Decachlorobiphenyl [2C]	*3.34*		µg/L	4.00		83.4	30-150				
Surrogate: Tetrachloro-m-xylene	*1.83*		µg/L	4.00		45.6	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	*2.23*		µg/L	4.00		55.6	30-150				

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349123 - SW-846 3005A										
Blank (B349123-BLK1)				Prepared: 08/15/23 Analyzed: 08/17/23						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Magnesium	ND	0.050	mg/L							
Manganese	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Vanadium	ND	0.010	mg/L							
Blank (B349123-BLK2)				Prepared: 08/15/23 Analyzed: 08/21/23						
Arsenic	ND	0.010	mg/L							
Calcium	ND	0.50	mg/L							
Lead	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Blank (B349123-BLK3)				Prepared: 08/15/23 Analyzed: 08/22/23						
Sodium	0.95	2.0	mg/L							B, J
Zinc	ND	0.010	mg/L							
LCS (B349123-BS1)				Prepared: 08/15/23 Analyzed: 08/17/23						
Aluminum	0.523	0.050	mg/L	0.500		105	45.3-154.7			
Antimony	0.549	0.050	mg/L	0.500		110	80-120			
Barium	0.554	0.050	mg/L	0.500		111	80-120			
Beryllium	0.565	0.0040	mg/L	0.500		113	80-120			
Cadmium	0.543	0.0040	mg/L	0.500		109	80-120			
Chromium	0.555	0.010	mg/L	0.500		111	80-120			
Cobalt	0.560	0.010	mg/L	0.500		112	80-120			
Copper	1.06	0.010	mg/L	1.00		106	80-120			
Iron	4.28	0.050	mg/L	4.00		107	80-120			
Magnesium	4.05	0.050	mg/L	4.00		101	80-120			
Manganese	0.550	0.010	mg/L	0.500		110	80-120			
Potassium	4.08	2.0	mg/L	4.00		102	80-120			
Vanadium	0.553	0.010	mg/L	0.500		111	80-120			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349123 - SW-846 3005A										
LCS (B349123-BS2)				Prepared: 08/15/23 Analyzed: 08/21/23						
Arsenic	0.512	0.010	mg/L	0.500		102	80-120			
Calcium	4.15	0.50	mg/L	4.00		104	80-120			
Lead	0.549	0.010	mg/L	0.500		110	80-120			
Nickel	0.548	0.010	mg/L	0.500		110	80-120			
Selenium	0.548	0.050	mg/L	0.500		110	80-120			
Silver	0.411	0.010	mg/L	0.500		82.2	80-120			
Sodium	4.41	2.0	mg/L	4.00		110	80-120			
Thallium	0.598	0.050	mg/L	0.500		120	80-120			
LCS (B349123-BS3)				Prepared: 08/15/23 Analyzed: 08/22/23						
Sodium	4.60	2.0	mg/L	4.00		115	80-120			
Zinc	1.09	0.010	mg/L	1.00		109	80-120			
LCS Dup (B349123-BSD1)				Prepared: 08/15/23 Analyzed: 08/17/23						
Aluminum	0.485	0.050	mg/L	0.500		97.0	45.3-154.7	7.46	30	
Antimony	0.507	0.050	mg/L	0.500		101	80-120	8.01	20	
Barium	0.516	0.050	mg/L	0.500		103	80-120	7.01	20	
Beryllium	0.523	0.0040	mg/L	0.500		105	80-120	7.68	20	
Cadmium	0.506	0.0040	mg/L	0.500		101	80-120	6.98	20	
Chromium	0.518	0.010	mg/L	0.500		104	80-120	6.96	20	
Cobalt	0.521	0.010	mg/L	0.500		104	80-120	7.13	20	
Copper	0.997	0.010	mg/L	1.00		99.7	80-120	6.21	20	
Iron	4.01	0.050	mg/L	4.00		100	80-120	6.34	20	
Magnesium	3.78	0.050	mg/L	4.00		94.5	80-120	6.79	20	
Manganese	0.516	0.010	mg/L	0.500		103	80-120	6.43	20	
Potassium	3.83	2.0	mg/L	4.00		95.9	80-120	6.31	20	
Vanadium	0.516	0.010	mg/L	0.500		103	80-120	6.99	20	
LCS Dup (B349123-BSD2)				Prepared: 08/15/23 Analyzed: 08/21/23						
Arsenic	0.492	0.010	mg/L	0.500		98.3	80-120	4.15	20	
Calcium	4.04	0.50	mg/L	4.00		101	80-120	2.57	20	
Lead	0.527	0.010	mg/L	0.500		105	80-120	4.14	20	
Nickel	0.527	0.010	mg/L	0.500		105	80-120	3.88	30	
Selenium	0.520	0.050	mg/L	0.500		104	80-120	5.14	20	
Silver	0.425	0.010	mg/L	0.500		85.0	80-120	3.41	20	
Sodium	4.27	2.0	mg/L	4.00		107	80-120	3.24	20	
Thallium	0.569	0.050	mg/L	0.500		114	80-120	5.07	20	
LCS Dup (B349123-BSD3)				Prepared: 08/15/23 Analyzed: 08/22/23						
Sodium	4.44	2.0	mg/L	4.00		111	80-120	3.36	20	
Zinc	1.07	0.010	mg/L	1.00		107	80-120	1.29	20	

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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349121 - SW-846 3005A Dissolved										
Blank (B349121-BLK1)				Prepared: 08/15/23 Analyzed: 08/17/23						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Calcium	ND	0.50	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Magnesium	ND	0.050	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.010	mg/L							
Blank (B349121-BLK2)				Prepared: 08/15/23 Analyzed: 08/19/23						
Arsenic	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Thallium	ND	0.050	mg/L							
LCS (B349121-BS1)				Prepared: 08/15/23 Analyzed: 08/17/23						
Aluminum	0.492	0.050	mg/L	0.500		98.4	80-120			
Antimony	0.513	0.050	mg/L	0.500		103	80-120			
Barium	0.508	0.050	mg/L	0.500		102	80-120			
Beryllium	0.500	0.0040	mg/L	0.500		100	80-120			
Cadmium	0.505	0.0040	mg/L	0.500		101	80-120			
Calcium	3.84	0.50	mg/L	4.00		96.1	80-120			
Chromium	0.498	0.010	mg/L	0.500		99.7	80-120			
Cobalt	0.497	0.010	mg/L	0.500		99.4	80-120			
Iron	4.00	0.050	mg/L	4.00		100	80-120			
Lead	0.507	0.010	mg/L	0.500		101	80-120			
Magnesium	3.86	0.050	mg/L	4.00		96.5	80-120			
Manganese	0.492	0.010	mg/L	0.500		98.5	80-120			
Nickel	0.501	0.010	mg/L	0.500		100	80-120			
Potassium	3.90	2.0	mg/L	4.00		97.5	80-120			
Silver	0.530	0.010	mg/L	0.500		106	80-120			
Sodium	3.98	2.0	mg/L	4.00		99.6	80-120			
Vanadium	0.496	0.010	mg/L	0.500		99.2	80-120			
Zinc	0.983	0.010	mg/L	1.00		98.3	80-120			

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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349121 - SW-846 3005A Dissolved										
LCS (B349121-BS2)				Prepared: 08/15/23 Analyzed: 08/19/23						
Arsenic	0.482	0.010	mg/L	0.500		96.4	80-120			
Copper	0.971	0.010	mg/L	1.00		97.1	80-120			
Selenium	0.504	0.050	mg/L	0.500		101	80-120			
Thallium	0.535	0.050	mg/L	0.500		107	80-120			
LCS Dup (B349121-BSD1)				Prepared: 08/15/23 Analyzed: 08/17/23						
Aluminum	0.533	0.050	mg/L	0.500		107	80-120	8.04	20	
Antimony	0.538	0.050	mg/L	0.500		108	80-120	4.78	20	
Barium	0.538	0.050	mg/L	0.500		108	80-120	5.74	20	
Beryllium	0.534	0.0040	mg/L	0.500		107	80-120	6.60	20	
Cadmium	0.535	0.0040	mg/L	0.500		107	80-120	5.81	20	
Calcium	4.11	0.50	mg/L	4.00		103	80-120	6.80	20	
Chromium	0.529	0.010	mg/L	0.500		106	80-120	5.95	20	
Cobalt	0.527	0.010	mg/L	0.500		105	80-120	5.75	20	
Iron	4.28	0.050	mg/L	4.00		107	80-120	6.73	20	
Lead	0.529	0.010	mg/L	0.500		106	80-120	4.27	20	
Magnesium	4.14	0.050	mg/L	4.00		103	80-120	6.89	20	
Manganese	0.526	0.010	mg/L	0.500		105	80-120	6.59	20	
Nickel	0.531	0.010	mg/L	0.500		106	80-120	5.82	20	
Potassium	4.18	2.0	mg/L	4.00		105	80-120	7.00	20	
Silver	0.552	0.010	mg/L	0.500		110	80-120	4.02	20	
Sodium	4.28	2.0	mg/L	4.00		107	80-120	7.14	20	
Vanadium	0.525	0.010	mg/L	0.500		105	80-120	5.70	20	
Zinc	1.05	0.010	mg/L	1.00		105	80-120	6.22	20	
LCS Dup (B349121-BSD2)				Prepared: 08/15/23 Analyzed: 08/19/23						
Arsenic	0.528	0.010	mg/L	0.500		106	80-120	9.01	20	
Copper	1.06	0.010	mg/L	1.00		106	80-120	9.19	20	
Selenium	0.556	0.050	mg/L	0.500		111	80-120	9.84	20	
Thallium	0.589	0.050	mg/L	0.500		118	80-120	9.49	20	

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BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM1	Analyzed:	08/29/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	3.46
Endrin [1]	2.39

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	3.26
Endrin [2]	1.90

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM2	Analyzed:	08/29/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	4.70
Endrin [1]	2.81

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.23
Endrin [2]	2.03

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM3	Analyzed:	08/30/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	5.00
Endrin [1]	3.13

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BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM3	Analyzed:	08/30/2023

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.48
Endrin [2]	2.08

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM4	Analyzed:	08/30/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	4.11
Endrin [1]	2.58

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	3.51
Endrin [2]	1.53

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM5	Analyzed:	08/30/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	6.32
Endrin [1]	3.29

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	5.39
Endrin [2]	2.30

BREAKDOWN REPORT

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BREAKDOWN REPORT

Lab Sample ID:	S093111-PEM1	Analyzed:	09/07/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.43
Endrin [1]	0.87

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.51
Endrin [2]	0.69

BREAKDOWN REPORT

Lab Sample ID:	S093111-PEM2	Analyzed:	09/07/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.68
Endrin [1]	1.01

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.58
Endrin [2]	0.87

BREAKDOWN REPORT

Lab Sample ID:	S093111-PEM3	Analyzed:	09/08/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.96
Endrin [1]	1.66

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BREAKDOWN REPORT

Lab Sample ID:	**S093111-PEM3**	**Analyzed:**	**09/08/2023**

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	1.13
Endrin [2]	0.91

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B349687-BS1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.856	6.826	6.886	2.1	
	2	6.786	6.756	6.816	2.3	9.1
4,4'-DDE	1	6.437	6.407	6.467	2.0	
	2	6.382	6.352	6.412	2.1	4.9
4,4'-DDT	1	7.060	7.030	7.090	2.0	
	2	7.012	6.983	7.043	2.1	4.9
Alachlor	1	5.909	5.879	5.939	1.9	
	2	5.634	5.605	5.665	1.9	0.0
Aldrin	1	5.810	5.779	5.839	1.4	
	2	5.675	5.645	5.705	1.4	6.9
alpha-BHC	1	5.165	5.135	5.195	2.0	
	2	5.057	5.028	5.088	1.7	16.2
alpha-Chlordane	1	6.374	6.345	6.405	1.9	
	2	6.250	6.221	6.281	1.9	0.0
beta-BHC	1	5.395	5.365	5.425	2.0	
	2	5.295	5.266	5.326	1.8	10.5
delta-BHC	1	5.499	5.469	5.529	2.0	
	2	5.457	5.428	5.488	1.9	5.1
Dieldrin	1	6.631	6.601	6.661	2.0	
	2	6.466	6.436	6.496	2.1	4.9
Endosulfan I	1	6.465	6.434	6.494	2.0	
	2	6.281	6.251	6.311	2.0	0.0
Endosulfan II	1	6.953	6.923	6.983	1.9	
	2	6.827	6.796	6.856	2.1	10.0
Endosulfan Sulfate	1	7.591	7.560	7.620	1.9	
	2	7.284	7.254	7.314	2.1	10.0
Endrin	1	6.793	6.762	6.822	2.1	
	2	6.672	6.643	6.703	2.1	0.0
Endrin Aldehyde	1	7.262	7.232	7.292	1.8	
	2	7.075	7.045	7.105	2.1	15.4
Endrin Ketone	1	7.801	7.770	7.830	1.9	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B349687-BS1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.674	7.644	7.704	2.0	5.1
gamma-BHC (Lindane)	1	5.344	5.314	5.374	2.0	
	2	5.245	5.216	5.276	1.8	10.5
gamma-Chlordane	1	6.285	6.255	6.315	1.9	
	2	6.154	6.124	6.184	1.9	0.0
Heptachlor	1	5.625	5.595	5.655	1.6	
	2	5.489	5.459	5.519	1.5	6.5
Heptachlor Epoxide	1	6.202	6.171	6.231	2.0	
	2	6.030	6.001	6.061	1.9	5.1
Hexachlorobenzene	1	5.070	5.040	5.100	1.7	
	2	4.981	4.952	5.012	1.8	5.7
Methoxychlor	1	7.438	7.407	7.467	1.8	
	2	7.551	7.521	7.581	1.9	5.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B349687-BSD1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.857	6.826	6.886	2.2	
	2	6.786	6.756	6.816	2.5	12.8
4,4'-DDE	1	6.437	6.407	6.467	2.1	
	2	6.383	6.352	6.412	2.1	0.0
4,4'-DDT	1	7.060	7.030	7.090	2.1	
	2	7.013	6.983	7.043	2.2	4.7
Alachlor	1	5.909	5.879	5.939	2.0	
	2	5.634	5.605	5.665	2.0	0.0
Aldrin	1	5.809	5.779	5.839	1.4	
	2	5.674	5.645	5.705	1.3	7.4
alpha-BHC	1	5.165	5.135	5.195	1.9	
	2	5.057	5.028	5.088	1.6	17.1
alpha-Chlordane	1	6.375	6.345	6.405	2.0	
	2	6.251	6.221	6.281	1.9	5.1
beta-BHC	1	5.396	5.365	5.425	2.0	
	2	5.295	5.266	5.326	1.8	10.5
delta-BHC	1	5.499	5.469	5.529	2.1	
	2	5.457	5.428	5.488	1.9	10.0
Dieldrin	1	6.632	6.601	6.661	2.0	
	2	6.467	6.436	6.496	2.1	4.9
Endosulfan I	1	6.465	6.434	6.494	2.1	
	2	6.281	6.251	6.311	2.0	4.9
Endosulfan II	1	6.953	6.923	6.983	2.0	
	2	6.827	6.796	6.856	2.2	9.5
Endosulfan Sulfate	1	7.592	7.560	7.620	2.1	
	2	7.284	7.254	7.314	2.2	4.7
Endrin	1	6.794	6.762	6.822	2.2	
	2	6.673	6.643	6.703	2.2	0.0
Endrin Aldehyde	1	7.263	7.232	7.292	1.9	
	2	7.076	7.045	7.105	2.3	14.0
Endrin Ketone	1	7.801	7.770	7.830	2.0	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B349687-BSD1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.674	7.644	7.704	2.1	0.0
gamma-BHC (Lindane)	1	5.344	5.314	5.374	1.9	
	2	5.245	5.216	5.276	1.7	11.1
gamma-Chlordane	1	6.285	6.255	6.315	1.9	
	2	6.154	6.124	6.184	1.9	0.0
Heptachlor	1	5.624	5.595	5.655	1.5	
	2	5.488	5.459	5.519	1.4	6.9
Heptachlor Epoxide	1	6.201	6.171	6.231	2.0	
	2	6.030	6.001	6.061	1.9	5.1
Hexachlorobenzene	1	5.070	5.040	5.100	1.5	
	2	4.982	4.952	5.012	1.6	6.5
Methoxychlor	1	7.438	7.407	7.467	1.9	
	2	7.551	7.521	7.581	2.0	5.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B349687-MS1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.853	6.827	6.887	2.0	
	2	6.784	6.757	6.817	2.2	9.5
4,4'-DDE	1	6.434	6.407	6.467	1.9	
	2	6.380	6.352	6.412	2.0	0.0
4,4'-DDT	1	7.058	7.031	7.091	1.9	
	2	7.011	6.983	7.043	2.0	5.1
Alachlor	1	5.907	5.879	5.939	2.0	
	2	5.633	5.604	5.664	2.2	9.5
Aldrin	1	5.807	5.779	5.839	1.5	
	2	5.673	5.644	5.704	1.4	6.9
alpha-BHC	1	5.163	5.135	5.195	2.0	
	2	5.056	5.027	5.087	1.7	16.2
beta-BHC	1	5.393	5.365	5.425	1.9	
	2	5.294	5.265	5.325	1.7	11.1
delta-BHC	1	5.497	5.468	5.528	2.0	
	2	5.455	5.427	5.487	1.8	10.5
Dieldrin	1	6.629	6.601	6.661	1.9	
	2	6.465	6.436	6.496	1.9	0.0
Endosulfan I	1	6.462	6.434	6.494	1.9	
	2	6.279	6.251	6.311	1.8	5.4
Endosulfan II	1	6.950	6.923	6.983	1.9	
	2	6.825	6.797	6.857	1.9	0.0
Endosulfan Sulfate	1	7.588	7.562	7.622	2.0	
	2	7.282	7.255	7.315	2.1	4.9
Endrin	1	6.790	6.763	6.823	2.1	
	2	6.670	6.643	6.703	1.9	10.0
Endrin Aldehyde	1	7.260	7.233	7.293	1.4	
	2	7.073	7.045	7.105	1.6	13.3
Endrin Ketone	1	7.797	7.771	7.831	2.0	
	2	7.672	7.644	7.704	2.0	0.0
gamma-BHC (Lindane)	1	5.342	5.314	5.374	1.9	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B349687-MS1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.244	5.215	5.275	1.6	17.1
Heptachlor	1	5.623	5.595	5.655	1.7	
	2	5.487	5.458	5.518	1.5	12.5
Heptachlor Epoxide	1	6.199	6.171	6.231	1.9	
	2	6.028	6.000	6.060	1.8	5.4
Hexachlorobenzene	1	5.068	5.040	5.100	2.0	
	2	4.981	4.952	5.012	1.8	10.5
Methoxychlor	1	7.434	7.408	7.468	1.8	
	2	7.549	7.520	7.580	1.9	5.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B349687-MSD1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.853	6.827	6.887	2.1	
	2	6.784	6.757	6.817	2.2	4.7
4,4'-DDE	1	6.434	6.407	6.467	2.0	
	2	6.380	6.352	6.412	2.0	0.0
4,4'-DDT	1	7.057	7.031	7.091	2.0	
	2	7.010	6.983	7.043	2.1	4.9
Alachlor	1	5.906	5.879	5.939	2.0	
	2	5.633	5.604	5.664	2.2	9.5
Aldrin	1	5.807	5.779	5.839	1.6	
	2	5.673	5.644	5.704	1.4	13.3
alpha-BHC	1	5.163	5.135	5.195	1.9	
	2	5.057	5.027	5.087	1.8	5.4
beta-BHC	1	5.394	5.365	5.425	1.9	
	2	5.294	5.265	5.325	1.7	11.1
delta-BHC	1	5.497	5.468	5.528	2.0	
	2	5.456	5.427	5.487	1.7	16.2
Dieldrin	1	6.628	6.601	6.661	2.0	
	2	6.465	6.436	6.496	1.9	5.1
Endosulfan I	1	6.461	6.434	6.494	2.0	
	2	6.279	6.251	6.311	1.7	16.2
Endosulfan II	1	6.950	6.923	6.983	1.9	
	2	6.825	6.797	6.857	1.9	0.0
Endosulfan Sulfate	1	7.587	7.562	7.622	2.0	
	2	7.282	7.255	7.315	2.1	4.9
Endrin	1	6.790	6.763	6.823	2.1	
	2	6.670	6.643	6.703	1.9	10.0
Endrin Aldehyde	1	7.259	7.233	7.293	1.4	
	2	7.072	7.045	7.105	1.5	6.9
Endrin Ketone	1	7.797	7.771	7.831	2.0	
	2	7.672	7.644	7.704	2.0	0.0
gamma-BHC (Lindane)	1	5.342	5.314	5.374	1.9	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B349687-MSD1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.244	5.215	5.275	1.7	11.1
Heptachlor	1	5.623	5.595	5.655	1.8	
	2	5.487	5.458	5.518	1.5	18.2
Heptachlor Epoxide	1	6.198	6.171	6.231	1.9	
	2	6.029	6.000	6.060	1.7	11.1
Hexachlorobenzene	1	5.068	5.040	5.100	2.2	
	2	4.981	4.952	5.012	1.9	14.6
Methoxychlor	1	7.434	7.408	7.468	1.9	
	2	7.548	7.520	7.580	2.0	5.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B350765-BS1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.785	6.755	6.815	1.5	
	2	6.710	6.681	6.741	1.6	6.5
4,4'-DDE	1	6.369	6.339	6.399	1.3	
	2	6.310	6.280	6.340	1.4	7.4
4,4'-DDT	1	6.987	6.958	7.018	1.5	
	2	6.935	6.905	6.965	1.5	6.5
Alachlor	1	5.848	5.818	5.878	1.3	
	2	5.575	5.544	5.604	1.3	0.0
Aldrin	1	5.747	5.717	5.777	0.98	
	2	5.612	5.581	5.641	0.97	1.0
alpha-BHC	1	5.117	5.086	5.146	1.2	
	2	5.009	4.978	5.038	1.1	8.7
alpha-Chlordane	1	6.306	6.276	6.336	1.2	
	2	6.180	6.149	6.209	1.3	8.0
beta-BHC	1	5.343	5.312	5.372	1.3	
	2	5.242	5.212	5.272	1.2	8.0
delta-BHC	1	5.443	5.412	5.472	1.2	
	2	5.400	5.369	5.429	1.1	8.7
Dieldrin	1	6.559	6.529	6.589	1.3	
	2	6.392	6.361	6.421	1.4	7.4
Endosulfan I	1	6.394	6.363	6.423	1.3	
	2	6.209	6.179	6.239	1.3	0.0
Endosulfan II	1	6.877	6.848	6.908	1.3	
	2	6.748	6.718	6.778	1.4	7.4
Endosulfan Sulfate	1	7.512	7.482	7.542	1.4	
	2	7.202	7.172	7.232	1.4	0.0
Endrin	1	6.719	6.689	6.749	1.4	
	2	6.595	6.565	6.625	1.4	0.0
Endrin Aldehyde	1	7.185	7.155	7.215	1.2	
	2	6.995	6.965	7.025	1.4	15.4
Endrin Ketone	1	7.720	7.689	7.749	1.5	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B350765-BS1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.589	7.559	7.619	1.5	0.0
gamma-BHC (Lindane)	1	5.292	5.261	5.321	1.2	
	2	5.192	5.162	5.222	1.2	0.0
gamma-Chlordane	1	6.217	6.187	6.247	1.2	
	2	6.084	6.054	6.114	1.2	0.0
Heptachlor	1	5.567	5.536	5.596	1.0	
	2	5.430	5.399	5.459	1.0	0.0
Heptachlor Epoxide	1	6.134	6.104	6.164	1.3	
	2	5.962	5.932	5.992	1.3	0.0
Hexachlorobenzene	1	5.023	4.993	5.053	0.88	
	2	4.935	4.904	4.964	0.86	2.3
Methoxychlor	1	7.364	7.334	7.394	1.4	
	2	7.471	7.442	7.502	1.5	6.9

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B350765-BSD1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.785	6.755	6.815	2.1	
	2	6.712	6.681	6.741	2.3	9.1
4,4'-DDE	1	6.370	6.339	6.399	1.8	
	2	6.311	6.280	6.340	2.2	20.0
4,4'-DDT	1	6.988	6.958	7.018	2.2	
	2	6.935	6.905	6.965	2.2	0.0
Alachlor	1	5.848	5.818	5.878	1.5	
	2	5.576	5.544	5.604	2.1	33.3
Aldrin	1	5.748	5.717	5.777	1.2	
	2	5.612	5.581	5.641	1.6	28.6
alpha-BHC	1	5.117	5.086	5.146	1.8	
	2	5.010	4.978	5.038	2.2	20.0
alpha-Chlordane	1	6.306	6.276	6.336	1.5	
	2	6.180	6.149	6.209	1.9	23.5
beta-BHC	1	5.343	5.312	5.372	1.8	
	2	5.242	5.212	5.272	2.0	10.5
delta-BHC	1	5.443	5.412	5.472	1.5	
	2	5.400	5.369	5.429	1.9	23.5
Dieldrin	1	6.560	6.529	6.589	1.6	
	2	6.393	6.361	6.421	2.1	27.0
Endosulfan I	1	6.394	6.363	6.423	1.7	
	2	6.210	6.179	6.239	2.1	21.1
Endosulfan II	1	6.878	6.848	6.908	1.8	
	2	6.749	6.718	6.778	2.0	10.5
Endosulfan Sulfate	1	7.512	7.482	7.542	1.9	
	2	7.203	7.172	7.232	2.1	10.0
Endrin	1	6.719	6.689	6.749	1.8	
	2	6.596	6.565	6.625	2.1	15.4
Endrin Aldehyde	1	7.186	7.155	7.215	1.8	
	2	6.995	6.965	7.025	2.2	20.0
Endrin Ketone	1	7.720	7.689	7.749	2.1	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B350765-BSD1 Date(s) Analyzed: 09/07/2023 09/07/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.589	7.559	7.619	2.1	0.0
gamma-BHC (Lindane)	1	5.292	5.261	5.321	1.7	
	2	5.192	5.162	5.222	2.3	30.0
gamma-Chlordane	1	6.218	6.187	6.247	1.5	
	2	6.086	6.054	6.114	1.9	23.5
Heptachlor	1	5.567	5.536	5.596	1.3	
	2	5.430	5.399	5.459	1.7	26.7
Heptachlor Epoxide	1	6.135	6.104	6.164	1.6	
	2	5.963	5.932	5.992	2.0	22.2
Hexachlorobenzene	1	5.024	4.993	5.053	1.4	
	2	4.935	4.904	4.964	1.8	25.0
Methoxychlor	1	7.365	7.334	7.394	2.0	
	2	7.471	7.442	7.502	2.0	0.0

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated laboratory blank as well as in the sample.
H-06	Sample was extracted past the recommended holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
MS-24	Either matrix spike or matrix spike duplicate is outside of control limits, but the other is within limits. Analysis is in control based on laboratory fortified blank recovery.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-11	Elevated reporting limit due to high concentration of target compounds.
S-10	Sample was re-extracted outside of holding time since surrogate standard recovery was outside of control limits. Data from analysis performed outside of holding time is also reported since surrogate recovery is acceptable.
S-26	Surrogate outside of control limits.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Water	
Aluminum	CT,NY,NH,ME,VA,NC
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,NC,VA
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	MA,NY,CT,NH,NC,ME,VA
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,NC,ME,VA
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,NC,VA
Calcium	CT,NH,NY,NC,ME,VA
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,NC,VA
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,NC,ME,VA
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,NC,VA
Iron	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,NC,VA
Lead	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,NC,ME,VA
Magnesium	CT,NH,NY,NC,ME,VA
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,NC,VA
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,NC,VA
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,NC,VA
Selenium	CT,NH,NY,ME,NC,VA
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,NC,VA
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,NC,ME,VA
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,RI,NC,VA
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,NC,VA
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,NC,VA
Zinc	CT,NH,NY,ME,VA,NC
SW-846 8081B in Water	
Alachlor	NC

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8260D in Water	
Acetone	CT,ME,NH,VA,NY
Acrylonitrile	CT,ME,NH,VA,NY

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
tert-Amyl Methyl Ether (TAME)	ME,NH,VA,NY
Benzene	CT,ME,NH,VA,NY
Bromobenzene	ME,NY
Bromochloromethane	ME,NH,VA,NY
Bromodichloromethane	CT,ME,NH,VA,NY
Bromoform	CT,ME,NH,VA,NY
Bromomethane	CT,ME,NH,VA,NY
2-Butanone (MEK)	CT,ME,NH,VA,NY
tert-Butyl Alcohol (TBA)	ME,NH,VA,NY
n-Butylbenzene	ME,VA,NY
sec-Butylbenzene	ME,VA,NY
tert-Butylbenzene	ME,VA,NY
tert-Butyl Ethyl Ether (TBEE)	ME,NH,VA,NY
Carbon Disulfide	CT,ME,NH,VA,NY
Carbon Tetrachloride	CT,ME,NH,VA,NY
Chlorobenzene	CT,ME,NH,VA,NY
Chlorodibromomethane	CT,ME,NH,VA,NY
Chloroethane	CT,ME,NH,VA,NY
Chloroform	CT,ME,NH,VA,NY
Chloromethane	CT,ME,NH,VA,NY
2-Chlorotoluene	ME,NH,VA,NY
4-Chlorotoluene	ME,NH,VA,NY
1,2-Dibromo-3-chloropropane (DBCP)	ME,NY
1,2-Dibromoethane (EDB)	ME,NY
Dibromomethane	ME,NH,VA,NY
1,2-Dichlorobenzene	CT,ME,NH,VA,NY
1,3-Dichlorobenzene	CT,ME,NH,VA,NY
1,4-Dichlorobenzene	CT,ME,NH,VA,NY
trans-1,4-Dichloro-2-butene	ME,NH,VA,NY
Dichlorodifluoromethane (Freon 12)	ME,NH,VA,NY
1,1-Dichloroethane	CT,ME,NH,VA,NY
1,2-Dichloroethane	CT,ME,NH,VA,NY
1,1-Dichloroethylene	CT,ME,NH,VA,NY
cis-1,2-Dichloroethylene	ME,NY
trans-1,2-Dichloroethylene	CT,ME,NH,VA,NY
1,2-Dichloropropane	CT,ME,NH,VA,NY
1,3-Dichloropropane	ME,VA,NY
2,2-Dichloropropane	ME,NH,VA,NY
1,1-Dichloropropene	ME,NH,VA,NY
cis-1,3-Dichloropropene	CT,ME,NH,VA,NY
trans-1,3-Dichloropropene	CT,ME,NH,VA,NY
Diethyl Ether	ME,NY
Diisopropyl Ether (DIPE)	ME,NH,VA,NY
1,4-Dioxane	ME,NY
Ethylbenzene	CT,ME,NH,VA,NY
Hexachlorobutadiene	CT,ME,NH,VA,NY
2-Hexanone (MBK)	CT,ME,NH,VA,NY

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
Isopropylbenzene (Cumene)	ME,VA,NY
p-Isopropyltoluene (p-Cymene)	CT,ME,NH,VA,NY
Methyl Acetate	ME,NY
Methyl tert-Butyl Ether (MTBE)	CT,ME,NH,VA,NY
Methyl Cyclohexane	NY
Methylene Chloride	CT,ME,NH,VA,NY
4-Methyl-2-pentanone (MIBK)	CT,ME,NH,VA,NY
Naphthalene	ME,NH,VA,NY
n-Propylbenzene	CT,ME,NH,VA,NY
Styrene	CT,ME,NH,VA,NY
1,1,1,2-Tetrachloroethane	CT,ME,NH,VA,NY
1,1,2,2-Tetrachloroethane	CT,ME,NH,VA,NY
Tetrachloroethylene	CT,ME,NH,VA,NY
Toluene	CT,ME,NH,VA,NY
1,2,3-Trichlorobenzene	ME,NH,VA,NY
1,2,4-Trichlorobenzene	CT,ME,NH,VA,NY
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,ME,NH,VA,NY
1,1,2-Trichloroethane	CT,ME,NH,VA,NY
Trichloroethylene	CT,ME,NH,VA,NY
Trichlorofluoromethane (Freon 11)	CT,ME,NH,VA,NY
1,2,3-Trichloropropane	ME,NH,VA,NY
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VA,NY
1,2,4-Trimethylbenzene	ME,VA,NY
1,3,5-Trimethylbenzene	ME,VA,NY
Vinyl Chloride	CT,ME,NH,VA,NY
m+p Xylene	CT,ME,NH,VA,NY
o-Xylene	CT,ME,NH,VA,NY

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023

Pace Analytical

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23H2240 KKS

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Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: EA Engineering
Address: 269 W. Jefferson St, Syracuse NY 13202
Phone: 315 380 1346
Project Name: Three Star Anodizing
Project Location: Wappingers Falls, NY
Project Number: NYSDEC #314058 EA #16025.23/00008
Project Manager: Mike Miller (EA)
Pace Analytical Quote Name/Number: Callout 141621
Invoice Recipient:
Sampled By: Moriah Gilkey

Requested Turnaround Time
7-Day ☐ 10-Day ☒
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other: Cat B Deliverables
CLP Like Data Pkg Required: ☐
Email To: michaelmiller@eaest.com
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	VOC 8260	Pesticides 8081	Total metals 6010B No Hg	Total Metals Filtered 6020 No Hg	# of Containers	[2] Preservation Code	[3] Container Code
								24	20	10	1			
								V	A	P	P			
1	314058-MW-3-08142023	08/14/23	1415		X	GW	U	X	X	X				
2	314058-MW-4-08142023	08/14/23	1301		X	GW		X	X	X				
3	314058-MW-5-08142023	08/14/23	1154		X	GW		X	X	X				
4	314058-MW-9R-08142023	08/14/23	1542		X	GW		X	X	X	X			
5	314058-MW-11-08142023	08/14/23	1548		X	GW		X	X	X				
6	314058-MW-15D-08142023	08/14/23	1215		X	GW		X	X	X				
7	314058-MW-16-08142023	08/14/23	1210		X	GW		X	X	X				
8	314058-~~MW~~FD-01	08/14/23			X	GW		X	X	X				
9	314058-EB-01	08/14/23	1730		Blank			X						
10	314058-FB-01	08/14/23	1725		11			X						

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments: ~~X~~TAL Metals 6010 (No Hg)~~X~~
- Extra volume provided w/ MW-15D for MS/MSD
- one extra sample bottle w/ MW-9R that is field filtered

one of one coolers

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
Moriah Gilkey	1800 08/14/23
Received by: (signature) 3.0°C	Date/Time: 8.15.23 1007
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

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Minneapolis, MN 55414

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Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:
Address:
Phone:
Project Name:
Project Location: see page 1
Project Number:
Project Manager:
Pace Analytical Quote Name/Number
Invoice Recipient:
Sampled By:

Requested Turnaround Time
7-Day ☐ 10-Day ☒
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	2	H	V	8260 - VOCs	# of Containers
11	314058-TB-01	Lab Prepped									X	

[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 08/14/23 1800	
Received by: (signature) 3.0°C	Date/Time: 8-15-23 1007	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Table of Contents

FedEx Sign Up or Log In

FedEx® Tracking

DELIVERED

Tuesday

8/15/23 at 10:07 AM

Signed for by: A.ARROYO

Obtain proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 4 pieces

TRACKING ID

782484165025

FROM
HUNT VALLEY, MD US
Label Created
8/14/23 6:22 PM

WE HAVE YOUR PACKAGE
NEWBURGH, NY
8/14/23 7:15 PM

IN TRANSIT
WINDSOR LOCKS, CT
8/15/23 7:10 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
8/15/23 7:20 AM

DELIVERED
East Longmeadow, MA US
Delivered
8/15/23 at 10:07 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL SUBMIT

MORE OPTIONS

Manage Delivery

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client EA Engineering

Project Three Star Anodizing

MCP/RCP Required N/A

Deliverable Package Requirement CAT B

Location Wappingers Falls, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐ _____

Received By / Date / Time AAM/8-15-23/1007

Back-Sheet By / Date / Time AAM/8-15-23/1328

Temperature Method Temp. Gun # 5

Temp ✓ < 6° C Actual Temperature 3.0°C

Rush Samples: Yes / (No) Notify _____

Short Hold: Yes / (No) Notify _____

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☑ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Effective Date: 07/13/2023

Quaitrax ID: 120836

Sample	Soils Jars (Circle Amb/Clear)				Ambers						Plastics												VOA Vials						Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL			1 Liter		500mL		250mL								Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	100mL Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc												
1										2									1					2									
2										2									1					2									
3										2									1					2									
4										2									2					2									
5										2									1					2									
6										2									1					2									
7										6									3					6									
8										2									1					2									
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20																																	

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August 29, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

Project Location: Wappingers Falls, NY
Client Job Number:
Project Number: 314058
Laboratory Work Order Number: 23H2245

Enclosed are results of analyses for samples as received by the laboratory on August 15, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 8/29/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 314058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H2245

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Wappingers Falls, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
314058-MW-11-08142023	23H2245-01	Ground Water		SW-846 8270E	
314058-MW-5-08142023	23H2245-02	Ground Water		SW-846 8270E	
314058-MW-4-08142023	23H2245-03	Ground Water		SW-846 8270E	
314058-MW-15D-08142023	23H2245-04	Ground Water		SW-846 8270E	
314058-MW-16-08142023	23H2245-05	Ground Water		SW-846 8270E	
314058-MW-9R-08142023	23H2245-06	Ground Water		SW-846 8270E	
314058-MW-3-08142023	23H2245-07	Ground Water		SW-846 8270E	
314058-FD-1-08142023	23H2245-08	Ground Water		SW-846 8270E	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 8270E

Qualifications:

V-17

Internal standard area <50% of associated calibration standard internal standard area. Reanalysis yielded similar internal standard non-conformance.

Analyte & Samples(s) Qualified:

23H2245-05[314058-MW-16-08142023]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 Sampled: 8/14/2023 15:48

Sample ID: 23H2245-01

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.36	0.19	0.031	µg/L	1		SW-846 8270E	8/16/23	8/23/23 17:41	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	25.8	15-110		8/23/23 17:41

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2245-02

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.19	0.031	µg/L	1		SW-846 8270E	8/16/23	8/29/23 10:05	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	29.7	15-110		8/29/23 10:05

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2245-03

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.19	0.031	µg/L	1		SW-846 8270E	8/16/23	8/29/23 10:25	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	27.4	15-110		8/29/23 10:25

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 Sampled: 8/14/2023 12:15

Sample ID: 23H2245-04

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	4.3	0.20	0.033	µg/L	1		SW-846 8270E	8/16/23	8/21/23 20:52	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	22.4	15-110		8/21/23 20:52

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2245-05

Sample Matrix: Ground Water

Sample Flags: V-17

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.033	µg/L	1		SW-846 8270E	8/16/23	8/29/23 10:45	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	33.6	15-110		8/29/23 10:45

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Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 Sampled: 8/14/2023 15:42

Sample ID: 23H2245-06

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.39	0.19	0.032	µg/L	1		SW-846 8270E	8/16/23	8/29/23 13:24	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	23.3	15-110		8/29/23 13:24

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2245-07

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.033	µg/L	1		SW-846 8270E	8/16/23	8/29/23 11:25	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	27.7	15-110		8/29/23 11:25	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2245

Date Received: 8/15/2023

Field Sample #: 314058-FD-1-08142023 | Sampled: 8/14/2023 00:00

Sample ID: 23H2245-08

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.26	0.20	0.033	µg/L	1		SW-846 8270E	8/16/23	8/29/23 11:45	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	30.0	15-110		8/29/23 11:45

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3510C **Analytical Method:SW-846 8270E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2245-01 [314058-MW-11-08142023]	B349163	1040	1.00	08/16/23
23H2245-02 [314058-MW-5-08142023]	B349163	1040	1.00	08/16/23
23H2245-03 [314058-MW-4-08142023]	B349163	1040	1.00	08/16/23
23H2245-04 [314058-MW-15D-08142023]	B349163	990	1.00	08/16/23
23H2245-05 [314058-MW-16-08142023]	B349163	980	1.00	08/16/23
23H2245-06 [314058-MW-9R-08142023]	B349163	1030	1.00	08/16/23
23H2245-07 [314058-MW-3-08142023]	B349163	990	1.00	08/16/23
23H2245-08 [314058-FD-1-08142023]	B349163	990	1.00	08/16/23

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QUALITY CONTROL

1,4-Dioxane by isotope dilution GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349163 - SW-846 3510C										
Blank (B349163-BLK1)				Prepared: 08/16/23 Analyzed: 08/17/23						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	*2.65*		µg/L	10.0		26.5	15-110			
LCS (B349163-BS1)				Prepared: 08/16/23 Analyzed: 08/17/23						
1,4-Dioxane	9.47	0.20	µg/L	10.0		94.7	40-140			
Surrogate: 1,4-Dioxane-d8	*3.01*		µg/L	10.0		30.1	15-110			
LCS Dup (B349163-BSD1)				Prepared: 08/16/23 Analyzed: 08/17/23						
1,4-Dioxane	11.2	0.20	µg/L	10.0		112	40-140	16.5	30	
Surrogate: 1,4-Dioxane-d8	*2.70*		µg/L	10.0		27.0	15-110			
Matrix Spike (B349163-MS2)	**Source: 23H2245-04**			Prepared: 08/16/23 Analyzed: 08/21/23						
1,4-Dioxane	14.7	0.20	µg/L	10.0	4.32	104	40-140			
Surrogate: 1,4-Dioxane-d8	*2.11*		µg/L	10.0		21.1	15-110			
Matrix Spike Dup (B349163-MSD2)	**Source: 23H2245-04**			Prepared: 08/16/23 Analyzed: 08/21/23						
1,4-Dioxane	16.5	0.20	µg/L	10.1	4.32	120	40-140	11.1	20	
Surrogate: 1,4-Dioxane-d8	*2.72*		µg/L	10.1		27.0	15-110			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
V-17	Internal standard area <50% of associated calibration standard internal standard area. Reanalysis yielded similar internal standard non-conformance.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
1,4-Dioxane	NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

231-12245
LK 5

https://www.pacelabs.com/

Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 1

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name:	EA Engineering
Address:	2269 W. Jefferson St, Syracuse NY 13202
Phone:	315 380 1376 (Sampler)
Project Name:	Three Star Anodizing
Project Location:	Wappingers Falls, NY
Project Number:	NYSDEC #314058 EA #16025231.0008
Project Manager:	Mike Muller (EA)
Pace Analytical Quote Name/Number	Pallant 141621
Invoice Recipient:	
Sampled By:	Monah Gilkey

Requested Turnaround Time
7-Day ☐ 10-Day ☒
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other: Cat B Deliverables
CLP Like Data Pkg Required: ☐
Email To: michaelmuller@eaest.com
Fax To #:

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	~~Ending~~ Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	1,4-Dioxane-8270 SIM
1	314058-MW-11-08142023	08/14/23	1548		X	GW	U	X
2	314058-MW-5-08142023	08/14/23	1154		X			X
3	314058-MW-4-08142023	08/14/23	1301		X			X
4	314058-MW-15D-08142023	08/14/23	1215		X			X
5	314058MW-16-08142023	08/14/23	1210		X			X
6	314058-MW-QR-08142023	08/14/23	1542		X			X
7	314058-MW-3-08142023	08/14/23	~~1501~~ 1415 MS		X			X
8	314058-FD-1-08142023	08/14/23			X	GW	U	X
	~~314058-FD~~ MW	08/14/23						MW
	~~314058-EB~~ MW							

ANALYSIS REQUESTED

# of Containers	4
[2] Preservation Code	A
[3] Container Code	

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:
*Extra volume was provided for MW-15D ~~FD~~ MW for MS/MSD
one of two coolers

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 1800 08/14/23
Received by: (signature) 30/2.2°C	Date/Time: 1007 8-15-23
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Others:

Deliverables
☐ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

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FedEx Sign Up or Log In

FedEx® Tracking

DELIVERED

Tuesday

8/15/23 at 10:07 AM

Signed for by: A.ARROYO

Obtain proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 4 pieces

TRACKING ID

782484165014

FROM
HUNT VALLEY, MD US
Label Created
8/14/23 6:22 PM

WE HAVE YOUR PACKAGE
NEWBURGH, NY
8/14/23 7:15 PM

IN TRANSIT
WINDSOR LOCKS, CT
8/15/23 7:12 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
8/15/23 7:21 AM

DELIVERED
East Longmeadow, MA US
Delivered
8/15/23 at 10:07 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

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MORE OPTIONS

Manage Delivery

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client EA Engineering

Project Three Star Anodizing

MCP/RCP Required N/A

Deliverable Package Requirement CAT B

Location Wappingers Falls, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time AAM | 2-15-23 | 1007

Back-Sheet By / Date / Time AAM | 2-15-23 | 1233

Temperature Method Temp. Gun # 4

Temp ~~6~~ °C Actual Temperature 3.0 | 2.2

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Quaitrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers						Plastics											VOA Vials						Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter		250mL			100mL	1 Liter		500mL		250mL							Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
					Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc											
1					2																												
2					1																												
3					1																												
4					3																												
5					2																												
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 13, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

Project Location: Wappingers Falls, NY
Client Job Number:
Project Number: 314058
Laboratory Work Order Number: 23H2273

Enclosed are results of analyses for samples as received by the laboratory on August 15, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 9/13/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 314058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H2273

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Wappingers Falls, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
314058-MW-3-08142023	23H2273-01	Ground Water		Draft Method 1633	
314058-MW-4-08142023	23H2273-02	Ground Water		Draft Method 1633	
314058-MW-5-08142023	23H2273-03	Ground Water		Draft Method 1633	
314058-MW-11-08142023	23H2273-04	Ground Water		Draft Method 1633	
314058-MW-9R-08142023	23H2273-05	Ground Water		Draft Method 1633	
314058-MW-15D-08142023	23H2273-06	Ground Water		Draft Method 1633	
314058-MW-16-08142023	23H2273-07	Ground Water		Draft Method 1633	
314058-FD-01	23H2273-08	Ground Water		Draft Method 1633	
314058-EB-01	23H2273-09	Equipment Blank Water		Draft Method 1633	
314058-FB-01	23H2273-10	Field Blank		Draft Method 1633	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Draft Method 1633

Qualifications:

H-02

Gross violation of holding time. Analysis performed after 2X the allowable holding time.

Analyte & Samples(s) Qualified:

Total Suspended Solids

23H2273-01[314058-MW-3-08142023], 23H2273-02[314058-MW-4-08142023], 23H2273-03[314058-MW-5-08142023], 23H2273-04[314058-MW- 11-08142023], 23H2273-05[314058-MW-9R-08142023], 23H2273-06[314058-MW-15D-08142023], 23H2273-07[314058-MW-16-08142023], 23H2273-08[314058-FD-01]

R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:

3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA

B349227-MSD1

Z-01

Extracted internal standard outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS

23H2273-03[314058-MW-5-08142023], 23H2273-09[314058-EB-01], 23H2273-10[314058-FB-01], B349227-BLK1, B349227-MRL1

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS

23H2273-03[314058-MW-5-08142023], 23H2273-09[314058-EB-01], 23H2273-10[314058-FB-01], B349227-BLK1, B349227-MRL1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2273-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	2.7	3.6	1.3	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluoropentanoic acid (PFPeA)	2.7	1.8	0.31	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorohexanoic acid (PFHxA)	1.6	0.90	0.19	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluoroheptanoic acid (PFHpA)	1.4	0.90	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorooctanoic acid (PFOA)	2.6	0.90	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorononanoic acid (PFNA)	0.69	0.90	0.17	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorodecanoic acid (PFDA)	ND	0.90	0.17	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.90	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.90	0.22	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorobutanesulfonic acid (PFBS)	0.94	0.90	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.90	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.2	0.90	0.18	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.90	0.27	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorooctanesulfonic acid (PFOS)	6.0	0.90	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.90	0.26	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	0.62	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	0.88	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	0.97	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.90	0.27	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.90	0.37	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.90	0.39	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.90	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.0	2.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.0	2.2	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	0.94	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	0.62	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.6	0.76	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.6	0.87	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.0	1.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	9.1	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	7.9	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2273-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	0.36	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.78	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:23	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	47.4	10-130		9/6/23 5:23
13C5-PFPeA	69.5	35-150		9/6/23 5:23
13C5-PFHxA	68.0	55-150		9/6/23 5:23
13C4-PFHpA	63.4	55-150		9/6/23 5:23
13C8-PFOA	66.2	60-140		9/6/23 5:23
13C9-PFNA	71.3	55-140		9/6/23 5:23
13C6-PFDA	68.0	50-140		9/6/23 5:23
13C7-PFUnA	66.1	30-140		9/6/23 5:23
13C2-PFDoA	59.0	10-150		9/6/23 5:23
13C2-PFTeDA	57.5	10-130		9/6/23 5:23
13C3-PFBS	66.5	55-150		9/6/23 5:23
13C3-PFHxS	67.9	55-150		9/6/23 5:23
13C8-PFOS	67.7	45-140		9/6/23 5:23
13C2-4:2FTS	66.0	60-200		9/6/23 5:23
13C2-6:2FTS	66.1	60-200		9/6/23 5:23
13C2-8:2FTS	66.3	50-200		9/6/23 5:23
13C8-PFOSA	59.4	30-130		9/6/23 5:23
D3-NMeFOSA	53.9	15-130		9/6/23 5:23
D5-NEtFOSA	53.6	10-130		9/6/23 5:23
D3-NMeFOSAA	63.7	45-200		9/6/23 5:23
D5-NEtFOSAA	60.3	10-200		9/6/23 5:23
D7-NMeFOSE	56.5	10-150		9/6/23 5:23
D9-NEtFOSE	52.3	10-150		9/6/23 5:23
13C3-HFPO-DA	70.5	25-160		9/6/23 5:23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-3-08142023 | Sampled: 8/14/2023 14:15

Sample ID: 23H2273-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	34	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2273-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	3.8	3.6	1.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluoropentanoic acid (PFPeA)	2.6	1.8	0.31	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorohexanoic acid (PFHxA)	2.0	0.89	0.19	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluoroheptanoic acid (PFHpA)	1.7	0.89	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorooctanoic acid (PFOA)	3.0	0.89	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorononanoic acid (PFNA)	0.96	0.89	0.17	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorodecanoic acid (PFDA)	ND	0.89	0.17	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.89	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.89	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.89	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.89	0.22	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorobutanesulfonic acid (PFBS)	1.2	0.89	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.89	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.5	0.89	0.18	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.89	0.27	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorooctanesulfonic acid (PFOS)	6.1	0.89	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.89	0.26	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.89	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.89	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	0.62	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	0.88	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	0.97	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.89	0.27	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.89	0.37	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.89	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.89	0.39	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.89	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	8.9	2.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	8.9	2.2	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	0.93	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	0.61	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.6	0.76	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.6	0.86	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	8.9	1.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	9.1	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	7.9	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2273-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	0.36	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.77	ng/L	1		Draft Method 1633	9/1/23	9/6/23 5:39	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	32.1	10-130		9/6/23 5:39
13C5-PFPeA	64.9	35-150		9/6/23 5:39
13C5-PFHxA	64.4	55-150		9/6/23 5:39
13C4-PFHpA	61.7	55-150		9/6/23 5:39
13C8-PFOA	64.1	60-140		9/6/23 5:39
13C9-PFNA	68.2	55-140		9/6/23 5:39
13C6-PFDA	63.0	50-140		9/6/23 5:39
13C7-PFUnA	62.1	30-140		9/6/23 5:39
13C2-PFDoA	52.1	10-150		9/6/23 5:39
13C2-PFTeDA	43.3	10-130		9/6/23 5:39
13C3-PFBS	62.9	55-150		9/6/23 5:39
13C3-PFHxS	63.3	55-150		9/6/23 5:39
13C8-PFOS	61.0	45-140		9/6/23 5:39
13C2-4:2FTS	62.7	60-200		9/6/23 5:39
13C2-6:2FTS	60.7	60-200		9/6/23 5:39
13C2-8:2FTS	56.1	50-200		9/6/23 5:39
13C8-PFOSA	53.7	30-130		9/6/23 5:39
D3-NMeFOSA	49.9	15-130		9/6/23 5:39
D5-NEtFOSA	47.8	10-130		9/6/23 5:39
D3-NMeFOSAA	56.4	45-200		9/6/23 5:39
D5-NEtFOSAA	52.7	10-200		9/6/23 5:39
D7-NMeFOSE	47.4	10-150		9/6/23 5:39
D9-NEtFOSE	40.3	10-150		9/6/23 5:39
13C3-HFPO-DA	66.8	25-160		9/6/23 5:39

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-4-08142023 | Sampled: 8/14/2023 13:01

Sample ID: 23H2273-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2273-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	3.5	3.7	1.4	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluoropentanoic acid (PFPeA)	0.62	1.9	0.32	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorohexanoic acid (PFHxA)	0.67	0.93	0.20	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluoroheptanoic acid (PFHpA)	0.37	0.93	0.24	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorooctanoic acid (PFOA)	1.2	0.93	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorononanoic acid (PFNA)	ND	0.93	0.18	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorodecanoic acid (PFDA)	ND	0.93	0.17	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.93	0.26	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.93	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.93	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorobutanesulfonic acid (PFBS)	2.3	0.93	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluoropentanesulfonic acid (PFPeS)	0.32	0.93	0.22	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorohexanesulfonic acid (PFHxS)	3.0	0.93	0.19	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.93	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorooctanesulfonic acid (PFOS)	5.8	0.93	0.30	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.93	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.93	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.93	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.7	0.65	ng/L	1	Z-01	Draft Method 1633	9/1/23	9/6/23 6:26	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.7	0.92	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.7	1.0	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.93	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.93	0.39	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.93	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.93	0.41	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.93	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.3	2.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.3	2.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.7	0.98	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.7	0.64	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.7	0.80	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.7	0.90	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.3	1.7	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	9.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	47	8.2	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2273-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.38	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.81	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:26	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	46.6		10-130		9/6/23 6:26
13C5-PFPeA	64.6		35-150		9/6/23 6:26
13C5-PFHxA	61.2		55-150		9/6/23 6:26
13C4-PFHpA	59.4		55-150		9/6/23 6:26
13C8-PFOA	60.7		60-140		9/6/23 6:26
13C9-PFNA	63.1		55-140		9/6/23 6:26
13C6-PFDA	62.4		50-140		9/6/23 6:26
13C7-PFUnA	65.7		30-140		9/6/23 6:26
13C2-PFDoA	58.5		10-150		9/6/23 6:26
13C2-PFTeDA	50.0		10-130		9/6/23 6:26
13C3-PFBS	63.0		55-150		9/6/23 6:26
13C3-PFHxS	61.4		55-150		9/6/23 6:26
13C8-PFOS	62.1		45-140		9/6/23 6:26
13C2-4:2FTS	**57.5**	*	60-200	Z-01	9/6/23 6:26
13C2-6:2FTS	60.3		60-200		9/6/23 6:26
13C2-8:2FTS	58.5		50-200		9/6/23 6:26
13C8-PFOSA	52.7		30-130		9/6/23 6:26
D3-NMeFOSA	54.3		15-130		9/6/23 6:26
D5-NEtFOSA	53.6		10-130		9/6/23 6:26
D3-NMeFOSAA	60.1		45-200		9/6/23 6:26
D5-NEtFOSAA	56.4		10-200		9/6/23 6:26
D7-NMeFOSE	53.2		10-150		9/6/23 6:26
D9-NEtFOSE	47.3		10-150		9/6/23 6:26
13C3-HFPO-DA	65.0		25-160		9/6/23 6:26

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-5-08142023 | Sampled: 8/14/2023 11:54

Sample ID: 23H2273-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 | Sampled: 8/14/2023 15:48

Sample ID: 23H2273-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	3.7	3.7	1.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluoropentanoic acid (PFPeA)	1.1	1.8	0.32	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorohexanoic acid (PFHxA)	1.5	0.91	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluoroheptanoic acid (PFHpA)	1.6	0.91	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorooctanoic acid (PFOA)	10	0.91	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorononanoic acid (PFNA)	ND	0.91	0.17	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorodecanoic acid (PFDA)	ND	0.91	0.17	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.91	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.91	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.91	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.91	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorobutanesulfonic acid (PFBS)	2.9	0.91	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.91	0.22	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.1	0.91	0.19	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.91	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorooctanesulfonic acid (PFOS)	22	0.91	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.91	0.27	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.91	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.91	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.7	0.64	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.7	0.90	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.7	0.99	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.91	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.91	0.38	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.91	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.91	0.40	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.91	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.1	2.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.1	2.2	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.7	0.96	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.7	0.63	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.7	0.78	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.7	0.89	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.1	1.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	46	9.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	46	8.1	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	0.46	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 | Sampled: 8/14/2023 15:48

Sample ID: 23H2273-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	0.37	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.79	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:42	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	30.1	10-130		9/6/23 6:42
13C5-PFPeA	62.1	35-150		9/6/23 6:42
13C5-PFHxA	66.5	55-150		9/6/23 6:42
13C4-PFHpA	62.3	55-150		9/6/23 6:42
13C8-PFOA	66.4	60-140		9/6/23 6:42
13C9-PFNA	66.7	55-140		9/6/23 6:42
13C6-PFDA	66.6	50-140		9/6/23 6:42
13C7-PFUnA	68.1	30-140		9/6/23 6:42
13C2-PFDoA	56.8	10-150		9/6/23 6:42
13C2-PFTeDA	45.7	10-130		9/6/23 6:42
13C3-PFBS	63.6	55-150		9/6/23 6:42
13C3-PFHxS	63.2	55-150		9/6/23 6:42
13C8-PFOS	68.1	45-140		9/6/23 6:42
13C2-4:2FTS	83.0	60-200		9/6/23 6:42
13C2-6:2FTS	74.3	60-200		9/6/23 6:42
13C2-8:2FTS	63.0	50-200		9/6/23 6:42
13C8-PFOSA	55.1	30-130		9/6/23 6:42
D3-NMeFOSA	56.1	15-130		9/6/23 6:42
D5-NEtFOSA	56.4	10-130		9/6/23 6:42
D3-NMeFOSAA	65.1	45-200		9/6/23 6:42
D5-NEtFOSAA	63.9	10-200		9/6/23 6:42
D7-NMeFOSE	53.4	10-150		9/6/23 6:42
D9-NEtFOSE	48.5	10-150		9/6/23 6:42
13C3-HFPO-DA	68.9	25-160		9/6/23 6:42

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-11-08142023 | Sampled: 8/14/2023 15:48

Sample ID: 23H2273-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	54	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2273-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	8.6	21	7.5	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluoropentanoic acid (PFPeA)	5.9	10	1.8	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorohexanoic acid (PFHxA)	3.2	5.2	1.1	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluoroheptanoic acid (PFHpA)	1.4	5.2	1.3	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorooctanoic acid (PFOA)	4.0	5.2	1.2	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorononanoic acid (PFNA)	ND	5.2	0.98	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorodecanoic acid (PFDA)	ND	5.2	0.95	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluoroundecanoic acid (PFUnA)	ND	5.2	1.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorododecanoic acid (PFDoA)	ND	5.2	1.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	5.2	1.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	5.2	1.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorobutanesulfonic acid (PFBS)	1.5	5.2	1.3	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	5.2	1.2	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorohexanesulfonic acid (PFHxS)	2.5	5.2	1.1	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	5.2	1.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorooctanesulfonic acid (PFOS)	4.9	5.2	1.6	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorononanesulfonic acid (PFNS)	ND	5.2	1.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	5.2	1.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	5.2	1.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	21	3.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	21	5.1	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	21	5.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	5.2	1.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	5.2	2.1	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	5.2	1.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
N-MeFOSAA (NMeFOSAA)	ND	5.2	2.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
N-EtFOSAA (NEtFOSAA)	ND	5.2	1.1	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	52	14	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	52	13	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	21	5.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	21	3.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
9Cl-PF3ONS (F53B Minor)	ND	21	4.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
11Cl-PF3OUdS (F53B Major)	ND	21	5.0	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	52	9.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	260	53	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	260	45	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	10	2.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	10	2.6	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2273-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	10	2.1	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	10	4.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 6:57	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	59.8	10-130		9/6/23 6:57
13C5-PFPeA	67.0	35-150		9/6/23 6:57
13C5-PFHxA	67.2	55-150		9/6/23 6:57
13C4-PFHpA	61.5	55-150		9/6/23 6:57
13C8-PFOA	66.0	60-140		9/6/23 6:57
13C9-PFNA	69.9	55-140		9/6/23 6:57
13C6-PFDA	67.9	50-140		9/6/23 6:57
13C7-PFUnA	70.4	30-140		9/6/23 6:57
13C2-PFDoA	57.5	10-150		9/6/23 6:57
13C2-PFTeDA	60.1	10-130		9/6/23 6:57
13C3-PFBS	65.0	55-150		9/6/23 6:57
13C3-PFHxS	63.6	55-150		9/6/23 6:57
13C8-PFOS	69.8	45-140		9/6/23 6:57
13C2-4:2FTS	62.3	60-200		9/6/23 6:57
13C2-6:2FTS	62.3	60-200		9/6/23 6:57
13C2-8:2FTS	63.2	50-200		9/6/23 6:57
13C8-PFOSA	56.8	30-130		9/6/23 6:57
D3-NMeFOSA	53.9	15-130		9/6/23 6:57
D5-NEtFOSA	56.7	10-130		9/6/23 6:57
D3-NMeFOSAA	63.7	45-200		9/6/23 6:57
D5-NEtFOSAA	61.7	10-200		9/6/23 6:57
D7-NMeFOSE	54.3	10-150		9/6/23 6:57
D9-NEtFOSE	51.1	10-150		9/6/23 6:57
13C3-HFPO-DA	69.1	25-160		9/6/23 6:57

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-9R-08142023 | Sampled: 8/14/2023 15:42

Sample ID: 23H2273-05

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	190	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 | Sampled: 8/14/2023 12:15

Sample ID: 23H2273-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	3.4	3.8	1.4	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluoropentanoic acid (PFPeA)	2.6	1.9	0.33	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorohexanoic acid (PFHxA)	2.2	0.95	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluoroheptanoic acid (PFHpA)	1.4	0.95	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorooctanoic acid (PFOA)	3.4	0.95	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorononanoic acid (PFNA)	1.4	0.95	0.18	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorodecanoic acid (PFDA)	0.22	0.95	0.18	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.95	0.26	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.95	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.95	0.26	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.95	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorobutanesulfonic acid (PFBS)	1.1	0.95	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.95	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorohexanesulfonic acid (PFHxS)	2.1	0.95	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.95	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorooctanesulfonic acid (PFOS)	6.9	0.95	0.30	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.95	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.95	0.30	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.95	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.66	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	0.94	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.95	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.95	0.39	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.95	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.95	0.42	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
N-EtFOSAA (NEtFOSAA)	0.49	0.95	0.21	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 7:13	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.5	2.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.5	2.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	0.99	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.65	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.81	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	0.92	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.5	1.7	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.7	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 | Sampled: 8/14/2023 12:15

Sample ID: 23H2273-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.38	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.82	ng/L	1		Draft Method 1633	9/1/23	9/6/23 7:13	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	31.8	10-130		9/6/23 7:13
13C5-PFPeA	64.1	35-150		9/6/23 7:13
13C5-PFHxA	64.0	55-150		9/6/23 7:13
13C4-PFHpA	62.0	55-150		9/6/23 7:13
13C8-PFOA	61.1	60-140		9/6/23 7:13
13C9-PFNA	66.7	55-140		9/6/23 7:13
13C6-PFDA	66.6	50-140		9/6/23 7:13
13C7-PFUnA	67.3	30-140		9/6/23 7:13
13C2-PFDoA	57.5	10-150		9/6/23 7:13
13C2-PFTeDA	50.7	10-130		9/6/23 7:13
13C3-PFBS	62.2	55-150		9/6/23 7:13
13C3-PFHxS	64.1	55-150		9/6/23 7:13
13C8-PFOS	65.3	45-140		9/6/23 7:13
13C2-4:2FTS	98.0	60-200		9/6/23 7:13
13C2-6:2FTS	100	60-200		9/6/23 7:13
13C2-8:2FTS	98.6	50-200		9/6/23 7:13
13C8-PFOSA	49.9	30-130		9/6/23 7:13
D3-NMeFOSA	51.6	15-130		9/6/23 7:13
D5-NEtFOSA	50.5	10-130		9/6/23 7:13
D3-NMeFOSAA	50.1	45-200		9/6/23 7:13
D5-NEtFOSAA	52.6	10-200		9/6/23 7:13
D7-NMeFOSE	49.1	10-150		9/6/23 7:13
D9-NEtFOSE	44.2	10-150		9/6/23 7:13
13C3-HFPO-DA	62.1	25-160		9/6/23 7:13

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-15D-08142023 | Sampled: 8/14/2023 12:15

Sample ID: 23H2273-06

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	22	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2273-07

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	3.6	3.8	1.4	ng/L	1	J	Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluoropentanoic acid (PFPeA)	4.6	1.9	0.33	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorohexanoic acid (PFHxA)	3.0	0.96	0.21	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluoroheptanoic acid (PFHpA)	1.2	0.96	0.24	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorooctanoic acid (PFOA)	2.5	0.96	0.22	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorononanoic acid (PFNA)	0.60	0.96	0.18	ng/L	1	J	Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorodecanoic acid (PFDA)	0.83	0.96	0.18	ng/L	1	J	Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluoroundecanoic acid (PFUnA)	0.45	0.96	0.26	ng/L	1	J	Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.96	0.25	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	0.24	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorobutanesulfonic acid (PFBS)	1.3	0.96	0.25	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.96	0.23	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.0	0.96	0.20	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.96	0.29	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorooctanesulfonic acid (PFOS)	4.3	0.96	0.31	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.67	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	0.95	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	0.29	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	0.40	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.96	0.42	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.96	0.21	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	2.5	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	2.4	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.66	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.82	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	0.93	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	1.7	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.8	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.5	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2273-07

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.83	ng/L	1		Draft Method 1633	9/8/23	9/12/23 18:54	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	41.9	10-130		9/12/23 18:54
13C5-PFPeA	72.1	35-150		9/12/23 18:54
13C5-PFHxA	75.8	55-150		9/12/23 18:54
13C4-PFHpA	79.1	55-150		9/12/23 18:54
13C8-PFOA	76.2	60-140		9/12/23 18:54
13C9-PFNA	73.7	55-140		9/12/23 18:54
13C6-PFDA	74.6	50-140		9/12/23 18:54
13C7-PFUnA	74.8	30-140		9/12/23 18:54
13C2-PFDoA	73.3	10-150		9/12/23 18:54
13C2-PFTeDA	64.2	10-130		9/12/23 18:54
13C3-PFBS	73.5	55-150		9/12/23 18:54
13C3-PFHxS	72.6	55-150		9/12/23 18:54
13C8-PFOS	72.6	45-140		9/12/23 18:54
13C2-4:2FTS	85.8	60-200		9/12/23 18:54
13C2-6:2FTS	82.1	60-200		9/12/23 18:54
13C2-8:2FTS	70.9	50-200		9/12/23 18:54
13C8-PFOSA	70.4	30-130		9/12/23 18:54
D3-NMeFOSA	58.5	15-130		9/12/23 18:54
D5-NEtFOSA	57.9	10-130		9/12/23 18:54
D3-NMeFOSAA	67.4	45-200		9/12/23 18:54
D5-NEtFOSAA	71.7	10-200		9/12/23 18:54
D7-NMeFOSE	69.8	10-150		9/12/23 18:54
D9-NEtFOSE	67.9	10-150		9/12/23 18:54
13C3-HFPO-DA	71.6	25-160		9/12/23 18:54

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-MW-16-08142023 | Sampled: 8/14/2023 12:10

Sample ID: 23H2273-07

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	32	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-FD-01 | Sampled: 8/14/2023 00:00

Sample ID: 23H2273-08

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	4.2	3.9	1.4	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluoropentanoic acid (PFPeA)	5.3	2.0	0.34	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorohexanoic acid (PFHxA)	3.4	0.98	0.21	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluoroheptanoic acid (PFHpA)	1.3	0.98	0.25	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorooctanoic acid (PFOA)	2.6	0.98	0.22	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorononanoic acid (PFNA)	0.63	0.98	0.19	ng/L	1	J	Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorodecanoic acid (PFDA)	1.0	0.98	0.18	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluoroundecanoic acid (PFUnA)	0.43	0.98	0.27	ng/L	1	J	Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.98	0.25	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	0.27	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	0.24	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorobutanesulfonic acid (PFBS)	1.0	0.98	0.25	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	0.23	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorohexanesulfonic acid (PFHxS)	0.99	0.98	0.20	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	0.30	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorooctanesulfonic acid (PFOS)	4.4	0.98	0.31	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.98	0.29	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	0.31	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	0.26	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.68	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.97	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	0.30	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	0.41	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	0.30	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.98	0.43	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.98	0.22	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	2.6	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	2.4	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.67	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.83	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.95	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	1.8	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	10	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	8.6	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.48	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-FD-01 | Sampled: 8/14/2023 00:00

Sample ID: 23H2273-08

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.39	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.85	ng/L	1		Draft Method 1633	9/8/23	9/12/23 19:10	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	45.7	10-130		9/12/23 19:10
13C5-PFPeA	73.6	35-150		9/12/23 19:10
13C5-PFHxA	75.9	55-150		9/12/23 19:10
13C4-PFHpA	79.9	55-150		9/12/23 19:10
13C8-PFOA	75.8	60-140		9/12/23 19:10
13C9-PFNA	76.6	55-140		9/12/23 19:10
13C6-PFDA	73.5	50-140		9/12/23 19:10
13C7-PFUnA	73.7	30-140		9/12/23 19:10
13C2-PFDoA	73.2	10-150		9/12/23 19:10
13C2-PFTeDA	63.0	10-130		9/12/23 19:10
13C3-PFBS	75.1	55-150		9/12/23 19:10
13C3-PFHxS	75.6	55-150		9/12/23 19:10
13C8-PFOS	74.4	45-140		9/12/23 19:10
13C2-4:2FTS	86.3	60-200		9/12/23 19:10
13C2-6:2FTS	80.2	60-200		9/12/23 19:10
13C2-8:2FTS	71.4	50-200		9/12/23 19:10
13C8-PFOSA	72.8	30-130		9/12/23 19:10
D3-NMeFOSA	59.4	15-130		9/12/23 19:10
D5-NEtFOSA	56.9	10-130		9/12/23 19:10
D3-NMeFOSAA	67.2	45-200		9/12/23 19:10
D5-NEtFOSAA	70.0	10-200		9/12/23 19:10
D7-NMeFOSE	68.9	10-150		9/12/23 19:10
D9-NEtFOSE	68.6	10-150		9/12/23 19:10
13C3-HFPO-DA	76.9	25-160		9/12/23 19:10

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-FD-01 | Sampled: 8/14/2023 00:00

Sample ID: 23H2273-08

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	24	10	mg/L	1	H-02	Draft Method 1633	8/26/23	8/28/23 12:26	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-EB-01 | Sampled: 8/14/2023 17:30

Sample ID: 23H2273-09

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	3.7	1.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluoropentanoic acid (PFPeA)	0.39	1.9	0.32	ng/L	1	J	Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.93	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.93	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorooctanoic acid (PFOA)	ND	0.93	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorononanoic acid (PFNA)	ND	0.93	0.18	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorodecanoic acid (PFDA)	ND	0.93	0.17	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.93	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.93	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.93	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.93	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.93	0.22	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.93	0.19	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.93	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.93	0.30	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.93	0.27	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.93	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.93	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.7	0.65	ng/L	1	Z-01	Draft Method 1633	9/1/23	9/6/23 8:00	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.7	0.92	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.7	1.0	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.93	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.93	0.39	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.93	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.93	0.41	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.93	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.3	2.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.3	2.3	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.7	0.97	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.7	0.64	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.7	0.79	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.7	0.90	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.3	1.7	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	46	9.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	46	8.2	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.45	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-EB-01 | Sampled: 8/14/2023 17:30

Sample ID: 23H2273-09

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.37	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.80	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:00	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	67.8		10-130		9/6/23 8:00
13C5-PFPeA	70.1		35-150		9/6/23 8:00
13C5-PFHxA	67.5		55-150		9/6/23 8:00
13C4-PFHpA	62.4		55-150		9/6/23 8:00
13C8-PFOA	68.3		60-140		9/6/23 8:00
13C9-PFNA	70.3		55-140		9/6/23 8:00
13C6-PFDA	70.3		50-140		9/6/23 8:00
13C7-PFUnA	68.9		30-140		9/6/23 8:00
13C2-PFDoA	60.3		10-150		9/6/23 8:00
13C2-PFTeDA	58.0		10-130		9/6/23 8:00
13C3-PFBS	64.2		55-150		9/6/23 8:00
13C3-PFHxS	66.7		55-150		9/6/23 8:00
13C8-PFOS	66.5		45-140		9/6/23 8:00
13C2-4:2FTS	**54.7**	*	60-200	Z-01	9/6/23 8:00
13C2-6:2FTS	68.9		60-200		9/6/23 8:00
13C2-8:2FTS	69.6		50-200		9/6/23 8:00
13C8-PFOSA	55.9		30-130		9/6/23 8:00
D3-NMeFOSA	55.2		15-130		9/6/23 8:00
D5-NEtFOSA	57.0		10-130		9/6/23 8:00
D3-NMeFOSAA	65.6		45-200		9/6/23 8:00
D5-NEtFOSAA	61.0		10-200		9/6/23 8:00
D7-NMeFOSE	55.8		10-150		9/6/23 8:00
D9-NEtFOSE	50.8		10-150		9/6/23 8:00
13C3-HFPO-DA	69.7		25-160		9/6/23 8:00

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-EB-01 | Sampled: 8/14/2023 17:30

Sample ID: 23H2273-09

Sample Matrix: Equipment Blank Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	8/26/23	8/26/23 10:51	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-FB-01 | Sampled: 8/14/2023 17:25

Sample ID: 23H2273-10

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	3.8	1.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.33	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.96	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.96	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorooctanoic acid (PFOA)	ND	0.96	0.22	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorononanoic acid (PFNA)	ND	0.96	0.18	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorodecanoic acid (PFDA)	ND	0.96	0.18	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.96	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	0.24	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.96	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.96	0.23	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.96	0.20	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.96	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	0.25	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.67	ng/L	1	Z-01	Draft Method 1633	9/1/23	9/6/23 8:15	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	0.95	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	0.29	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	0.40	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.96	0.42	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.96	0.21	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	2.5	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	2.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.66	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.82	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	0.93	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	1.7	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.8	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.4	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-FB-01 | Sampled: 8/14/2023 17:25

Sample ID: 23H2273-10

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.83	ng/L	1		Draft Method 1633	9/1/23	9/6/23 8:15	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	67.7		10-130		9/6/23 8:15
13C5-PFPeA	68.4		35-150		9/6/23 8:15
13C5-PFHxA	67.6		55-150		9/6/23 8:15
13C4-PFHpA	62.3		55-150		9/6/23 8:15
13C8-PFOA	63.4		60-140		9/6/23 8:15
13C9-PFNA	67.2		55-140		9/6/23 8:15
13C6-PFDA	66.9		50-140		9/6/23 8:15
13C7-PFUnA	70.9		30-140		9/6/23 8:15
13C2-PFDoA	61.7		10-150		9/6/23 8:15
13C2-PFTeDA	57.6		10-130		9/6/23 8:15
13C3-PFBS	65.9		55-150		9/6/23 8:15
13C3-PFHxS	66.8		55-150		9/6/23 8:15
13C8-PFOS	69.7		45-140		9/6/23 8:15
13C2-4:2FTS	**56.4**	*	60-200	Z-01	9/6/23 8:15
13C2-6:2FTS	70.7		60-200		9/6/23 8:15
13C2-8:2FTS	72.9		50-200		9/6/23 8:15
13C8-PFOSA	56.5		30-130		9/6/23 8:15
D3-NMeFOSA	53.1		15-130		9/6/23 8:15
D5-NEtFOSA	55.7		10-130		9/6/23 8:15
D3-NMeFOSAA	65.6		45-200		9/6/23 8:15
D5-NEtFOSAA	64.4		10-200		9/6/23 8:15
D7-NMeFOSE	58.5		10-150		9/6/23 8:15
D9-NEtFOSE	52.7		10-150		9/6/23 8:15
13C3-HFPO-DA	70.8		25-160		9/6/23 8:15

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2273

Date Received: 8/15/2023

Field Sample #: 314058-FB-01 | Sampled: 8/14/2023 17:25

Sample ID: 23H2273-10

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	8/26/23	8/26/23 10:51	IS

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Sample Extraction Data

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 8/26/2023 per NO PREP in Batch B350262**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2273-01 [314058-MW-3-08142023]	B349227	558	5.00	09/01/23
23H2273-02 [314058-MW-4-08142023]	B349227	560	5.00	09/01/23
23H2273-03 [314058-MW-5-08142023]	B349227	535	5.00	09/01/23
23H2273-04 [314058-MW-11-08142023]	B349227	547	5.00	09/01/23
23H2273-05 [314058-MW-9R-08142023]	B349227	97.1	5.00	09/01/23
23H2273-06 [314058-MW-15D-08142023]	B349227	526	5.00	09/01/23
23H2273-09 [314058-EB-01]	B349227	539	5.00	09/01/23
23H2273-10 [314058-FB-01]	B349227	522	5.00	09/01/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23H2273-09 [314058-EB-01]	B350255	50.0	08/26/23
23H2273-10 [314058-FB-01]	B350255	50.0	08/26/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23H2273-01 [314058-MW-3-08142023]	B350262	50.0	08/26/23
23H2273-02 [314058-MW-4-08142023]	B350262	50.0	08/26/23
23H2273-03 [314058-MW-5-08142023]	B350262	50.0	08/26/23
23H2273-04 [314058-MW-11-08142023]	B350262	50.0	08/26/23
23H2273-05 [314058-MW-9R-08142023]	B350262	50.0	08/26/23
23H2273-06 [314058-MW-15D-08142023]	B350262	50.0	08/26/23
23H2273-07 [314058-MW-16-08142023]	B350262	50.0	08/26/23
23H2273-08 [314058-FD-01]	B350262	50.0	08/26/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 8/26/2023 per NO PREP in Batch B350262**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2273-07RE1 [314058-MW-16-08142023]	B351358	521	5.00	09/08/23
23H2273-08RE1 [314058-FD-01]	B351358	511	5.00	09/08/23

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349227 - Draft Method 1633										
Blank (B349227-BLK1)				Prepared: 09/01/23 Analyzed: 09/06/23						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							Z-01
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*68.0*		ng/L	98.1		69.3	10-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B349227 - Draft Method 1633											
Blank (B349227-BLK1)				Prepared: 09/01/23 Analyzed: 09/06/23							
Surrogate: 13C5-PFPeA	*33.2*		ng/L	49.1		67.7		35-150			
Surrogate: 13C5-PFHxA	*16.6*		ng/L	24.5		67.5		55-150			
Surrogate: 13C4-PFHpA	*15.1*		ng/L	24.5		61.6		55-150			
Surrogate: 13C8-PFOA	*15.9*		ng/L	24.5		64.9		60-140			
Surrogate: 13C9-PFNA	*8.53*		ng/L	12.3		69.6		55-140			
Surrogate: 13C6-PFDA	*8.48*		ng/L	12.3		69.2		50-140			
Surrogate: 13C7-PFUnA	*8.54*		ng/L	12.3		69.6		30-140			
Surrogate: 13C2-PFDoA	*7.73*		ng/L	12.3		63.0		10-150			
Surrogate: 13C2-PFTeDA	*7.09*		ng/L	12.3		57.8		10-130			
Surrogate: 13C3-PFBS	*16.5*		ng/L	24.5		67.5		55-150			
Surrogate: 13C3-PFHxS	*16.3*		ng/L	24.5		66.5		55-150			
Surrogate: 13C8-PFOS	*16.0*		ng/L	24.5		65.4		45-140			
Surrogate: 13C2-4:2FTS	*27.6*		ng/L	49.1		**56.3**	*	60-200			Z-01
Surrogate: 13C2-6:2FTS	*33.3*		ng/L	49.1		68.0		60-200			
Surrogate: 13C2-8:2FTS	*34.4*		ng/L	49.1		70.1		50-200			
Surrogate: 13C8-PFOSA	*14.1*		ng/L	24.5		57.4		30-130			
Surrogate: D3-NMeFOSA	*13.7*		ng/L	24.5		55.9		15-130			
Surrogate: D5-NEtFOSA	*14.3*		ng/L	24.5		58.4		10-130			
Surrogate: D3-NMeFOSAA	*31.7*		ng/L	49.1		64.7		45-200			
Surrogate: D5-NEtFOSAA	*30.4*		ng/L	49.1		62.0		10-200			
Surrogate: D7-NMeFOSE	*142*		ng/L	245		58.0		10-150			
Surrogate: D9-NEtFOSE	*130*		ng/L	245		53.1		10-150			
Surrogate: 13C3-HFPO-DA	*69.5*		ng/L	98.1		70.9		25-160			
LCS (B349227-BS1)				Prepared: 09/01/23 Analyzed: 09/06/23							
Perfluorobutanoic acid (PFBA)	97.4	3.9	ng/L	93.9		104		58-148			
Perfluoropentanoic acid (PFPeA)	48.0	2.0	ng/L	47.0		102		54-152			
Perfluorohexanoic acid (PFHxA)	24.3	0.98	ng/L	23.5		104		55-152			
Perfluoroheptanoic acid (PFHpA)	24.8	0.98	ng/L	23.5		105		54-154			
Perfluorooctanoic acid (PFOA)	23.8	0.98	ng/L	23.5		101		52-161			
Perfluorononanoic acid (PFNA)	23.9	0.98	ng/L	23.5		102		59-149			
Perfluorodecanoic acid (PFDA)	24.2	0.98	ng/L	23.5		103		52-147			
Perfluoroundecanoic acid (PFUnA)	23.6	0.98	ng/L	23.5		101		48-159			
Perfluorododecanoic acid (PFDoA)	24.4	0.98	ng/L	23.5		104		64-142			
Perfluorotridecanoic acid (PFTrDA)	24.2	0.98	ng/L	23.5		103		49-148			
Perfluorotetradecanoic acid (PFTeDA)	24.7	0.98	ng/L	23.5		105		47-161			
Perfluorobutanesulfonic acid (PFBS)	21.8	0.98	ng/L	20.8		105		62-144			
Perfluoropentanesulfonic acid (PFPeS)	23.7	0.98	ng/L	22.1		107		59-151			
Perfluorohexanesulfonic acid (PFHxS)	21.7	0.98	ng/L	21.5		101		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	23.0	0.98	ng/L	22.4		103		55-152			
Perfluorooctanesulfonic acid (PFOS)	21.5	0.98	ng/L	21.8		98.5		58-149			
Perfluorononanesulfonic acid (PFNS)	22.8	0.98	ng/L	22.6		101		52-148			
Perfluorodecanesulfonic acid (PFDS)	21.8	0.98	ng/L	22.7		96.2		51-147			
Perfluorododecanesulfonic acid (PFDoS)	21.2	0.98	ng/L	22.8		93.0		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	94.4	3.9	ng/L	88.0		107		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	97.3	3.9	ng/L	89.2		109		61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	101	3.9	ng/L	90.4		111		63-152			
Perfluorooctanesulfonamide (PFOSA)	25.3	0.98	ng/L	23.5		108		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	21.2	0.98	ng/L	23.5		90.3		63-145			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349227 - Draft Method 1633										
LCS (B349227-BS1)				Prepared: 09/01/23 Analyzed: 09/06/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	20.7	0.98	ng/L	23.5		88.1	65-139			
N-MeFOSAA (NMeFOSAA)	22.3	0.98	ng/L	23.5		94.8	58-144			
N-EtFOSAA (NEtFOSAA)	25.7	0.98	ng/L	23.5		109	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	246	9.8	ng/L	235		105	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	256	9.8	ng/L	235		109	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	95.1	3.9	ng/L	93.9		101	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	79.2	3.9	ng/L	88.6		89.4	68-146			
9Cl-PF3ONS (F53B Minor)	87.6	3.9	ng/L	88.0		99.5	56-156			
11Cl-PF3OUdS (F53B Major)	84.1	3.9	ng/L	88.6		94.9	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	224	9.8	ng/L	235		95.5	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1130	49	ng/L	1170		96.6	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1100	49	ng/L	1170		93.8	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	42.3	2.0	ng/L	41.8		101	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	45.1	2.0	ng/L	47.0		96.1	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	45.6	2.0	ng/L	47.0		97.0	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	54.5	2.0	ng/L	47.0		116	48-161			
Surrogate: 13C4-PFBA	*67.0*		ng/L	97.8		68.4	10-130			
Surrogate: 13C5-PFPeA	*33.3*		ng/L	48.9		68.1	35-150			
Surrogate: 13C5-PFHxA	*16.6*		ng/L	24.5		67.7	55-150			
Surrogate: 13C4-PFHpA	*15.5*		ng/L	24.5		63.5	55-150			
Surrogate: 13C8-PFOA	*16.4*		ng/L	24.5		66.9	60-140			
Surrogate: 13C9-PFNA	*8.70*		ng/L	12.2		71.1	55-140			
Surrogate: 13C6-PFDA	*8.47*		ng/L	12.2		69.2	50-140			
Surrogate: 13C7-PFUnA	*8.99*		ng/L	12.2		73.5	30-140			
Surrogate: 13C2-PFDoA	*8.03*		ng/L	12.2		65.6	10-150			
Surrogate: 13C2-PFTeDA	*7.47*		ng/L	12.2		61.1	10-130			
Surrogate: 13C3-PFBS	*16.0*		ng/L	24.5		65.6	55-150			
Surrogate: 13C3-PFHxS	*16.2*		ng/L	24.5		66.3	55-150			
Surrogate: 13C8-PFOS	*16.2*		ng/L	24.5		66.4	45-140			
Surrogate: 13C2-4:2FTS	*30.5*		ng/L	48.9		62.3	60-200			
Surrogate: 13C2-6:2FTS	*36.2*		ng/L	48.9		73.9	60-200			
Surrogate: 13C2-8:2FTS	*36.5*		ng/L	48.9		74.7	50-200			
Surrogate: 13C8-PFOSA	*13.8*		ng/L	24.5		56.5	30-130			
Surrogate: D3-NMeFOSA	*13.4*		ng/L	24.5		54.7	15-130			
Surrogate: D5-NEtFOSA	*13.6*		ng/L	24.5		55.5	10-130			
Surrogate: D3-NMeFOSAA	*31.1*		ng/L	48.9		63.7	45-200			
Surrogate: D5-NEtFOSAA	*31.3*		ng/L	48.9		64.0	10-200			
Surrogate: D7-NMeFOSE	*144*		ng/L	245		58.9	10-150			
Surrogate: D9-NEtFOSE	*132*		ng/L	245		54.0	10-150			
Surrogate: 13C3-HFPO-DA	*68.9*		ng/L	97.8		70.4	25-160			
MRL Check (B349227-MRL1)				Prepared: 09/01/23 Analyzed: 09/06/23						
Perfluorobutanoic acid (PFBA)	7.61	3.9	ng/L	7.84		97.0	44-157			
Perfluoropentanoic acid (PFPeA)	3.58	2.0	ng/L	3.92		91.5	57-148			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349227 - Draft Method 1633										
MRL Check (B349227-MRL1)				Prepared: 09/01/23 Analyzed: 09/06/23						
Perfluorohexanoic acid (PFHxA)	1.72	0.98	ng/L	1.96		88.0	62-149			
Perfluoroheptanoic acid (PFHpA)	1.70	0.98	ng/L	1.96		86.5	56-150			
Perfluorooctanoic acid (PFOA)	1.52	0.98	ng/L	1.96		77.3	57-161			
Perfluorononanoic acid (PFNA)	1.59	0.98	ng/L	1.96		81.2	53-157			
Perfluorodecanoic acid (PFDA)	1.70	0.98	ng/L	1.96		86.9	43-158			
Perfluoroundecanoic acid (PFUnA)	1.72	0.98	ng/L	1.96		87.6	50-155			
Perfluorododecanoic acid (PFDoA)	1.69	0.98	ng/L	1.96		86.1	60-141			
Perfluorotridecanoic acid (PFTrDA)	1.61	0.98	ng/L	1.96		82.2	52-140			
Perfluorotetradecanoic acid (PFTeDA)	1.66	0.98	ng/L	1.96		84.8	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.50	0.98	ng/L	1.74		86.1	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.59	0.98	ng/L	1.84		86.2	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.49	0.98	ng/L	1.79		83.2	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.47	0.98	ng/L	1.87		78.6	51-150			
Perfluorooctanesulfonic acid (PFOS)	1.46	0.98	ng/L	1.82		80.5	43-162			
Perfluorononanesulfonic acid (PFNS)	1.53	0.98	ng/L	1.89		81.2	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.45	0.98	ng/L	1.89		76.6	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.50	0.98	ng/L	1.90		79.0	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	6.36	3.9	ng/L	7.35		86.6	52-158			Z-01
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.02	3.9	ng/L	7.44		94.3	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.30	3.9	ng/L	7.54		96.8	46-165			
Perfluorooctanesulfonamide (PFOSA)	1.73	0.98	ng/L	1.96		88.4	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	1.69	0.98	ng/L	1.96		86.2	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.57	0.98	ng/L	1.96		80.1	49-156			
N-MeFOSAA (NMeFOSAA)	1.40	0.98	ng/L	1.96		71.7	32-160			
N-EtFOSAA (NEtFOSAA)	2.15	0.98	ng/L	1.96		110	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	17.8	9.8	ng/L	19.6		91.0	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	18.9	9.8	ng/L	19.6		96.3	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.90	3.9	ng/L	7.84		88.1	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	5.58	3.9	ng/L	7.40		75.5	61-148			
9Cl-PF3ONS (F53B Minor)	5.90	3.9	ng/L	7.35		80.3	44-167			
11Cl-PF3OUdS (F53B Major)	5.82	3.9	ng/L	7.40		78.7	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	14.1	9.8	ng/L	19.6		71.8	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	74.7	49	ng/L	98.0		76.3	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	73.7	49	ng/L	98.0		75.2	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.93	2.0	ng/L	3.49		84.0	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.35	2.0	ng/L	3.92		85.4	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.20	2.0	ng/L	3.92		81.7	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.13	2.0	ng/L	3.92		105	47-160			
Surrogate: 13C4-PFBA	*69.2*		ng/L	98.0		70.6	10-130			
Surrogate: 13C5-PFPeA	*35.0*		ng/L	49.0		71.4	35-150			
Surrogate: 13C5-PFHxA	*17.0*		ng/L	24.5		69.4	55-150			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B349227 - Draft Method 1633											
MRL Check (B349227-MRL1)				Prepared: 09/01/23 Analyzed: 09/06/23							
Surrogate: 13C4-PFHpA	*15.7*		ng/L	24.5		64.3		55-150			
Surrogate: 13C8-PFOA	*16.7*		ng/L	24.5		68.3		60-140			
Surrogate: 13C9-PFNA	*8.58*		ng/L	12.2		70.1		55-140			
Surrogate: 13C6-PFDA	*8.63*		ng/L	12.2		70.4		50-140			
Surrogate: 13C7-PFUnA	*8.82*		ng/L	12.2		72.1		30-140			
Surrogate: 13C2-PFDoA	*7.93*		ng/L	12.2		64.8		10-150			
Surrogate: 13C2-PFTeDA	*7.92*		ng/L	12.2		64.7		10-130			
Surrogate: 13C3-PFBS	*16.7*		ng/L	24.5		68.2		55-150			
Surrogate: 13C3-PFHxS	*16.4*		ng/L	24.5		67.1		55-150			
Surrogate: 13C8-PFOS	*17.2*		ng/L	24.5		70.3		45-140			
Surrogate: 13C2-4:2FTS	*27.7*		ng/L	49.0		**56.5**	*	60-200			Z-01
Surrogate: 13C2-6:2FTS	*35.6*		ng/L	49.0		72.7		60-200			
Surrogate: 13C2-8:2FTS	*37.4*		ng/L	49.0		76.3		50-200			
Surrogate: 13C8-PFOSA	*14.6*		ng/L	24.5		59.8		30-130			
Surrogate: D3-NMeFOSA	*13.9*		ng/L	24.5		56.8		15-130			
Surrogate: D5-NEtFOSA	*14.5*		ng/L	24.5		59.2		10-130			
Surrogate: D3-NMeFOSAA	*33.0*		ng/L	49.0		67.3		45-200			
Surrogate: D5-NEtFOSAA	*31.4*		ng/L	49.0		64.0		10-200			
Surrogate: D7-NMeFOSE	*151*		ng/L	245		61.5		10-150			
Surrogate: D9-NEtFOSE	*139*		ng/L	245		56.9		10-150			
Surrogate: 13C3-HFPO-DA	*72.6*		ng/L	98.0		74.1		25-160			
Matrix Spike (B349227-MS1)		**Source: 23H2273-06**		Prepared: 09/01/23 Analyzed: 09/06/23							
Perfluorobutanoic acid (PFBA)	103	3.8	ng/L	92.3	3.42	108		58-148			
Perfluoropentanoic acid (PFPeA)	49.2	1.9	ng/L	46.1	2.58	101		54-152			
Perfluorohexanoic acid (PFHxA)	27.2	0.96	ng/L	23.1	2.24	108		55-152			
Perfluoroheptanoic acid (PFHpA)	25.9	0.96	ng/L	23.1	1.44	106		54-154			
Perfluorooctanoic acid (PFOA)	27.3	0.96	ng/L	23.1	3.39	104		52-161			
Perfluorononanoic acid (PFNA)	25.2	0.96	ng/L	23.1	1.41	103		59-149			
Perfluorodecanoic acid (PFDA)	23.9	0.96	ng/L	23.1	0.219	103		52-147			
Perfluoroundecanoic acid (PFUnA)	23.5	0.96	ng/L	23.1	ND	102		48-159			
Perfluorododecanoic acid (PFDoA)	23.1	0.96	ng/L	23.1	ND	99.9		64-142			
Perfluorotridecanoic acid (PFTrDA)	21.5	0.96	ng/L	23.1	ND	93.2		49-148			
Perfluorotetradecanoic acid (PFTeDA)	23.5	0.96	ng/L	23.1	ND	102		47-161			
Perfluorobutanesulfonic acid (PFBS)	22.1	0.96	ng/L	20.5	1.15	103		62-144			
Perfluoropentanesulfonic acid (PFPeS)	23.2	0.96	ng/L	21.7	ND	107		59-151			
Perfluorohexanesulfonic acid (PFHxS)	22.9	0.96	ng/L	21.1	2.06	98.8		57-146			
Perfluoroheptanesulfonic acid (PFHpS)	22.2	0.96	ng/L	22.0	ND	101		55-152			
Perfluorooctanesulfonic acid (PFOS)	28.0	0.96	ng/L	21.4	6.94	98.5		58-149			
Perfluorononanesulfonic acid (PFNS)	20.2	0.96	ng/L	22.2	ND	90.8		52-148			
Perfluorodecanesulfonic acid (PFDS)	19.1	0.96	ng/L	22.3	ND	85.6		51-147			
Perfluorododecanesulfonic acid (PFDoS)	17.5	0.96	ng/L	22.4	ND	78.1		36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	93.7	3.8	ng/L	86.5	ND	108		67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	95.1	3.8	ng/L	87.7	ND	108		61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	97.9	3.8	ng/L	88.8	ND	110		63-152			
Perfluorooctanesulfonamide (PFOSA)	24.6	0.96	ng/L	23.1	ND	107		61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	21.7	0.96	ng/L	23.1	ND	94.1		63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	20.1	0.96	ng/L	23.1	ND	87.1		65-139			
N-MeFOSAA (NMeFOSAA)	24.0	0.96	ng/L	23.1	ND	104		58-144			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349227 - Draft Method 1633										
Matrix Spike (B349227-MS1)		**Source: 23H2273-06**		Prepared: 09/01/23 Analyzed: 09/06/23						
N-EtFOSAA (NEtFOSAA)	27.2	0.96	ng/L	23.1	0.492	116	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	239	9.6	ng/L	231	ND	104	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	244	9.6	ng/L	231	ND	106	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	90.7	3.8	ng/L	92.3	ND	98.2	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	79.8	3.8	ng/L	87.1	ND	91.6	68-146			
9Cl-PF3ONS (F53B Minor)	91.7	3.8	ng/L	86.5	ND	106	56-156			
11Cl-PF3OUdS (F53B Major)	80.5	3.8	ng/L	87.1	ND	92.5	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	169	9.6	ng/L	231	ND	73.1	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1210	48	ng/L	1150	ND	105	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1220	48	ng/L	1150	ND	105	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	41.7	1.9	ng/L	41.1	ND	102	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	41.2	1.9	ng/L	46.1	ND	89.2	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	46.9	1.9	ng/L	46.1	ND	102	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	50.0	1.9	ng/L	46.1	ND	108	48-161			
Surrogate: 13C4-PFBA	*33.3*		ng/L	96.1		34.7	10-130			
Surrogate: 13C5-PFPeA	*28.9*		ng/L	48.1		60.0	35-150			
Surrogate: 13C5-PFHxA	*15.0*		ng/L	24.0		62.2	55-150			
Surrogate: 13C4-PFHpA	*13.9*		ng/L	24.0		58.0	55-150			
Surrogate: 13C8-PFOA	*14.5*		ng/L	24.0		60.3	60-140			
Surrogate: 13C9-PFNA	*7.79*		ng/L	12.0		64.8	55-140			
Surrogate: 13C6-PFDA	*7.76*		ng/L	12.0		64.5	50-140			
Surrogate: 13C7-PFUnA	*7.67*		ng/L	12.0		63.8	30-140			
Surrogate: 13C2-PFDoA	*6.72*		ng/L	12.0		55.9	10-150			
Surrogate: 13C2-PFTeDA	*5.85*		ng/L	12.0		48.7	10-130			
Surrogate: 13C3-PFBS	*15.2*		ng/L	24.0		63.0	55-150			
Surrogate: 13C3-PFHxS	*15.2*		ng/L	24.0		63.1	55-150			
Surrogate: 13C8-PFOS	*15.1*		ng/L	24.0		63.0	45-140			
Surrogate: 13C2-4:2FTS	*46.5*		ng/L	48.1		96.6	60-200			
Surrogate: 13C2-6:2FTS	*46.1*		ng/L	48.1		96.0	60-200			
Surrogate: 13C2-8:2FTS	*48.8*		ng/L	48.1		102	50-200			
Surrogate: 13C8-PFOSA	*11.9*		ng/L	24.0		49.5	30-130			
Surrogate: D3-NMeFOSA	*11.2*		ng/L	24.0		46.6	15-130			
Surrogate: D5-NEtFOSA	*11.1*		ng/L	24.0		46.1	10-130			
Surrogate: D3-NMeFOSAA	*24.3*		ng/L	48.1		50.6	45-200			
Surrogate: D5-NEtFOSAA	*23.7*		ng/L	48.1		49.3	10-200			
Surrogate: D7-NMeFOSE	*113*		ng/L	240		46.8	10-150			
Surrogate: D9-NEtFOSE	*101*		ng/L	240		42.1	10-150			
Surrogate: 13C3-HFPO-DA	*58.7*		ng/L	96.1		61.0	25-160			
Matrix Spike Dup (B349227-MSD1)		**Source: 23H2273-06**		Prepared: 09/01/23 Analyzed: 09/06/23						
Perfluorobutanoic acid (PFBA)	102	4.0	ng/L	96.1	3.42	103	58-148	0.505	20	
Perfluoropentanoic acid (PFPeA)	50.6	2.0	ng/L	48.0	2.58	99.9	54-152	2.68	20	
Perfluorohexanoic acid (PFHxA)	27.7	1.0	ng/L	24.0	2.24	106	55-152	1.88	25	
Perfluoroheptanoic acid (PFHpA)	26.6	1.0	ng/L	24.0	1.44	105	54-154	2.61	25	
Perfluorooctanoic acid (PFOA)	27.6	1.0	ng/L	24.0	3.39	101	52-161	0.944	25	

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B349227 - Draft Method 1633											
Matrix Spike Dup (B349227-MSD1)	**Source: 23H2273-06**			Prepared: 09/01/23 Analyzed: 09/06/23							
Perfluorononanoic acid (PFNA)	24.9	1.0	ng/L	24.0	1.41	97.7	59-149	1.46		25	
Perfluorodecanoic acid (PFDA)	23.9	1.0	ng/L	24.0	0.219	98.7	52-147	0.0353		25	
Perfluoroundecanoic acid (PFUnA)	24.4	1.0	ng/L	24.0	ND	102	48-159	3.97		30	
Perfluorododecanoic acid (PFDoA)	23.9	1.0	ng/L	24.0	ND	99.5	64-142	3.61		25	
Perfluorotridecanoic acid (PFTrDA)	23.0	1.0	ng/L	24.0	ND	95.6	49-148	6.56		25	
Perfluorotetradecanoic acid (PFTeDA)	23.8	1.0	ng/L	24.0	ND	99.3	47-161	1.37		25	
Perfluorobutanesulfonic acid (PFBS)	23.1	1.0	ng/L	21.3	1.15	103	62-144	4.35		20	
Perfluoropentanesulfonic acid (PFPeS)	23.2	1.0	ng/L	22.6	ND	103	59-151	0.0403		25	
Perfluorohexanesulfonic acid (PFHxS)	24.5	1.0	ng/L	22.0	2.06	102	57-146	6.58		25	
Perfluoroheptanesulfonic acid (PFHpS)	23.9	1.0	ng/L	22.9	ND	104	55-152	7.51		25	
Perfluorooctanesulfonic acid (PFOS)	29.6	1.0	ng/L	22.3	6.94	102	58-149	5.49		20	
Perfluorononanesulfonic acid (PFNS)	21.9	1.0	ng/L	23.1	ND	94.8	52-148	8.28		25	
Perfluorodecanesulfonic acid (PFDS)	20.5	1.0	ng/L	23.2	ND	88.4	51-147	7.28		25	
Perfluorododecanesulfonic acid (PFDoS)	18.1	1.0	ng/L	23.3	ND	77.7	36-145	3.44		30	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	88.3	4.0	ng/L	90.1	ND	98.0	67-146	5.87		25	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	97.2	4.0	ng/L	91.3	ND	107	61-151	2.22		30	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	103	4.0	ng/L	92.5	ND	112	63-152	5.50		30	
Perfluorooctanesulfonamide (PFOSA)	24.7	1.0	ng/L	24.0	ND	103	61-148	0.434		20	
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	22.3	1.0	ng/L	24.0	ND	92.7	63-145	2.49		25	
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	20.9	1.0	ng/L	24.0	ND	87.1	65-139	4.01		25	
N-MeFOSAA (NMeFOSAA)	23.5	1.0	ng/L	24.0	ND	98.0	58-144	1.73		25	
N-EtFOSAA (NEtFOSAA)	25.8	1.0	ng/L	24.0	0.492	105	59-146	5.17		25	
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	240	10	ng/L	240	ND	99.9	71-136	0.183		20	
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	250	10	ng/L	240	ND	104	69-137	2.19		25	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	93.7	4.0	ng/L	96.1	ND	97.5	63-144	3.29		25	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	86.7	4.0	ng/L	90.7	ND	95.7	68-146	8.36		20	
9Cl-PF3ONS (F53B Minor)	94.7	4.0	ng/L	90.1	ND	105	56-156	3.23		30	
11Cl-PF3OUdS (F53B Major)	82.6	4.0	ng/L	90.7	ND	91.1	46-156	2.48		35	
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	210	10	ng/L	240	ND	87.6	62-129	**22.0**	*	20	R-06
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1270	50	ng/L	1200	ND	106	63-134	4.84		20	
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1270	50	ng/L	1200	ND	106	50-138	4.57		25	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	43.4	2.0	ng/L	42.8	ND	102	56-151	3.96		20	
Perfluoro-3-methoxypropanoic acid (PFMPA)	40.0	2.0	ng/L	48.0	ND	83.2	51-145	2.87		25	
Perfluoro-4-methoxybutanoic acid (PFMBA)	46.0	2.0	ng/L	48.0	ND	95.8	55-148	1.84		20	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	51.1	2.0	ng/L	48.0	ND	106	48-161	2.18		35	
Surrogate: 13C4-PFBA	*37.8*		ng/L	100		37.7	10-130				
Surrogate: 13C5-PFPeA	*32.1*		ng/L	50.0		64.1	35-150				
Surrogate: 13C5-PFHxA	*16.1*		ng/L	25.0		64.3	55-150				
Surrogate: 13C4-PFHpA	*15.5*		ng/L	25.0		62.1	55-150				
Surrogate: 13C8-PFOA	*16.0*		ng/L	25.0		63.9	60-140				
Surrogate: 13C9-PFNA	*8.53*		ng/L	12.5		68.1	55-140				

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349227 - Draft Method 1633										
Matrix Spike Dup (B349227-MSD1)	**Source: 23H2273-06**			Prepared: 09/01/23 Analyzed: 09/06/23						
Surrogate: 13C6-PFDA	*7.98*		ng/L	12.5		63.8	50-140			
Surrogate: 13C7-PFUnA	*7.84*		ng/L	12.5		62.7	30-140			
Surrogate: 13C2-PFDoA	*7.00*		ng/L	12.5		56.0	10-150			
Surrogate: 13C2-PFTeDA	*6.15*		ng/L	12.5		49.2	10-130			
Surrogate: 13C3-PFBS	*15.8*		ng/L	25.0		63.0	55-150			
Surrogate: 13C3-PFHxS	*16.1*		ng/L	25.0		64.4	55-150			
Surrogate: 13C8-PFOS	*16.0*		ng/L	25.0		63.9	45-140			
Surrogate: 13C2-4:2FTS	*49.6*		ng/L	50.0		99.0	60-200			
Surrogate: 13C2-6:2FTS	*50.0*		ng/L	50.0		99.8	60-200			
Surrogate: 13C2-8:2FTS	*52.3*		ng/L	50.0		104	50-200			
Surrogate: 13C8-PFOSA	*13.3*		ng/L	25.0		53.1	30-130			
Surrogate: D3-NMeFOSA	*13.0*		ng/L	25.0		52.0	15-130			
Surrogate: D5-NEtFOSA	*12.3*		ng/L	25.0		49.3	10-130			
Surrogate: D3-NMeFOSAA	*26.4*		ng/L	50.0		52.8	45-200			
Surrogate: D5-NEtFOSAA	*26.7*		ng/L	50.0		53.3	10-200			
Surrogate: D7-NMeFOSE	*125*		ng/L	250		49.8	10-150			
Surrogate: D9-NEtFOSE	*109*		ng/L	250		43.5	10-150			
Surrogate: 13C3-HFPO-DA	*63.6*		ng/L	100		63.5	25-160			
Batch B351358 - Draft Method 1633										
Blank (B351358-BLK1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.99	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.99	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.99	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.99	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.99	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.99	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.99	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.99	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.99	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.99	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.99	ng/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351358 - Draft Method 1633										
Blank (B351358-BLK1)				Prepared: 09/08/23 Analyzed: 09/12/23						
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*91.7*		ng/L	98.6		93.0	10-130			
Surrogate: 13C5-PFPeA	*45.2*		ng/L	49.3		91.7	35-150			
Surrogate: 13C5-PFHxA	*22.8*		ng/L	24.7		92.5	55-150			
Surrogate: 13C4-PFHpA	*22.4*		ng/L	24.7		90.7	55-150			
Surrogate: 13C8-PFOA	*22.3*		ng/L	24.7		90.5	60-140			
Surrogate: 13C9-PFNA	*11.8*		ng/L	12.3		95.7	55-140			
Surrogate: 13C6-PFDA	*11.3*		ng/L	12.3		91.9	50-140			
Surrogate: 13C7-PFUnA	*11.5*		ng/L	12.3		93.6	30-140			
Surrogate: 13C2-PFDoA	*10.7*		ng/L	12.3		87.1	10-150			
Surrogate: 13C2-PFTeDA	*10.3*		ng/L	12.3		83.2	10-130			
Surrogate: 13C3-PFBS	*23.0*		ng/L	24.7		93.5	55-150			
Surrogate: 13C3-PFHxS	*22.7*		ng/L	24.7		92.1	55-150			
Surrogate: 13C8-PFOS	*21.7*		ng/L	24.7		88.1	45-140			
Surrogate: 13C2-4:2FTS	*35.8*		ng/L	49.3		72.6	60-200			
Surrogate: 13C2-6:2FTS	*41.4*		ng/L	49.3		84.0	60-200			
Surrogate: 13C2-8:2FTS	*40.6*		ng/L	49.3		82.4	50-200			
Surrogate: 13C8-PFOSA	*20.7*		ng/L	24.7		84.0	30-130			
Surrogate: D3-NMeFOSA	*19.0*		ng/L	24.7		77.3	15-130			
Surrogate: D5-NEtFOSA	*19.2*		ng/L	24.7		78.0	10-130			
Surrogate: D3-NMeFOSAA	*44.5*		ng/L	49.3		90.2	45-200			
Surrogate: D5-NEtFOSAA	*43.0*		ng/L	49.3		87.2	10-200			
Surrogate: D7-NMeFOSE	*214*		ng/L	247		86.6	10-150			
Surrogate: D9-NEtFOSE	*211*		ng/L	247		85.4	10-150			
Surrogate: 13C3-HFPO-DA	*95.5*		ng/L	98.6		96.8	25-160			
LCS (B351358-BS1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Perfluorobutanoic acid (PFBA)	88.1	3.9	ng/L	94.2		93.5	58-148			
Perfluoropentanoic acid (PFPeA)	42.9	2.0	ng/L	47.1		91.1	54-152			
Perfluorohexanoic acid (PFHxA)	22.1	0.98	ng/L	23.5		93.8	55-152			
Perfluoroheptanoic acid (PFHpA)	21.3	0.98	ng/L	23.5		90.5	54-154			
Perfluorooctanoic acid (PFOA)	21.0	0.98	ng/L	23.5		89.3	52-161			
Perfluorononanoic acid (PFNA)	21.4	0.98	ng/L	23.5		90.8	59-149			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351358 - Draft Method 1633										
LCS (B351358-BS1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Perfluorodecanoic acid (PFDA)	21.8	0.98	ng/L	23.5		92.6	52-147			
Perfluoroundecanoic acid (PFUnA)	22.0	0.98	ng/L	23.5		93.6	48-159			
Perfluorododecanoic acid (PFDoA)	21.8	0.98	ng/L	23.5		92.6	64-142			
Perfluorotridecanoic acid (PFTrDA)	21.0	0.98	ng/L	23.5		89.1	49-148			
Perfluorotetradecanoic acid (PFTeDA)	21.8	0.98	ng/L	23.5		92.7	47-161			
Perfluorobutanesulfonic acid (PFBS)	18.5	0.98	ng/L	20.9		88.5	62-144			
Perfluoropentanesulfonic acid (PFPeS)	20.3	0.98	ng/L	22.1		91.6	59-151			
Perfluorohexanesulfonic acid (PFHxS)	19.3	0.98	ng/L	21.5		89.8	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	19.9	0.98	ng/L	22.4		88.7	55-152			
Perfluorooctanesulfonic acid (PFOS)	19.2	0.98	ng/L	21.8		88.1	58-149			
Perfluorononanesulfonic acid (PFNS)	19.9	0.98	ng/L	22.7		88.0	52-148			
Perfluorodecanesulfonic acid (PFDS)	19.1	0.98	ng/L	22.7		83.9	51-147			
Perfluorododecanesulfonic acid (PFDoS)	18.8	0.98	ng/L	22.8		82.5	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	85.3	3.9	ng/L	88.3		96.6	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	84.9	3.9	ng/L	89.5		94.9	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	92.8	3.9	ng/L	90.6		102	63-152			
Perfluorooctanesulfonamide (PFOSA)	21.0	0.98	ng/L	23.5		89.1	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	20.8	0.98	ng/L	23.5		88.4	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	20.4	0.98	ng/L	23.5		86.6	65-139			
N-MeFOSAA (NMeFOSAA)	21.7	0.98	ng/L	23.5		92.3	58-144			
N-EtFOSAA (NEtFOSAA)	21.0	0.98	ng/L	23.5		89.3	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	212	9.8	ng/L	235		90.1	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	213	9.8	ng/L	235		90.7	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	84.4	3.9	ng/L	94.2		89.7	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	73.9	3.9	ng/L	88.9		83.1	68-146			
9Cl-PF3ONS (F53B Minor)	85.2	3.9	ng/L	88.3		96.5	56-156			
11Cl-PF3OUdS (F53B Major)	78.2	3.9	ng/L	88.9		87.9	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	185	9.8	ng/L	235		78.6	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1000	49	ng/L	1180		85.2	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	976	49	ng/L	1180		82.9	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	39.0	2.0	ng/L	41.9		93.1	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	39.9	2.0	ng/L	47.1		84.8	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	42.9	2.0	ng/L	47.1		91.0	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	44.5	2.0	ng/L	47.1		94.5	48-161			
Surrogate: 13C4-PFBA	*84.3*		ng/L	98.1		85.9	10-130			
Surrogate: 13C5-PFPeA	*42.3*		ng/L	49.1		86.2	35-150			
Surrogate: 13C5-PFHxA	*21.0*		ng/L	24.5		85.8	55-150			
Surrogate: 13C4-PFHpA	*21.6*		ng/L	24.5		88.0	55-150			
Surrogate: 13C8-PFOA	*20.9*		ng/L	24.5		85.3	60-140			
Surrogate: 13C9-PFNA	*10.7*		ng/L	12.3		86.9	55-140			
Surrogate: 13C6-PFDA	*10.5*		ng/L	12.3		85.4	50-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351358 - Draft Method 1633										
LCS (B351358-BS1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Surrogate: 13C7-PFUnA	*10.7*		ng/L	12.3		87.4	30-140			
Surrogate: 13C2-PFDoA	*10.5*		ng/L	12.3		85.8	10-150			
Surrogate: 13C2-PFTeDA	*10.5*		ng/L	12.3		85.4	10-130			
Surrogate: 13C3-PFBS	*20.4*		ng/L	24.5		83.4	55-150			
Surrogate: 13C3-PFHxS	*20.7*		ng/L	24.5		84.2	55-150			
Surrogate: 13C8-PFOS	*20.7*		ng/L	24.5		84.2	45-140			
Surrogate: 13C2-4:2FTS	*35.8*		ng/L	49.1		73.0	60-200			
Surrogate: 13C2-6:2FTS	*39.7*		ng/L	49.1		80.9	60-200			
Surrogate: 13C2-8:2FTS	*41.2*		ng/L	49.1		84.0	50-200			
Surrogate: 13C8-PFOSA	*19.0*		ng/L	24.5		77.7	30-130			
Surrogate: D3-NMeFOSA	*16.3*		ng/L	24.5		66.5	15-130			
Surrogate: D5-NEtFOSA	*16.9*		ng/L	24.5		68.8	10-130			
Surrogate: D3-NMeFOSAA	*38.3*		ng/L	49.1		78.1	45-200			
Surrogate: D5-NEtFOSAA	*41.2*		ng/L	49.1		83.9	10-200			
Surrogate: D7-NMeFOSE	*192*		ng/L	245		78.3	10-150			
Surrogate: D9-NEtFOSE	*190*		ng/L	245		77.3	10-150			
Surrogate: 13C3-HFPO-DA	*88.2*		ng/L	98.1		89.9	25-160			
MRL Check (B351358-MRL1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Perfluorobutanoic acid (PFBA)	7.02	4.0	ng/L	7.93		88.6	44-157			
Perfluoropentanoic acid (PFPeA)	3.17	2.0	ng/L	3.96		79.9	57-148			
Perfluorohexanoic acid (PFHxA)	1.55	0.99	ng/L	1.98		78.2	62-149			
Perfluoroheptanoic acid (PFHpA)	1.50	0.99	ng/L	1.98		75.7	56-150			
Perfluorooctanoic acid (PFOA)	1.33	0.99	ng/L	1.98		67.2	57-161			
Perfluorononanoic acid (PFNA)	1.37	0.99	ng/L	1.98		69.2	53-157			
Perfluorodecanoic acid (PFDA)	1.49	0.99	ng/L	1.98		75.4	43-158			
Perfluoroundecanoic acid (PFUnA)	1.40	0.99	ng/L	1.98		70.8	50-155			
Perfluorododecanoic acid (PFDoA)	1.42	0.99	ng/L	1.98		71.8	60-141			
Perfluorotridecanoic acid (PFTrDA)	1.37	0.99	ng/L	1.98		69.1	52-140			
Perfluorotetradecanoic acid (PFTeDA)	1.52	0.99	ng/L	1.98		76.9	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.44	0.99	ng/L	1.76		81.6	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.47	0.99	ng/L	1.86		79.1	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.30	0.99	ng/L	1.81		71.8	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.48	0.99	ng/L	1.89		78.2	51-150			
Perfluorooctanesulfonic acid (PFOS)	1.50	0.99	ng/L	1.84		81.5	43-162			
Perfluorononanesulfonic acid (PFNS)	1.45	0.99	ng/L	1.91		75.7	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.36	0.99	ng/L	1.91		70.8	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.32	0.99	ng/L	1.92		68.4	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	5.68	4.0	ng/L	7.43		76.4	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	5.77	4.0	ng/L	7.53		76.6	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	6.06	4.0	ng/L	7.63		79.4	46-165			
Perfluorooctanesulfonamide (PFOSA)	1.54	0.99	ng/L	1.98		77.6	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	1.45	0.99	ng/L	1.98		73.4	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.53	0.99	ng/L	1.98		77.4	49-156			
N-MeFOSAA (NMeFOSAA)	1.48	0.99	ng/L	1.98		74.9	32-160			
N-EtFOSAA (NEtFOSAA)	1.77	0.99	ng/L	1.98		89.4	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	15.4	9.9	ng/L	19.8		77.9	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	15.6	9.9	ng/L	19.8		78.5	60-147			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351358 - Draft Method 1633										
MRL Check (B351358-MRL1)				Prepared: 09/08/23 Analyzed: 09/12/23						
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.78	4.0	ng/L	7.93		85.5	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	5.52	4.0	ng/L	7.48		73.8	61-148			
9Cl-PF3ONS (F53B Minor)	6.02	4.0	ng/L	7.43		81.0	44-167			
11Cl-PF3OUdS (F53B Major)	5.50	4.0	ng/L	7.48		73.5	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	13.2	9.9	ng/L	19.8		66.5	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	68.7	50	ng/L	99.1		69.3	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	65.6	50	ng/L	99.1		66.2	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.02	2.0	ng/L	3.53		85.5	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.12	2.0	ng/L	3.96		78.7	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.20	2.0	ng/L	3.96		80.7	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.83	2.0	ng/L	3.96		96.6	47-160			
Surrogate: 13C4-PFBA	*83.6*		ng/L	99.1		84.3	10-130			
Surrogate: 13C5-PFPeA	*41.2*		ng/L	49.6		83.1	35-150			
Surrogate: 13C5-PFHxA	*20.5*		ng/L	24.8		82.9	55-150			
Surrogate: 13C4-PFHpA	*20.3*		ng/L	24.8		81.9	55-150			
Surrogate: 13C8-PFOA	*21.1*		ng/L	24.8		85.2	60-140			
Surrogate: 13C9-PFNA	*10.7*		ng/L	12.4		86.3	55-140			
Surrogate: 13C6-PFDA	*10.2*		ng/L	12.4		82.3	50-140			
Surrogate: 13C7-PFUnA	*10.0*		ng/L	12.4		81.1	30-140			
Surrogate: 13C2-PFDoA	*9.64*		ng/L	12.4		77.8	10-150			
Surrogate: 13C2-PFTeDA	*9.08*		ng/L	12.4		73.3	10-130			
Surrogate: 13C3-PFBS	*20.6*		ng/L	24.8		82.9	55-150			
Surrogate: 13C3-PFHxS	*20.5*		ng/L	24.8		82.9	55-150			
Surrogate: 13C8-PFOS	*21.3*		ng/L	24.8		85.8	45-140			
Surrogate: 13C2-4:2FTS	*33.7*		ng/L	49.6		68.0	60-200			
Surrogate: 13C2-6:2FTS	*37.6*		ng/L	49.6		75.9	60-200			
Surrogate: 13C2-8:2FTS	*36.4*		ng/L	49.6		73.4	50-200			
Surrogate: 13C8-PFOSA	*19.2*		ng/L	24.8		77.6	30-130			
Surrogate: D3-NMeFOSA	*18.3*		ng/L	24.8		73.7	15-130			
Surrogate: D5-NEtFOSA	*19.2*		ng/L	24.8		77.4	10-130			
Surrogate: D3-NMeFOSAA	*39.7*		ng/L	49.6		80.1	45-200			
Surrogate: D5-NEtFOSAA	*39.2*		ng/L	49.6		79.2	10-200			
Surrogate: D7-NMeFOSE	*201*		ng/L	248		81.1	10-150			
Surrogate: D9-NEtFOSE	*202*		ng/L	248		81.4	10-150			
Surrogate: 13C3-HFPO-DA	*86.7*		ng/L	99.1		87.5	25-160			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350262 - Draft Method 1633										
Blank (B350262-BLK1)				Prepared: 08/26/23 Analyzed: 08/28/23						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B350262-BS1)				Prepared: 08/26/23 Analyzed: 08/28/23						
Total Suspended Solids	185	5.0	mg/L	200		92.5	64.1-125			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-02	Gross violation of holding time. Analysis performed after 2X the allowable holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
Z-01	Extracted internal standard outside of control limits. Analyte is a known difficult compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV

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Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

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Page 1 of 1

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: EA Engineering

Address: 2269 W. Jefferson St, Syracuse NY 13202

Phone: 315 380 1346

Project Name: Three Star Anodizing

Project Location: Wappingers Falls, NY

Project Number: NYSDEC # 314058 EA# 1602523/0008

Project Manager: Mike Miller (EA)

Pace Analytical Quote Name/Number Rollout 141621

Invoice Recipient:

Sampled By: Moriah Gilkey

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other: Cat B Deliverables
CLP Like Data Pkg Required: ☒
Email To: michael.miller@eaest.com
Fax To #:

ANALYSIS REQUESTED

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	~~Ending~~ Date/Time	Composite	Grab	Matrix Code	Conc Code	PFAS 1633 (w/ TSS)	# of Containers	Preservation Code	Container Code
1	314058-MW-3-08142023	08/14/23	1415		X	GW	V	X			
2	314058-MW-4-08142023	08/14/23	1301		X	GW		X			
3	314058-MW-5-08142023	08/14/23	1154		X	GW		X			
4	314058-MW-11-08142023	08/14/23	1548		X	GW		X			
5	314058-MW-9R-08142023	08/14/23	1542		X	GW		X			
6	314058-MW-15D-08142023	08/14/23	1215		X	GW		X			
7	314058-MW-16-08142023	08/14/23	1210		X	GW		X			
8	314058-FD-01	08/14/23			X	GW		X			
9	314058-EB-01	08/14/23	1330					X			
10	314058-FB-01	08/14/23	1325					X			

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:
Extra Volume Included w/ MW-15D for MS/MSD

One of Cooler

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
Moriah Gilkey	08/14/23 1800
Received by: (signature) 4.6°C	Date/Time: 8-15-23 1007
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☐ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ *AIHA-LAP,LLC*

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

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FedEx Sign Up or Log In

FedEx® Tracking

DELIVERED

Tuesday

8/15/23 at 10:07 AM

Signed for by: A.ARROYO

Obtain proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 4 pieces

TRACKING ID

782484165047

FROM
HUNT VALLEY, MD US

Label Created
8/14/23 6:22 PM

WE HAVE YOUR PACKAGE
NEWBURGH, NY
8/14/23 7:15 PM

IN TRANSIT
WINDSOR LOCKS, CT
8/15/23 7:16 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
8/15/23 7:25 AM

DELIVERED
East Longmeadow, MA US

Delivered
8/15/23 at 10:07 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL SUBMIT

MORE OPTIONS

Manage Delivery

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client EA Engineering

Project Three Star Anodizing

MCP/RCP Required N/A

Deliverable Package Requirement N/A

Location Wapingers Falls, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time AAM / 8-15-23 / 1007

Back-Sheet By / Date / Time AAM / 8-15-23 / 1409

Temperature Method Temp Gun # 4

Temp ✓ < 6° C Actual Temperature 4.6°C

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☑	☐
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics													VOA Vials					Other / Fill in				
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter		250mL		100mL	1 Liter		500mL	250mL																		
					Unpreserved	HCL	Sulfuric	Sulfuric	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact	125mL Plastic				
1												2															1				
2																															
3																															
4																															
5												1																			
6												8																			
7												2															1				
8																															
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con-test®
A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

August 31, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

Project Location: Wappingers Falls, NY
Client Job Number:
Project Number: 314058
Laboratory Work Order Number: 23H2452

Enclosed are results of analyses for samples as received by the laboratory on August 16, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 8/31/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 314058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H2452

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Wappingers Falls, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
314058-MW-1-08152023	23H2452-01	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-2-08152023	23H2452-02	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-10-08152023	23H2452-03	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-12-08152023	23H2452-04	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-13-08152023	23H2452-05	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-14D-08152023	23H2452-06	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-MW-18-08152023	23H2452-07	Ground Water		SW-846 6010D	
				SW-846 8081B	
				SW-846 8260D	
314058-EB-02	23H2452-08	Ground Water		SW-846 8260D	
314058-FB-02	23H2452-09	Field Blank		SW-846 8260D	
314058-TB-02	23H2452-10	Trip Blank Water		SW-846 8260D	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 6010D

Qualifications:

B

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:

Aluminum

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], B349399-BLK2

SW-846 8081B

Qualifications:

S-12

Surrogate recovery is outside of control limits on confirmatory column, but within control limits on primary column. Data validation is not affected.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl

23H2452-05[314058-MW-13-08152023]

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

Hexachlorobenzene [2C]

B349687-BS1, B349687-BSD1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Hexachlorobenzene [2C]

23H2452-05[314058-MW-13-08152023]

SW-846 8260D

Qualifications:

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

23H2452-06[314058-MW-14D-08152023]

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

2,2-Dichloropropane

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-03[314058-MW-10-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], 23H2452-08[314058-EB-02], 23H2452-09[314058-FB-02], 23H2452-10[314058-TB-02], B349354-BLK1, B349354-BS1, B349354-BSD1, S092302-CCV1

Bromomethane

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-03[314058-MW-10-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], 23H2452-08[314058-EB-02], 23H2452-09[314058-FB-02], 23H2452-10[314058-TB-02], B349354-BLK1, B349354-BS1, B349354-BSD1, S092302-CCV1

Chloromethane

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-03[314058-MW-10-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], 23H2452-08[314058-EB-02], 23H2452-09[314058-FB-02], 23H2452-10[314058-TB-02], B349354-BLK1, B349354-BS1, B349354-BSD1, S092302-CCV1

Naphthalene

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-03[314058-MW-10-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], 23H2452-08[314058-EB-02], 23H2452-09[314058-FB-02], 23H2452-10[314058-TB-02], B349354-BLK1, B349354-BS1, B349354-BSD1, S092302-CCV1

tert-Amyl Methyl Ether (TAME)

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-03[314058-MW-10-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], 23H2452-08[314058-EB-02], 23H2452-09[314058-FB-02], 23H2452-10[314058-TB-02], B349354-BLK1, B349354-BS1, B349354-BSD1, S092302-CCV1

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V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromochloromethane

B349354-BS1, B349354-BSD1, S092302-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Bromomethane

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-03[314058-MW-10-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], 23H2452-08[314058-EB-02], 23H2452-09[314058-FB-02], 23H2452-10[314058-TB-02], B349354-BLK1, B349354-BS1, B349354-BSD1, S092302-CCV1

Chloromethane

23H2452-01[314058-MW-1-08152023], 23H2452-02[314058-MW-2-08152023], 23H2452-03[314058-MW-10-08152023], 23H2452-04[314058-MW-12-08152023], 23H2452-05[314058-MW-13-08152023], 23H2452-06[314058-MW-14D-08152023], 23H2452-07[314058-MW-18-08152023], 23H2452-08[314058-EB-02], 23H2452-09[314058-FB-02], 23H2452-10[314058-TB-02], B349354-BLK1, B349354-BS1, B349354-BSD1, S092302-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Acetone

B349354-BS1, B349354-BSD1, S092302-CCV1

Carbon Disulfide

B349354-BS1, B349354-BSD1, S092302-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

con-test® A Pace Analytical® Laboratory

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 | Sampled: 8/15/2023 14:25

Sample ID: 23H2452-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Chloroform	0.35	2.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2-Dichlorobenzene	0.16	1.0	0.13	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1-Dichloroethane	1.7	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1-Dichloroethylene	0.33	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
cis-1,2-Dichloroethylene	5.3	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
trans-1,2-Dichloroethylene	0.32	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 | Sampled: 8/15/2023 14:25

Sample ID: 23H2452-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Tetrachloroethylene	47	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1,1-Trichloroethane	10	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Trichloroethylene	7.6	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Trichlorofluoromethane (Freon 11)	0.24	2.0	0.15	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
Vinyl Chloride	0.38	2.0	0.24	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:03	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:03	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	104	70-130		8/19/23 4:03
Toluene-d8	101	70-130		8/19/23 4:03
4-Bromofluorobenzene	94.4	70-130		8/19/23 4:03

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 | Sampled: 8/15/2023 14:25

Sample ID: 23H2452-01

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Aldrin [1]	ND	0.047	0.0068	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
alpha-BHC [1]	ND	0.047	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
beta-BHC [1]	ND	0.047	0.0078	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
delta-BHC [1]	ND	0.047	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
4,4'-DDE [1]	ND	0.038	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
4,4'-DDT [1]	ND	0.038	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Dieldrin [1]	ND	0.0019	0.00096	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Endosulfan I [1]	ND	0.047	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Endosulfan II [1]	ND	0.075	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Endosulfan sulfate [1]	ND	0.075	0.0061	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Endrin [1]	ND	0.075	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Endrin aldehyde [1]	ND	0.075	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Endrin ketone [1]	ND	0.075	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Heptachlor [1]	ND	0.047	0.0057	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Heptachlor epoxide [1]	ND	0.047	0.0065	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Hexachlorobenzene [1]	ND	0.047	0.027	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Methoxychlor [1]	ND	0.47	0.0098	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG
Toxaphene [1]	ND	0.94	0.63	µg/L	1		SW-846 8081B	8/21/23	8/30/23 19:41	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	59.0	30-150		8/30/23 19:41
Decachlorobiphenyl [2]	61.0	30-150		8/30/23 19:41
Tetrachloro-m-xylene [1]	48.1	30-150		8/30/23 19:41
Tetrachloro-m-xylene [2]	43.0	30-150		8/30/23 19:41

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 | Sampled: 8/15/2023 14:25

Sample ID: 23H2452-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.087	0.050	0.020	mg/L	1	B	SW-846 6010D	8/17/23	8/22/23 22:31	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Barium	0.018	0.050	0.0057	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Calcium	96	0.50	0.091	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Copper	0.0048	0.010	0.0047	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Iron	0.41	0.050	0.047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Magnesium	12	0.050	0.016	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Manganese	0.30	0.010	0.0028	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Potassium	0.80	2.0	0.33	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Sodium	12	2.0	0.74	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:13	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:31	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:31	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 | Sampled: 8/15/2023 12:51

Sample ID: 23H2452-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Chlorobenzene	2.8	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2-Dichlorobenzene	0.27	1.0	0.13	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1-Dichloroethane	0.17	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
cis-1,2-Dichloroethylene	13	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
trans-1,2-Dichloroethylene	0.60	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 | Sampled: 8/15/2023 12:51

Sample ID: 23H2452-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Tetrachloroethylene	6.0	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Trichloroethylene	12	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.41	1.0	0.21	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
Vinyl Chloride	0.90	2.0	0.24	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:30	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:30	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		8/19/23 4:30
Toluene-d8	104	70-130		8/19/23 4:30
4-Bromofluorobenzene	95.3	70-130		8/19/23 4:30

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 | Sampled: 8/15/2023 12:51

Sample ID: 23H2452-02

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Aldrin [1]	ND	0.048	0.0069	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
alpha-BHC [1]	ND	0.048	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
beta-BHC [1]	ND	0.048	0.0079	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
delta-BHC [1]	ND	0.048	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
gamma-BHC (Lindane) [1]	ND	0.029	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
4,4'-DDE [1]	ND	0.038	0.0048	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
4,4'-DDT [1]	ND	0.038	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Dieldrin [1]	ND	0.0019	0.00097	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Endosulfan I [1]	ND	0.048	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Endosulfan II [1]	ND	0.076	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Endosulfan sulfate [1]	ND	0.076	0.0061	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Endrin [1]	ND	0.076	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Endrin aldehyde [1]	ND	0.076	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Endrin ketone [1]	ND	0.076	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Heptachlor [1]	ND	0.048	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Heptachlor epoxide [1]	ND	0.048	0.0065	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Hexachlorobenzene [1]	ND	0.048	0.027	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Methoxychlor [1]	ND	0.48	0.0099	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG
Toxaphene [1]	ND	0.95	0.63	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:08	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	53.6	30-150		8/30/23 20:08
Decachlorobiphenyl [2]	56.8	30-150		8/30/23 20:08
Tetrachloro-m-xylene [1]	35.0	30-150		8/30/23 20:08
Tetrachloro-m-xylene [2]	36.8	30-150		8/30/23 20:08

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 | Sampled: 8/15/2023 12:51

Sample ID: 23H2452-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.10	0.050	0.020	mg/L	1	B	SW-846 6010D	8/17/23	8/22/23 22:36	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Barium	0.036	0.050	0.0057	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Calcium	71	0.50	0.091	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Iron	0.21	0.050	0.047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Magnesium	13	0.050	0.016	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Manganese	0.68	0.010	0.0028	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Potassium	1.6	2.0	0.33	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Sodium	42	2.0	0.74	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:19	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:36	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:36	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2452-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Chlorobenzene	0.31	1.0	0.12	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2-Dichlorobenzene	1.1	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,3-Dichlorobenzene	0.18	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,4-Dichlorobenzene	0.60	1.0	0.13	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1-Dichloroethane	1.6	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
cis-1,2-Dichloroethylene	5.0	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
trans-1,2-Dichloroethylene	0.99	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2452-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Tetrachloroethylene	0.29	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1,1-Trichloroethane	0.27	1.0	0.15	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Trichloroethylene	0.27	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
Vinyl Chloride	4.3	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 4:57	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	104	70-130		8/19/23 4:57
Toluene-d8	104	70-130		8/19/23 4:57
4-Bromofluorobenzene	96.7	70-130		8/19/23 4:57

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2452-03

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.19	0.036	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Aldrin [1]	ND	0.048	0.0069	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
alpha-BHC [1]	ND	0.048	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
beta-BHC [1]	ND	0.048	0.0079	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
delta-BHC [1]	ND	0.048	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
gamma-BHC (Lindane) [1]	ND	0.029	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Chlordane [1]	ND	0.19	0.032	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
4,4'-DDD [1]	ND	0.038	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
4,4'-DDE [1]	ND	0.038	0.0048	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
4,4'-DDT [1]	ND	0.038	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Dieldrin [1]	ND	0.0019	0.00097	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Endosulfan I [1]	ND	0.048	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Endosulfan II [1]	ND	0.076	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Endosulfan sulfate [1]	ND	0.076	0.0061	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Endrin [1]	ND	0.076	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Endrin aldehyde [1]	ND	0.076	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Endrin ketone [1]	ND	0.076	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Heptachlor [1]	ND	0.048	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Heptachlor epoxide [1]	ND	0.048	0.0065	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Hexachlorobenzene [1]	ND	0.048	0.027	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Methoxychlor [1]	ND	0.48	0.0099	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG
Toxaphene [1]	ND	0.95	0.63	µg/L	1		SW-846 8081B	8/21/23	8/30/23 20:34	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	48.8	30-150		8/30/23 20:34
Decachlorobiphenyl [2]	52.1	30-150		8/30/23 20:34
Tetrachloro-m-xylene [1]	44.3	30-150		8/30/23 20:34
Tetrachloro-m-xylene [2]	45.1	30-150		8/30/23 20:34

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2452-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.020	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:42	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Arsenic	0.0085	0.010	0.0073	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Barium	0.022	0.050	0.0057	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Calcium	87	0.50	0.091	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Chromium	0.023	0.010	0.0093	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Iron	4.1	0.050	0.047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Magnesium	23	0.050	0.016	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Manganese	0.37	0.010	0.0028	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Nickel	0.0046	0.010	0.0024	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Potassium	3.9	2.0	0.33	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Sodium	29	2.0	0.74	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:24	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:42	HNN
Zinc	0.0073	0.010	0.0040	mg/L	1	J	SW-846 6010D	8/17/23	8/22/23 22:42	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2452-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Chlorobenzene	21	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2-Dichlorobenzene	19	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,4-Dichlorobenzene	1.1	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1-Dichloroethane	4.5	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
cis-1,2-Dichloroethylene	11	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
trans-1,2-Dichloroethylene	2.6	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2452-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Toluene	0.23	1.0	0.22	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1,1-Trichloroethane	0.21	1.0	0.15	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Trichloroethylene	0.91	1.0	0.17	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.64	1.0	0.21	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
Vinyl Chloride	26	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:24	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		8/19/23 5:24
Toluene-d8	104	70-130		8/19/23 5:24
4-Bromofluorobenzene	95.1	70-130		8/19/23 5:24

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2452-04

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.18	0.035	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Aldrin [1]	ND	0.046	0.0066	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
alpha-BHC [1]	ND	0.046	0.0034	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
beta-BHC [1]	ND	0.046	0.0076	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
delta-BHC [1]	ND	0.046	0.0054	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
gamma-BHC (Lindane) [1]	ND	0.028	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Chlordane [1]	ND	0.18	0.031	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
4,4'-DDD [1]	ND	0.037	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
4,4'-DDE [1]	ND	0.037	0.0046	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
4,4'-DDT [1]	ND	0.037	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Dieldrin [1]	ND	0.0018	0.00093	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Endosulfan I [1]	ND	0.046	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Endosulfan II [1]	ND	0.073	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Endosulfan sulfate [1]	ND	0.073	0.0059	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Endrin [1]	ND	0.073	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Endrin aldehyde [1]	ND	0.073	0.0041	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Endrin ketone [1]	ND	0.073	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Heptachlor [1]	ND	0.046	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Heptachlor epoxide [1]	ND	0.046	0.0063	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Hexachlorobenzene [1]	ND	0.046	0.026	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Methoxychlor [1]	ND	0.46	0.0095	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG
Toxaphene [1]	ND	0.92	0.61	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:01	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	39.3	30-150		8/30/23 21:01
Decachlorobiphenyl [2]	42.1	30-150		8/30/23 21:01
Tetrachloro-m-xylene [1]	46.8	30-150		8/30/23 21:01
Tetrachloro-m-xylene [2]	46.3	30-150		8/30/23 21:01

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2452-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.021	0.050	0.020	mg/L	1	B, J	SW-846 6010D	8/17/23	8/22/23 22:47	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Arsenic	0.024	0.010	0.0073	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Barium	0.010	0.050	0.0057	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Calcium	61	0.50	0.091	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Chromium	0.080	0.010	0.0093	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Iron	4.9	0.050	0.047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Magnesium	13	0.050	0.016	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Manganese	0.43	0.010	0.0028	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Nickel	0.13	0.010	0.0024	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Potassium	34	2.0	0.33	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Sodium	17	2.0	0.74	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:29	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:47	HNN
Zinc	1.0	0.010	0.0040	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:47	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 | Sampled: 8/15/2023 11:19

Sample ID: 23H2452-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2-Dichlorobenzene	0.34	1.0	0.13	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1-Dichloroethane	0.24	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
cis-1,2-Dichloroethylene	0.33	1.0	0.14	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 | Sampled: 8/15/2023 11:19

Sample ID: 23H2452-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 5:52	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 5:52	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		8/19/23 5:52
Toluene-d8	103	70-130		8/19/23 5:52
4-Bromofluorobenzene	95.1	70-130		8/19/23 5:52

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 | Sampled: 8/15/2023 11:19

Sample ID: 23H2452-05

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [2]	ND	0.19	0.040	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Aldrin [2]	ND	0.047	0.0067	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
alpha-BHC [2]	ND	0.047	0.0042	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
beta-BHC [2]	ND	0.047	0.0060	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
delta-BHC [2]	ND	0.047	0.0034	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
gamma-BHC (Lindane) [2]	ND	0.028	0.0034	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Chlordane [2]	ND	0.19	0.048	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
4,4'-DDD [2]	ND	0.038	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
4,4'-DDE [2]	ND	0.038	0.0043	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
4,4'-DDT [2]	ND	0.038	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Dieldrin [2]	ND	0.0019	0.0012	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Endosulfan I [2]	ND	0.047	0.0043	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Endosulfan II [2]	ND	0.075	0.0044	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Endosulfan sulfate [2]	ND	0.075	0.0041	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Endrin [2]	ND	0.075	0.0039	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Endrin aldehyde [2]	ND	0.075	0.0051	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Endrin ketone [2]	ND	0.075	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Heptachlor [2]	ND	0.047	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Heptachlor epoxide [2]	ND	0.047	0.0031	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Hexachlorobenzene [2]	ND	0.047	0.0082	µg/L	1	V-20	SW-846 8081B	8/21/23	8/31/23 11:46	TG
Methoxychlor [2]	ND	0.47	0.0056	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG
Toxaphene [2]	ND	0.94	0.71	µg/L	1		SW-846 8081B	8/21/23	8/31/23 11:46	TG

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	**27.1**	*	30-150	S-12	8/31/23 11:46
Decachlorobiphenyl [2]	30.4		30-150		8/31/23 11:46
Tetrachloro-m-xylene [1]	47.4		30-150		8/31/23 11:46
Tetrachloro-m-xylene [2]	44.5		30-150		8/31/23 11:46

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 | Sampled: 8/15/2023 11:19

Sample ID: 23H2452-05

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.51	0.050	0.020	mg/L	1	B	SW-846 6010D	8/17/23	8/22/23 22:53	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Arsenic	0.022	0.010	0.0073	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Barium	0.13	0.050	0.0057	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Calcium	110	0.50	0.091	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Iron	14	0.050	0.047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Magnesium	20	0.050	0.016	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Manganese	1.5	0.010	0.0028	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Potassium	4.1	2.0	0.33	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Sodium	51	2.0	0.74	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/17/23	8/21/23 14:56	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:53	HNN
Zinc	ND	0.010	0.0040	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:53	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 | Sampled: 8/15/2023 15:15

Sample ID: 23H2452-06

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	14	250	10	µg/L	5	J	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Acrylonitrile	ND	25	2.3	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.5	0.66	µg/L	5	V-05	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Benzene	ND	5.0	0.92	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Bromobenzene	ND	5.0	0.74	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Bromochloromethane	ND	5.0	1.4	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Bromodichloromethane	ND	2.5	0.79	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Bromoform	ND	5.0	2.0	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Bromomethane	ND	10	6.6	µg/L	5	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
2-Butanone (MEK)	ND	100	8.4	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
tert-Butyl Alcohol (TBA)	ND	100	21	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
n-Butylbenzene	ND	5.0	0.75	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
sec-Butylbenzene	ND	5.0	0.63	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
tert-Butylbenzene	ND	5.0	0.71	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	2.5	0.77	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Carbon Disulfide	ND	25	7.8	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Carbon Tetrachloride	ND	25	0.82	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Chlorobenzene	16	5.0	0.59	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Chlorodibromomethane	ND	2.5	1.0	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Chloroethane	ND	10	1.7	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Chloroform	ND	10	0.70	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Chloromethane	ND	10	2.5	µg/L	5	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
2-Chlorotoluene	ND	5.0	0.77	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
4-Chlorotoluene	ND	5.0	0.77	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	25	4.3	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2-Dibromoethane (EDB)	ND	2.5	0.80	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Dibromomethane	ND	5.0	1.6	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2-Dichlorobenzene	ND	5.0	0.65	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,3-Dichlorobenzene	ND	5.0	0.68	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,4-Dichlorobenzene	ND	5.0	0.64	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
trans-1,4-Dichloro-2-butene	ND	10	7.5	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Dichlorodifluoromethane (Freon 12)	ND	10	0.80	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1-Dichloroethane	7.2	5.0	0.68	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2-Dichloroethane	ND	5.0	1.5	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1-Dichloroethylene	3.5	5.0	0.70	µg/L	5	J	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
cis-1,2-Dichloroethylene	660	5.0	0.70	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
trans-1,2-Dichloroethylene	8.5	5.0	0.86	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2-Dichloropropane	ND	5.0	0.97	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,3-Dichloropropane	ND	2.5	0.58	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
2,2-Dichloropropane	ND	5.0	1.7	µg/L	5	V-05	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1-Dichloropropene	ND	10	0.75	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
cis-1,3-Dichloropropene	ND	2.5	0.82	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
trans-1,3-Dichloropropene	ND	2.5	0.71	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Diethyl Ether	ND	10	0.72	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 | Sampled: 8/15/2023 15:15

Sample ID: 23H2452-06

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	2.5	1.0	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,4-Dioxane	ND	250	90	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Ethylbenzene	2.3	5.0	1.1	µg/L	5	J	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Hexachlorobutadiene	ND	3.0	2.3	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
2-Hexanone (MBK)	ND	50	6.0	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Isopropylbenzene (Cumene)	ND	5.0	0.76	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
p-Isopropyltoluene (p-Cymene)	ND	5.0	0.63	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Methyl Acetate	ND	5.0	3.0	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Methyl tert-Butyl Ether (MTBE)	ND	5.0	0.85	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Methyl Cyclohexane	ND	5.0	0.78	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Methylene Chloride	ND	25	0.88	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
4-Methyl-2-pentanone (MIBK)	ND	50	6.6	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Naphthalene	ND	10	1.9	µg/L	5	V-05	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
n-Propylbenzene	ND	5.0	0.62	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Styrene	ND	5.0	0.75	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1,1,2-Tetrachloroethane	ND	5.0	0.81	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1,2,2-Tetrachloroethane	ND	2.5	0.68	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Tetrachloroethylene	16	5.0	0.84	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Tetrahydrofuran	ND	50	2.4	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Toluene	1.7	5.0	1.1	µg/L	5	J	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2,3-Trichlorobenzene	ND	25	1.7	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2,4-Trichlorobenzene	ND	5.0	1.5	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,3,5-Trichlorobenzene	ND	5.0	1.0	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1,1-Trichloroethane	18	5.0	0.75	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1,2-Trichloroethane	ND	5.0	0.96	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Trichloroethylene	520	5.0	0.87	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Trichlorofluoromethane (Freon 11)	ND	10	0.77	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2,3-Trichloropropane	ND	10	1.4	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11	5.0	1.0	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,2,4-Trimethylbenzene	ND	5.0	0.99	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
1,3,5-Trimethylbenzene	ND	5.0	0.75	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
Vinyl Chloride	85	10	1.2	µg/L	5		SW-846 8260D	8/17/23	8/19/23 6:46	EEH
m+p Xylene	5.4	10	2.5	µg/L	5	J	SW-846 8260D	8/17/23	8/19/23 6:46	EEH
o-Xylene	1.8	5.0	1.2	µg/L	5	J	SW-846 8260D	8/17/23	8/19/23 6:46	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		8/19/23 6:46
Toluene-d8	103	70-130		8/19/23 6:46
4-Bromofluorobenzene	96.1	70-130		8/19/23 6:46

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 | Sampled: 8/15/2023 15:15

Sample ID: 23H2452-06

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.20	0.037	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Aldrin [1]	ND	0.049	0.0071	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
alpha-BHC [1]	ND	0.049	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
beta-BHC [1]	ND	0.049	0.0081	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
delta-BHC [1]	ND	0.049	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
gamma-BHC (Lindane) [1]	ND	0.029	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Chlordane [1]	ND	0.20	0.033	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
4,4'-DDD [1]	ND	0.039	0.0041	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
4,4'-DDE [1]	ND	0.039	0.0049	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
4,4'-DDT [1]	ND	0.039	0.0060	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Dieldrin [1]	ND	0.0020	0.00099	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Endosulfan I [1]	ND	0.049	0.0051	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Endosulfan II [1]	ND	0.078	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Endosulfan sulfate [1]	ND	0.078	0.0063	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Endrin [1]	ND	0.078	0.0041	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Endrin aldehyde [1]	ND	0.078	0.0044	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Endrin ketone [1]	ND	0.078	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Heptachlor [1]	ND	0.049	0.0060	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Heptachlor epoxide [1]	ND	0.049	0.0067	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Hexachlorobenzene [1]	ND	0.049	0.028	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Methoxychlor [1]	ND	0.49	0.010	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG
Toxaphene [1]	ND	0.98	0.65	µg/L	1		SW-846 8081B	8/21/23	8/30/23 21:55	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	54.7	30-150		8/30/23 21:55
Decachlorobiphenyl [2]	58.5	30-150		8/30/23 21:55
Tetrachloro-m-xylene [1]	56.2	30-150		8/30/23 21:55
Tetrachloro-m-xylene [2]	46.2	30-150		8/30/23 21:55

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 | Sampled: 8/15/2023 15:15

Sample ID: 23H2452-06

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.49	0.050	0.020	mg/L	1	B	SW-846 6010D	8/17/23	8/22/23 22:58	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Barium	0.036	0.050	0.0057	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Calcium	65	0.50	0.091	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Cobalt	0.0019	0.010	0.0017	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Copper	0.0086	0.010	0.0047	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Iron	3.2	0.050	0.047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Magnesium	15	0.050	0.016	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Manganese	0.65	0.010	0.0028	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Nickel	0.0033	0.010	0.0024	mg/L	1	J	SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Potassium	4.1	2.0	0.33	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Sodium	38	2.0	0.74	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:01	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:58	HNN
Zinc	0.12	0.010	0.0040	mg/L	1		SW-846 6010D	8/17/23	8/22/23 22:58	HNN

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2452-07

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 6:19	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 6:19	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1-Dichloroethane	1.4	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
cis-1,2-Dichloroethylene	17	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
trans-1,2-Dichloroethylene	1.9	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2452-07

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 6:19	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Tetrachloroethylene	37	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1,1-Trichloroethane	3.4	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Trichloroethylene	7.0	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.43	1.0	0.21	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
Vinyl Chloride	0.39	2.0	0.24	µg/L	1	J	SW-846 8260D	8/17/23	8/19/23 6:19	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 6:19	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.8	70-130		8/19/23 6:19
Toluene-d8	101	70-130		8/19/23 6:19
4-Bromofluorobenzene	95.0	70-130		8/19/23 6:19

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2452-07

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.18	0.034	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Aldrin [1]	ND	0.045	0.0066	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
alpha-BHC [1]	ND	0.045	0.0033	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
beta-BHC [1]	ND	0.045	0.0075	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
delta-BHC [1]	ND	0.045	0.0054	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
gamma-BHC (Lindane) [1]	ND	0.027	0.0037	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Chlordane [1]	ND	0.18	0.031	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
4,4'-DDD [1]	ND	0.036	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
4,4'-DDE [1]	ND	0.036	0.0046	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
4,4'-DDT [1]	ND	0.036	0.0055	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Dieldrin [1]	ND	0.0018	0.00092	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Endosulfan I [1]	ND	0.045	0.0047	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Endosulfan II [1]	ND	0.073	0.0035	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Endosulfan sulfate [1]	ND	0.073	0.0058	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Endrin [1]	ND	0.073	0.0038	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Endrin aldehyde [1]	ND	0.073	0.0040	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Endrin ketone [1]	ND	0.073	0.0036	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Heptachlor [1]	ND	0.045	0.0055	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Heptachlor epoxide [1]	ND	0.045	0.0063	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Hexachlorobenzene [1]	ND	0.045	0.026	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Methoxychlor [1]	ND	0.45	0.0094	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG
Toxaphene [1]	ND	0.91	0.60	µg/L	1		SW-846 8081B	8/21/23	8/30/23 22:22	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	66.1	30-150		8/30/23 22:22
Decachlorobiphenyl [2]	68.9	30-150		8/30/23 22:22
Tetrachloro-m-xylene [1]	53.0	30-150		8/30/23 22:22
Tetrachloro-m-xylene [2]	58.3	30-150		8/30/23 22:22

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2452-07

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.10	0.050	0.020	mg/L	1	B	SW-846 6010D	8/17/23	8/22/23 23:04	HNN
Antimony	ND	0.050	0.011	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Arsenic	ND	0.010	0.0073	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Barium	0.050	0.050	0.0057	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Cadmium	ND	0.0040	0.0013	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Calcium	46	0.50	0.091	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Chromium	ND	0.010	0.0093	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Cobalt	ND	0.010	0.0017	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Iron	0.20	0.050	0.047	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Magnesium	10	0.050	0.016	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Manganese	0.015	0.010	0.0028	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Nickel	ND	0.010	0.0024	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Potassium	2.2	2.0	0.33	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Selenium	ND	0.050	0.018	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Silver	ND	0.010	0.0027	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Sodium	43	2.0	0.74	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	8/17/23	8/21/23 15:08	ATP
Vanadium	ND	0.010	0.0071	mg/L	1		SW-846 6010D	8/17/23	8/22/23 23:04	HNN
Zinc	0.012	0.010	0.0040	mg/L	1		SW-846 6010D	8/17/23	8/22/23 23:04	HNN

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-EB-02 | Sampled: 8/15/2023 15:35

Sample ID: 23H2452-08

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 1:47	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 1:47	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-EB-02 | Sampled: 8/15/2023 15:35

Sample ID: 23H2452-08

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 1:47	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:47	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		8/19/23 1:47
Toluene-d8	103	70-130		8/19/23 1:47
4-Bromofluorobenzene	98.5	70-130		8/19/23 1:47

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-FB-02 | Sampled: 8/15/2023 15:40

Sample ID: 23H2452-09

Sample Matrix: Field Blank

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 0:52	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 0:52	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-FB-02 | Sampled: 8/15/2023 15:40

Sample ID: 23H2452-09

Sample Matrix: Field Blank

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 0:52	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 0:52	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		8/19/23 0:52
Toluene-d8	103	70-130		8/19/23 0:52
4-Bromofluorobenzene	95.7	70-130		8/19/23 0:52

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-TB-02 | Sampled: 8/15/2023 00:00

Sample ID: 23H2452-10

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 1:20	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05, V-34	SW-846 8260D	8/17/23	8/19/23 1:20	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2452

Date Received: 8/16/2023

Field Sample #: 314058-TB-02 | Sampled: 8/15/2023 00:00

Sample ID: 23H2452-10

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Naphthalene	ND	2.0	0.38	µg/L	1	V-05	SW-846 8260D	8/17/23	8/19/23 1:20	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	8/17/23	8/19/23 1:20	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		8/19/23 1:20
Toluene-d8	103	70-130		8/19/23 1:20
4-Bromofluorobenzene	95.8	70-130		8/19/23 1:20

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Sample Extraction Data

Prep Method:SW-846 3005A **Analytical Method:SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2452-01 [314058-MW-1-08152023]	B349399	50.0	50.0	08/17/23
23H2452-02 [314058-MW-2-08152023]	B349399	50.0	50.0	08/17/23
23H2452-03 [314058-MW-10-08152023]	B349399	50.0	50.0	08/17/23
23H2452-04 [314058-MW-12-08152023]	B349399	50.0	50.0	08/17/23
23H2452-05 [314058-MW-13-08152023]	B349399	50.0	50.0	08/17/23
23H2452-06 [314058-MW-14D-08152023]	B349399	50.0	50.0	08/17/23
23H2452-07 [314058-MW-18-08152023]	B349399	50.0	50.0	08/17/23

Prep Method:SW-846 3510C **Analytical Method:SW-846 8081B**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2452-01 [314058-MW-1-08152023]	B349687	106	2.00	08/21/23
23H2452-02 [314058-MW-2-08152023]	B349687	105	2.00	08/21/23
23H2452-03 [314058-MW-10-08152023]	B349687	105	2.00	08/21/23
23H2452-04 [314058-MW-12-08152023]	B349687	109	2.00	08/21/23
23H2452-05 [314058-MW-13-08152023]	B349687	106	2.00	08/21/23
23H2452-06 [314058-MW-14D-08152023]	B349687	102	2.00	08/21/23
23H2452-07 [314058-MW-18-08152023]	B349687	110	2.00	08/21/23

Prep Method:SW-846 5030B **Analytical Method:SW-846 8260D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2452-01 [314058-MW-1-08152023]	B349354	5	5.00	08/17/23
23H2452-02 [314058-MW-2-08152023]	B349354	5	5.00	08/17/23
23H2452-03 [314058-MW-10-08152023]	B349354	5	5.00	08/17/23
23H2452-04 [314058-MW-12-08152023]	B349354	5	5.00	08/17/23
23H2452-05 [314058-MW-13-08152023]	B349354	5	5.00	08/17/23
23H2452-06 [314058-MW-14D-08152023]	B349354	1	5.00	08/17/23
23H2452-07 [314058-MW-18-08152023]	B349354	5	5.00	08/17/23
23H2452-08 [314058-EB-02]	B349354	5	5.00	08/17/23
23H2452-09 [314058-FB-02]	B349354	5	5.00	08/17/23
23H2452-10 [314058-TB-02]	B349354	5	5.00	08/17/23

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349354 - SW-846 5030B										
Blank (B349354-BLK1)				Prepared: 08/17/23 Analyzed: 08/18/23						
Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							V-05
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							V-05, V-34
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							V-05, V-34
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							V-05
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl Acetate	ND	1.0	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B349354 - SW-846 5030B											
Blank (B349354-BLK1)				Prepared: 08/17/23 Analyzed: 08/18/23							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L								
Methyl Cyclohexane	ND	1.0	µg/L								
Methylene Chloride	ND	5.0	µg/L								
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L								
Naphthalene	ND	2.0	µg/L							V-05	
n-Propylbenzene	ND	1.0	µg/L								
Styrene	ND	1.0	µg/L								
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L								
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L								
Tetrachloroethylene	ND	1.0	µg/L								
Tetrahydrofuran	ND	10	µg/L								
Toluene	ND	1.0	µg/L								
1,2,3-Trichlorobenzene	ND	5.0	µg/L								
1,2,4-Trichlorobenzene	ND	1.0	µg/L								
1,3,5-Trichlorobenzene	ND	1.0	µg/L								
1,1,1-Trichloroethane	ND	1.0	µg/L								
1,1,2-Trichloroethane	ND	1.0	µg/L								
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,2,3-Trichloropropane	ND	2.0	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L								
1,2,4-Trimethylbenzene	ND	1.0	µg/L								
1,3,5-Trimethylbenzene	ND	1.0	µg/L								
Vinyl Chloride	ND	2.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*25.0*		µg/L	25.0		100	70-130				
Surrogate: Toluene-d8	*25.5*		µg/L	25.0		102	70-130				
Surrogate: 4-Bromofluorobenzene	*24.1*		µg/L	25.0		96.3	70-130				
LCS (B349354-BS1)				Prepared: 08/17/23 Analyzed: 08/18/23							
Acetone	104	50	µg/L	100		104	70-160			V-35	†
Acrylonitrile	9.44	5.0	µg/L	10.0		94.4	70-130				
tert-Amyl Methyl Ether (TAME)	7.75	0.50	µg/L	10.0		77.5	70-130			V-05	
Benzene	11.2	1.0	µg/L	10.0		112	70-130				
Bromobenzene	10.8	1.0	µg/L	10.0		108	70-130				
Bromochloromethane	12.0	1.0	µg/L	10.0		120	70-130			V-20	
Bromodichloromethane	11.2	0.50	µg/L	10.0		112	70-130				
Bromoform	9.91	1.0	µg/L	10.0		99.1	70-130				
Bromomethane	8.75	2.0	µg/L	10.0		87.5	40-160			V-05, V-34	†
2-Butanone (MEK)	96.8	20	µg/L	100		96.8	40-160				†
tert-Butyl Alcohol (TBA)	82.0	20	µg/L	100		82.0	40-160				†
n-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130				
sec-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
tert-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
tert-Butyl Ethyl Ether (TBEE)	8.25	0.50	µg/L	10.0		82.5	70-130				
Carbon Disulfide	98.4	5.0	µg/L	100		98.4	70-130			V-35	
Carbon Tetrachloride	10.7	5.0	µg/L	10.0		107	70-130				
Chlorobenzene	10.8	1.0	µg/L	10.0		108	70-130				
Chlorodibromomethane	10.9	0.50	µg/L	10.0		109	70-130				
Chloroethane	9.47	2.0	µg/L	10.0		94.7	70-130				
Chloroform	10.9	2.0	µg/L	10.0		109	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B349354 - SW-846 5030B											
LCS (B349354-BS1)				Prepared: 08/17/23 Analyzed: 08/18/23							
Chloromethane	9.55	2.0	µg/L	10.0		95.5	40-160			V-05, V-34	†
2-Chlorotoluene	9.42	1.0	µg/L	10.0		94.2	70-130				
4-Chlorotoluene	10.8	1.0	µg/L	10.0		108	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	9.64	5.0	µg/L	10.0		96.4	70-130				
1,2-Dibromoethane (EDB)	10.8	0.50	µg/L	10.0		108	70-130				
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130				
1,2-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130				
1,3-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130				
1,4-Dichlorobenzene	10.7	1.0	µg/L	10.0		107	70-130				
trans-1,4-Dichloro-2-butene	7.53	2.0	µg/L	10.0		75.3	70-130				
Dichlorodifluoromethane (Freon 12)	9.80	2.0	µg/L	10.0		98.0	40-160				†
1,1-Dichloroethane	10.8	1.0	µg/L	10.0		108	70-130				
1,2-Dichloroethane	10.1	1.0	µg/L	10.0		101	70-130				
1,1-Dichloroethylene	11.0	1.0	µg/L	10.0		110	70-130				
cis-1,2-Dichloroethylene	10.9	1.0	µg/L	10.0		109	70-130				
trans-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130				
1,2-Dichloropropane	10.5	1.0	µg/L	10.0		105	70-130				
1,3-Dichloropropane	10.9	0.50	µg/L	10.0		109	70-130				
2,2-Dichloropropane	6.76	1.0	µg/L	10.0		67.6	40-130			V-05	†
1,1-Dichloropropene	10.8	2.0	µg/L	10.0		108	70-130				
cis-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101	70-130				
trans-1,3-Dichloropropene	9.35	0.50	µg/L	10.0		93.5	70-130				
Diethyl Ether	11.1	2.0	µg/L	10.0		111	70-130				
Diisopropyl Ether (DIPE)	11.0	0.50	µg/L	10.0		110	70-130				
1,4-Dioxane	89.4	50	µg/L	100		89.4	40-130				†
Ethylbenzene	10.7	1.0	µg/L	10.0		107	70-130				
Hexachlorobutadiene	9.38	0.60	µg/L	10.0		93.8	70-130				
2-Hexanone (MBK)	108	10	µg/L	100		108	70-160				†
Isopropylbenzene (Cumene)	10.5	1.0	µg/L	10.0		105	70-130				
p-Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105	70-130				
Methyl Acetate	9.74	1.0	µg/L	10.0		97.4	70-130				
Methyl tert-Butyl Ether (MTBE)	9.34	1.0	µg/L	10.0		93.4	70-130				
Methyl Cyclohexane	9.78	1.0	µg/L	10.0		97.8	70-130				
Methylene Chloride	10.2	5.0	µg/L	10.0		102	70-130				
4-Methyl-2-pentanone (MIBK)	109	10	µg/L	100		109	70-160				†
Naphthalene	9.59	2.0	µg/L	10.0		95.9	40-130			V-05	†
n-Propylbenzene	10.2	1.0	µg/L	10.0		102	70-130				
Styrene	10.5	1.0	µg/L	10.0		105	70-130				
1,1,1,2-Tetrachloroethane	10.6	1.0	µg/L	10.0		106	70-130				
1,1,2,2-Tetrachloroethane	9.43	0.50	µg/L	10.0		94.3	70-130				
Tetrachloroethylene	10.4	1.0	µg/L	10.0		104	70-130				
Tetrahydrofuran	9.22	10	µg/L	10.0		92.2	70-130			J	
Toluene	10.7	1.0	µg/L	10.0		107	70-130				
1,2,3-Trichlorobenzene	9.91	5.0	µg/L	10.0		99.1	70-130				
1,2,4-Trichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130				
1,3,5-Trichlorobenzene	9.91	1.0	µg/L	10.0		99.1	70-130				
1,1,1-Trichloroethane	10.5	1.0	µg/L	10.0		105	70-130				
1,1,2-Trichloroethane	10.6	1.0	µg/L	10.0		106	70-130				
Trichloroethylene	11.7	1.0	µg/L	10.0		117	70-130				
Trichlorofluoromethane (Freon 11)	10.8	2.0	µg/L	10.0		108	70-130				
1,2,3-Trichloropropane	10.5	2.0	µg/L	10.0		105	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B349354 - SW-846 5030B											
LCS (B349354-BS1)				Prepared: 08/17/23 Analyzed: 08/18/23							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.9	1.0	µg/L	10.0		109	70-130				
1,2,4-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130				
1,3,5-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130				
Vinyl Chloride	10.6	2.0	µg/L	10.0		106	40-160				†
m+p Xylene	21.1	2.0	µg/L	20.0		105	70-130				
o-Xylene	10.5	1.0	µg/L	10.0		105	70-130				
Surrogate: 1,2-Dichloroethane-d4	*25.9*		µg/L	25.0		104	70-130				
Surrogate: Toluene-d8	*25.8*		µg/L	25.0		103	70-130				
Surrogate: 4-Bromofluorobenzene	*24.7*		µg/L	25.0		98.7	70-130				
LCS Dup (B349354-BSD1)				Prepared: 08/17/23 Analyzed: 08/18/23							
Acetone	106	50	µg/L	100		106	70-160	2.57	25	V-35	†
Acrylonitrile	10.0	5.0	µg/L	10.0		100	70-130	6.06	25		
tert-Amyl Methyl Ether (TAME)	7.87	0.50	µg/L	10.0		78.7	70-130	1.54	25	V-05	
Benzene	11.7	1.0	µg/L	10.0		117	70-130	4.20	25		
Bromobenzene	11.4	1.0	µg/L	10.0		114	70-130	5.15	25		
Bromochloromethane	12.5	1.0	µg/L	10.0		125	70-130	4.00	25	V-20	
Bromodichloromethane	11.4	0.50	µg/L	10.0		114	70-130	1.51	25		
Bromoform	10.3	1.0	µg/L	10.0		103	70-130	3.76	25		
Bromomethane	9.45	2.0	µg/L	10.0		94.5	40-160	7.69	25	V-05, V-34	†
2-Butanone (MEK)	104	20	µg/L	100		104	40-160	7.03	25		†
tert-Butyl Alcohol (TBA)	92.0	20	µg/L	100		92.0	40-160	11.5	25		†
n-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130	8.06	25		
sec-Butylbenzene	11.6	1.0	µg/L	10.0		116	70-130	8.48	25		
tert-Butylbenzene	11.7	1.0	µg/L	10.0		117	70-130	7.37	25		
tert-Butyl Ethyl Ether (TBEE)	8.56	0.50	µg/L	10.0		85.6	70-130	3.69	25		
Carbon Disulfide	104	5.0	µg/L	100		104	70-130	5.71	25	V-35	
Carbon Tetrachloride	11.4	5.0	µg/L	10.0		114	70-130	6.17	25		
Chlorobenzene	11.7	1.0	µg/L	10.0		117	70-130	7.66	25		
Chlorodibromomethane	10.9	0.50	µg/L	10.0		109	70-130	0.459	25		
Chloroethane	8.99	2.0	µg/L	10.0		89.9	70-130	5.20	25		
Chloroform	11.3	2.0	µg/L	10.0		113	70-130	3.78	25		
Chloromethane	11.3	2.0	µg/L	10.0		113	40-160	16.5	25	V-05, V-34	†
2-Chlorotoluene	9.67	1.0	µg/L	10.0		96.7	70-130	2.62	25		
4-Chlorotoluene	11.3	1.0	µg/L	10.0		113	70-130	4.72	25		
1,2-Dibromo-3-chloropropane (DBCP)	10.5	5.0	µg/L	10.0		105	70-130	8.64	25		
1,2-Dibromoethane (EDB)	11.0	0.50	µg/L	10.0		110	70-130	1.83	25		
Dibromomethane	10.8	1.0	µg/L	10.0		108	70-130	1.28	25		
1,2-Dichlorobenzene	11.7	1.0	µg/L	10.0		117	70-130	8.63	25		
1,3-Dichlorobenzene	11.9	1.0	µg/L	10.0		119	70-130	7.80	25		
1,4-Dichlorobenzene	11.3	1.0	µg/L	10.0		113	70-130	5.09	25		
trans-1,4-Dichloro-2-butene	7.71	2.0	µg/L	10.0		77.1	70-130	2.36	25		
Dichlorodifluoromethane (Freon 12)	10.6	2.0	µg/L	10.0		106	40-160	8.13	25		†
1,1-Dichloroethane	11.4	1.0	µg/L	10.0		114	70-130	5.47	25		
1,2-Dichloroethane	10.4	1.0	µg/L	10.0		104	70-130	2.34	25		
1,1-Dichloroethylene	11.4	1.0	µg/L	10.0		114	70-130	3.57	25		
cis-1,2-Dichloroethylene	11.4	1.0	µg/L	10.0		114	70-130	4.39	25		
trans-1,2-Dichloroethylene	11.1	1.0	µg/L	10.0		111	70-130	6.12	25		
1,2-Dichloropropane	11.0	1.0	µg/L	10.0		110	70-130	4.37	25		
1,3-Dichloropropane	11.2	0.50	µg/L	10.0		112	70-130	2.45	25		
2,2-Dichloropropane	7.13	1.0	µg/L	10.0		71.3	40-130	5.33	25	V-05	†
1,1-Dichloropropene	11.5	2.0	µg/L	10.0		115	70-130	6.62	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B349354 - SW-846 5030B											
LCS Dup (B349354-BSD1)				Prepared: 08/17/23 Analyzed: 08/18/23							
cis-1,3-Dichloropropene	10.0	0.50	µg/L	10.0		100	70-130	0.497	25		
trans-1,3-Dichloropropene	9.16	0.50	µg/L	10.0		91.6	70-130	2.05	25		
Diethyl Ether	11.5	2.0	µg/L	10.0		115	70-130	3.19	25		
Diisopropyl Ether (DIPE)	11.6	0.50	µg/L	10.0		116	70-130	5.85	25		
1,4-Dioxane	102	50	µg/L	100		102	40-130	13.3	50		† ‡
Ethylbenzene	11.3	1.0	µg/L	10.0		113	70-130	4.91	25		
Hexachlorobutadiene	10.8	0.60	µg/L	10.0		108	70-130	14.4	25		
2-Hexanone (MBK)	108	10	µg/L	100		108	70-160	0.351	25		†
Isopropylbenzene (Cumene)	11.3	1.0	µg/L	10.0		113	70-130	6.89	25		
p-Isopropyltoluene (p-Cymene)	11.4	1.0	µg/L	10.0		114	70-130	8.19	25		
Methyl Acetate	9.10	1.0	µg/L	10.0		91.0	70-130	6.79	25		
Methyl tert-Butyl Ether (MTBE)	9.48	1.0	µg/L	10.0		94.8	70-130	1.49	25		
Methyl Cyclohexane	10.2	1.0	µg/L	10.0		102	70-130	4.40	25		
Methylene Chloride	10.6	5.0	µg/L	10.0		106	70-130	3.64	25		
4-Methyl-2-pentanone (MIBK)	113	10	µg/L	100		113	70-160	3.96	25		†
Naphthalene	10.6	2.0	µg/L	10.0		106	40-130	10.5	25	V-05	†
n-Propylbenzene	11.0	1.0	µg/L	10.0		110	70-130	8.11	25		
Styrene	11.4	1.0	µg/L	10.0		114	70-130	7.86	25		
1,1,1,2-Tetrachloroethane	11.3	1.0	µg/L	10.0		113	70-130	6.20	25		
1,1,2,2-Tetrachloroethane	10.5	0.50	µg/L	10.0		105	70-130	11.0	25		
Tetrachloroethylene	10.7	1.0	µg/L	10.0		107	70-130	2.65	25		
Tetrahydrofuran	10.4	10	µg/L	10.0		104	70-130	11.5	25		
Toluene	11.2	1.0	µg/L	10.0		112	70-130	3.93	25		
1,2,3-Trichlorobenzene	10.8	5.0	µg/L	10.0		108	70-130	8.69	25		
1,2,4-Trichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	7.66	25		
1,3,5-Trichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	10.4	25		
1,1,1-Trichloroethane	10.8	1.0	µg/L	10.0		108	70-130	3.09	25		
1,1,2-Trichloroethane	11.2	1.0	µg/L	10.0		112	70-130	5.88	25		
Trichloroethylene	11.9	1.0	µg/L	10.0		119	70-130	1.87	25		
Trichlorofluoromethane (Freon 11)	11.6	2.0	µg/L	10.0		116	70-130	6.96	25		
1,2,3-Trichloropropane	11.1	2.0	µg/L	10.0		111	70-130	5.65	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.4	1.0	µg/L	10.0		114	70-130	4.40	25		
1,2,4-Trimethylbenzene	11.6	1.0	µg/L	10.0		116	70-130	8.27	25		
1,3,5-Trimethylbenzene	11.1	1.0	µg/L	10.0		111	70-130	7.99	25		
Vinyl Chloride	11.8	2.0	µg/L	10.0		118	40-160	11.0	25		†
m+p Xylene	22.5	2.0	µg/L	20.0		112	70-130	6.38	25		
o-Xylene	11.3	1.0	µg/L	10.0		113	70-130	7.14	25		
Surrogate: 1,2-Dichloroethane-d4	*24.9*		µg/L	25.0		99.6	70-130				
Surrogate: Toluene-d8	*25.3*		µg/L	25.0		101	70-130				
Surrogate: 4-Bromofluorobenzene	*24.5*		µg/L	25.0		97.8	70-130				

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
Blank (B349687-BLK1)				Prepared: 08/21/23 Analyzed: 08/29/23						
alpha-Chlordane	ND	0.050	µg/L							
alpha-Chlordane [2C]	ND	0.050	µg/L							
gamma-Chlordane	ND	0.050	µg/L							
gamma-Chlordane [2C]	ND	0.050	µg/L							
Alachlor	ND	0.20	µg/L							
Alachlor [2C]	ND	0.20	µg/L							
Aldrin	ND	0.050	µg/L							
Aldrin [2C]	ND	0.050	µg/L							
alpha-BHC	ND	0.050	µg/L							
alpha-BHC [2C]	ND	0.050	µg/L							
beta-BHC	ND	0.050	µg/L							
beta-BHC [2C]	ND	0.050	µg/L							
delta-BHC	ND	0.050	µg/L							
delta-BHC [2C]	ND	0.050	µg/L							
gamma-BHC (Lindane)	ND	0.030	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.030	µg/L							
Chlordane	ND	0.20	µg/L							
Chlordane [2C]	ND	0.20	µg/L							
4,4'-DDD	ND	0.040	µg/L							
4,4'-DDD [2C]	ND	0.040	µg/L							
4,4'-DDE	ND	0.040	µg/L							
4,4'-DDE [2C]	ND	0.040	µg/L							
4,4'-DDT	ND	0.040	µg/L							
4,4'-DDT [2C]	ND	0.040	µg/L							
Dieldrin	ND	0.0020	µg/L							
Dieldrin [2C]	ND	0.0020	µg/L							
Endosulfan I	ND	0.050	µg/L							
Endosulfan I [2C]	ND	0.050	µg/L							
Endosulfan II	ND	0.080	µg/L							
Endosulfan II [2C]	ND	0.080	µg/L							
Endosulfan Sulfate	ND	0.080	µg/L							
Endosulfan Sulfate [2C]	ND	0.080	µg/L							
Endrin	ND	0.080	µg/L							
Endrin [2C]	ND	0.080	µg/L							
Endrin Aldehyde	ND	0.080	µg/L							
Endrin Aldehyde [2C]	ND	0.080	µg/L							
Endrin Ketone	ND	0.080	µg/L							
Endrin Ketone [2C]	ND	0.080	µg/L							
Heptachlor	ND	0.050	µg/L							
Heptachlor [2C]	ND	0.050	µg/L							
Heptachlor Epoxide	ND	0.050	µg/L							
Heptachlor Epoxide [2C]	ND	0.050	µg/L							
Hexachlorobenzene	ND	0.050	µg/L							
Hexachlorobenzene [2C]	ND	0.050	µg/L							
Methoxychlor	ND	0.50	µg/L							
Methoxychlor [2C]	ND	0.50	µg/L							
Toxaphene	ND	1.0	µg/L							
Toxaphene [2C]	ND	1.0	µg/L							
Surrogate: Decachlorobiphenyl	*2.75*		µg/L	4.00		68.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.22*		µg/L	4.00		80.5	30-150			
Surrogate: Tetrachloro-m-xylene	*2.02*		µg/L	4.00		50.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.03*		µg/L	4.00		50.7	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
LCS (B349687-BS1)				Prepared: 08/21/23 Analyzed: 08/29/23						
alpha-Chlordane	1.9	0.050	µg/L	2.00		96.6	0-200			
alpha-Chlordane [2C]	1.9	0.050	µg/L	2.00		93.2	0-200			
gamma-Chlordane	1.9	0.050	µg/L	2.00		94.1	0-200			
gamma-Chlordane [2C]	1.9	0.050	µg/L	2.00		95.2	0-200			
Alachlor	1.9	0.20	µg/L	2.00		94.9	40-140			
Alachlor [2C]	1.9	0.20	µg/L	2.00		97.2	40-140			
Aldrin	1.4	0.050	µg/L	2.00		72.4	40-140			
Aldrin [2C]	1.4	0.050	µg/L	2.00		68.0	40-140			
alpha-BHC	2.0	0.050	µg/L	2.00		99.7	40-140			
alpha-BHC [2C]	1.7	0.050	µg/L	2.00		87.5	40-140			
beta-BHC	2.0	0.050	µg/L	2.00		100	40-140			
beta-BHC [2C]	1.8	0.050	µg/L	2.00		90.6	40-140			
delta-BHC	2.0	0.050	µg/L	2.00		101	40-140			
delta-BHC [2C]	1.9	0.050	µg/L	2.00		94.4	40-140			
gamma-BHC (Lindane)	2.0	0.030	µg/L	2.00		98.8	40-140			
gamma-BHC (Lindane) [2C]	1.8	0.030	µg/L	2.00		90.5	40-140			
4,4'-DDD	2.1	0.040	µg/L	2.00		106	40-140			
4,4'-DDD [2C]	2.3	0.040	µg/L	2.00		117	40-140			
4,4'-DDE	2.0	0.040	µg/L	2.00		99.5	40-140			
4,4'-DDE [2C]	2.1	0.040	µg/L	2.00		106	40-140			
4,4'-DDT	2.0	0.040	µg/L	2.00		97.9	40-140			
4,4'-DDT [2C]	2.1	0.040	µg/L	2.00		104	40-140			
Dieldrin	2.0	0.0020	µg/L	2.00		98.2	40-140			
Dieldrin [2C]	2.1	0.0020	µg/L	2.00		104	40-140			
Endosulfan I	2.0	0.050	µg/L	2.00		101	40-140			
Endosulfan I [2C]	2.0	0.050	µg/L	2.00		98.1	40-140			
Endosulfan II	1.9	0.080	µg/L	2.00		94.6	40-140			
Endosulfan II [2C]	2.1	0.080	µg/L	2.00		104	40-140			
Endosulfan Sulfate	1.9	0.080	µg/L	2.00		97.0	40-140			
Endosulfan Sulfate [2C]	2.1	0.080	µg/L	2.00		106	40-140			
Endrin	2.1	0.080	µg/L	2.00		103	40-140			
Endrin [2C]	2.1	0.080	µg/L	2.00		105	40-140			
Endrin Aldehyde	1.8	0.080	µg/L	2.00		90.3	40-140			
Endrin Aldehyde [2C]	2.1	0.080	µg/L	2.00		107	40-140			
Endrin Ketone	1.9	0.080	µg/L	2.00		96.3	40-140			
Endrin Ketone [2C]	2.0	0.080	µg/L	2.00		101	40-140			
Heptachlor	1.6	0.050	µg/L	2.00		80.6	40-140			
Heptachlor [2C]	1.5	0.050	µg/L	2.00		74.4	40-140			
Heptachlor Epoxide	2.0	0.050	µg/L	2.00		100	40-140			
Heptachlor Epoxide [2C]	1.9	0.050	µg/L	2.00		93.2	40-140			
Hexachlorobenzene	1.7	0.050	µg/L	2.00		84.8	40-140			
Hexachlorobenzene [2C]	1.8	0.050	µg/L	2.00		92.2	40-140			V-06
Methoxychlor	1.8	0.50	µg/L	2.00		88.3	40-140			
Methoxychlor [2C]	1.9	0.50	µg/L	2.00		93.9	40-140			
Surrogate: Decachlorobiphenyl	*3.08*		µg/L	4.00		77.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.48*		µg/L	4.00		86.9	30-150			
Surrogate: Tetrachloro-m-xylene	*2.57*		µg/L	4.00		64.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*2.32*		µg/L	4.00		57.9	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349687 - SW-846 3510C										
LCS Dup (B349687-BSD1)				Prepared: 08/21/23 Analyzed: 08/29/23						
alpha-Chlordane	2.0	0.050	µg/L	2.00		97.9	0-200	1.31		
alpha-Chlordane [2C]	1.9	0.050	µg/L	2.00		94.3	0-200	1.21		
gamma-Chlordane	1.9	0.050	µg/L	2.00		94.5	0-200	0.419		
gamma-Chlordane [2C]	1.9	0.050	µg/L	2.00		94.9	0-200	0.329		
Alachlor	2.0	0.20	µg/L	2.00		98.1	40-140	3.36	20	
Alachlor [2C]	2.0	0.20	µg/L	2.00		98.9	40-140	1.75	20	
Aldrin	1.4	0.050	µg/L	2.00		68.1	40-140	6.15	20	
Aldrin [2C]	1.3	0.050	µg/L	2.00		62.9	40-140	7.82	20	
alpha-BHC	1.9	0.050	µg/L	2.00		94.1	40-140	5.80	20	
alpha-BHC [2C]	1.6	0.050	µg/L	2.00		78.7	40-140	10.6	20	
beta-BHC	2.0	0.050	µg/L	2.00		98.8	40-140	1.42	20	
beta-BHC [2C]	1.8	0.050	µg/L	2.00		92.2	40-140	1.66	20	
delta-BHC	2.1	0.050	µg/L	2.00		104	40-140	3.21	20	
delta-BHC [2C]	1.9	0.050	µg/L	2.00		96.1	40-140	1.72	20	
gamma-BHC (Lindane)	1.9	0.030	µg/L	2.00		95.8	40-140	3.08	20	
gamma-BHC (Lindane) [2C]	1.7	0.030	µg/L	2.00		83.3	40-140	8.31	20	
4,4'-DDD	2.2	0.040	µg/L	2.00		110	40-140	3.79	20	
4,4'-DDD [2C]	2.5	0.040	µg/L	2.00		123	40-140	5.41	20	
4,4'-DDE	2.1	0.040	µg/L	2.00		104	40-140	4.02	20	
4,4'-DDE [2C]	2.1	0.040	µg/L	2.00		103	40-140	2.52	20	
4,4'-DDT	2.1	0.040	µg/L	2.00		104	40-140	6.03	20	
4,4'-DDT [2C]	2.2	0.040	µg/L	2.00		108	40-140	4.63	20	
Dieldrin	2.0	0.0020	µg/L	2.00		102	40-140	3.59	20	
Dieldrin [2C]	2.1	0.0020	µg/L	2.00		106	40-140	2.48	20	
Endosulfan I	2.1	0.050	µg/L	2.00		104	40-140	2.67	20	
Endosulfan I [2C]	2.0	0.050	µg/L	2.00		100	40-140	2.26	20	
Endosulfan II	2.0	0.080	µg/L	2.00		100	40-140	6.06	20	
Endosulfan II [2C]	2.2	0.080	µg/L	2.00		109	40-140	5.05	20	
Endosulfan Sulfate	2.1	0.080	µg/L	2.00		104	40-140	7.13	20	
Endosulfan Sulfate [2C]	2.2	0.080	µg/L	2.00		112	40-140	5.54	20	
Endrin	2.2	0.080	µg/L	2.00		108	40-140	4.41	20	
Endrin [2C]	2.2	0.080	µg/L	2.00		108	40-140	2.86	20	
Endrin Aldehyde	1.9	0.080	µg/L	2.00		97.4	40-140	7.55	20	
Endrin Aldehyde [2C]	2.3	0.080	µg/L	2.00		113	40-140	5.07	20	
Endrin Ketone	2.0	0.080	µg/L	2.00		102	40-140	6.05	20	
Endrin Ketone [2C]	2.1	0.080	µg/L	2.00		107	40-140	5.71	20	
Heptachlor	1.5	0.050	µg/L	2.00		75.6	40-140	6.33	20	
Heptachlor [2C]	1.4	0.050	µg/L	2.00		68.1	40-140	8.91	20	
Heptachlor Epoxide	2.0	0.050	µg/L	2.00		101	40-140	1.11	20	
Heptachlor Epoxide [2C]	1.9	0.050	µg/L	2.00		93.3	40-140	0.111	20	
Hexachlorobenzene	1.5	0.050	µg/L	2.00		76.0	40-140	11.0	20	
Hexachlorobenzene [2C]	1.6	0.050	µg/L	2.00		80.3	40-140	13.8	20	V-06
Methoxychlor	1.9	0.50	µg/L	2.00		94.3	40-140	6.51	20	
Methoxychlor [2C]	2.0	0.50	µg/L	2.00		100	40-140	6.67	20	
Surrogate: Decachlorobiphenyl	*2.84*		µg/L	4.00		71.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*3.28*		µg/L	4.00		82.0	30-150			
Surrogate: Tetrachloro-m-xylene	*1.93*		µg/L	4.00		48.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.68*		µg/L	4.00		42.1	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349399 - SW-846 3005A										
Blank (B349399-BLK1)				Prepared: 08/17/23 Analyzed: 08/21/23						
Aluminum	0.026	0.050	mg/L							J
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Calcium	ND	0.50	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Magnesium	ND	0.050	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Blank (B349399-BLK2)				Prepared: 08/17/23 Analyzed: 08/22/23						
Aluminum	0.039	0.050	mg/L							B, J
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.010	mg/L							
LCS (B349399-BS1)				Prepared: 08/17/23 Analyzed: 08/21/23						
Aluminum	0.558	0.050	mg/L	0.500		112	45.3-154.7			
Antimony	0.533	0.050	mg/L	0.500		107	80-120			
Arsenic	0.506	0.010	mg/L	0.500		101	80-120			
Barium	0.541	0.050	mg/L	0.500		108	80-120			
Beryllium	0.541	0.0040	mg/L	0.500		108	80-120			
Cadmium	0.523	0.0040	mg/L	0.500		105	80-120			
Calcium	4.21	0.50	mg/L	4.00		105	80-120			
Chromium	0.535	0.010	mg/L	0.500		107	80-120			
Cobalt	0.537	0.010	mg/L	0.500		107	80-120			
Copper	1.03	0.010	mg/L	1.00		103	80-120			
Iron	4.28	0.050	mg/L	4.00		107	80-120			
Lead	0.549	0.010	mg/L	0.500		110	80-120			
Magnesium	4.07	0.050	mg/L	4.00		102	80-120			
Manganese	0.532	0.010	mg/L	0.500		106	80-120			
Nickel	0.545	0.010	mg/L	0.500		109	80-120			
Potassium	4.20	2.0	mg/L	4.00		105	80-120			
Selenium	0.540	0.050	mg/L	0.500		108	80-120			
Silver	0.483	0.010	mg/L	0.500		96.5	80-120			
Sodium	4.21	2.0	mg/L	4.00		105	80-120			
Thallium	0.579	0.050	mg/L	0.500		116	80-120			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349399 - SW-846 3005A										
LCS (B349399-BS2)				Prepared: 08/17/23 Analyzed: 08/22/23						
Aluminum	0.543	0.050	mg/L	0.500		109	45.3-154.7			
Vanadium	0.528	0.010	mg/L	0.500		106	80-120			
Zinc	1.08	0.010	mg/L	1.00		108	80-120			
LCS Dup (B349399-BSD1)				Prepared: 08/17/23 Analyzed: 08/21/23						
Aluminum	0.548	0.050	mg/L	0.500		110	45.3-154.7	1.81	30	
Antimony	0.525	0.050	mg/L	0.500		105	80-120	1.50	20	
Arsenic	0.496	0.010	mg/L	0.500		99.2	80-120	1.91	20	
Barium	0.533	0.050	mg/L	0.500		107	80-120	1.53	20	
Beryllium	0.540	0.0040	mg/L	0.500		108	80-120	0.252	20	
Cadmium	0.512	0.0040	mg/L	0.500		102	80-120	2.09	20	
Calcium	4.24	0.50	mg/L	4.00		106	80-120	0.796	20	
Chromium	0.527	0.010	mg/L	0.500		105	80-120	1.50	20	
Cobalt	0.528	0.010	mg/L	0.500		106	80-120	1.55	20	
Copper	1.00	0.010	mg/L	1.00		100	80-120	2.08	20	
Iron	4.36	0.050	mg/L	4.00		109	80-120	1.71	20	
Lead	0.539	0.010	mg/L	0.500		108	80-120	1.87	20	
Magnesium	4.14	0.050	mg/L	4.00		103	80-120	1.57	20	
Manganese	0.540	0.010	mg/L	0.500		108	80-120	1.60	20	
Nickel	0.538	0.010	mg/L	0.500		108	80-120	1.33	30	
Potassium	4.27	2.0	mg/L	4.00		107	80-120	1.73	20	
Selenium	0.527	0.050	mg/L	0.500		105	80-120	2.51	20	
Silver	0.467	0.010	mg/L	0.500		93.4	80-120	3.26	20	
Sodium	4.26	2.0	mg/L	4.00		107	80-120	1.22	20	
Thallium	0.568	0.050	mg/L	0.500		114	80-120	1.96	20	
LCS Dup (B349399-BSD2)				Prepared: 08/17/23 Analyzed: 08/22/23						
Aluminum	0.521	0.050	mg/L	0.500		104	45.3-154.7	4.13	30	
Vanadium	0.520	0.010	mg/L	0.500		104	80-120	1.45	20	
Zinc	1.04	0.010	mg/L	1.00		104	80-120	3.99	20	

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BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM1	Analyzed:	08/29/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	3.46
Endrin [1]	2.39

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	3.26
Endrin [2]	1.90

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM2	Analyzed:	08/29/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	4.70
Endrin [1]	2.81

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.23
Endrin [2]	2.03

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM3	Analyzed:	08/30/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	5.00
Endrin [1]	3.13

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BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM3	Analyzed:	08/30/2023

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.48
Endrin [2]	2.08

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM4	Analyzed:	08/30/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	4.11
Endrin [1]	2.58

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	3.51
Endrin [2]	1.53

BREAKDOWN REPORT

Lab Sample ID:	S092824-PEM5	Analyzed:	08/30/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	6.32
Endrin [1]	3.29

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	5.39
Endrin [2]	2.30

BREAKDOWN REPORT

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BREAKDOWN REPORT

Lab Sample ID:	S092846-PEM1	Analyzed:	08/31/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	8.16
Endrin [1]	5.75

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	6.86
Endrin [2]	4.25

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B349687-BS1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.856	6.826	6.886	2.1	
	2	6.786	6.756	6.816	2.3	9.1
4,4'-DDE	1	6.437	6.407	6.467	2.0	
	2	6.382	6.352	6.412	2.1	4.9
4,4'-DDT	1	7.060	7.030	7.090	2.0	
	2	7.012	6.983	7.043	2.1	4.9
Alachlor	1	5.909	5.879	5.939	1.9	
	2	5.634	5.605	5.665	1.9	0.0
Aldrin	1	5.810	5.779	5.839	1.4	
	2	5.675	5.645	5.705	1.4	6.9
alpha-BHC	1	5.165	5.135	5.195	2.0	
	2	5.057	5.028	5.088	1.7	16.2
alpha-Chlordane	1	6.374	6.345	6.405	1.9	
	2	6.250	6.221	6.281	1.9	0.0
beta-BHC	1	5.395	5.365	5.425	2.0	
	2	5.295	5.266	5.326	1.8	10.5
delta-BHC	1	5.499	5.469	5.529	2.0	
	2	5.457	5.428	5.488	1.9	5.1
Dieldrin	1	6.631	6.601	6.661	2.0	
	2	6.466	6.436	6.496	2.1	4.9
Endosulfan I	1	6.465	6.434	6.494	2.0	
	2	6.281	6.251	6.311	2.0	0.0
Endosulfan II	1	6.953	6.923	6.983	1.9	
	2	6.827	6.796	6.856	2.1	10.0
Endosulfan Sulfate	1	7.591	7.560	7.620	1.9	
	2	7.284	7.254	7.314	2.1	10.0
Endrin	1	6.793	6.762	6.822	2.1	
	2	6.672	6.643	6.703	2.1	0.0
Endrin Aldehyde	1	7.262	7.232	7.292	1.8	
	2	7.075	7.045	7.105	2.1	15.4
Endrin Ketone	1	7.801	7.770	7.830	1.9	

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B349687-BS1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	7.674	7.644	7.704	2.0	5.1
gamma-BHC (Lindane)	1	5.344	5.314	5.374	2.0	
	2	5.245	5.216	5.276	1.8	10.5
gamma-Chlordane	1	6.285	6.255	6.315	1.9	
	2	6.154	6.124	6.184	1.9	0.0
Heptachlor	1	5.625	5.595	5.655	1.6	
	2	5.489	5.459	5.519	1.5	6.5
Heptachlor Epoxide	1	6.202	6.171	6.231	2.0	
	2	6.030	6.001	6.061	1.9	5.1
Hexachlorobenzene	1	5.070	5.040	5.100	1.7	
	2	4.981	4.952	5.012	1.8	5.7
Methoxychlor	1	7.438	7.407	7.467	1.8	
	2	7.551	7.521	7.581	1.9	5.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B349687-BSD1 Date(s) Analyzed: 08/29/2023 08/29/2023

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	6.857	6.826	6.886	2.2	
	2	6.786	6.756	6.816	2.5	12.8
4,4'-DDE	1	6.437	6.407	6.467	2.1	
	2	6.383	6.352	6.412	2.1	0.0
4,4'-DDT	1	7.060	7.030	7.090	2.1	
	2	7.013	6.983	7.043	2.2	4.7
Alachlor	1	5.909	5.879	5.939	2.0	
	2	5.634	5.605	5.665	2.0	0.0
Aldrin	1	5.809	5.779	5.839	1.4	
	2	5.674	5.645	5.705	1.3	7.4
alpha-BHC	1	5.165	5.135	5.195	1.9	
	2	5.057	5.028	5.088	1.6	17.1
alpha-Chlordane	1	6.375	6.345	6.405	2.0	
	2	6.251	6.221	6.281	1.9	5.1
beta-BHC	1	5.396	5.365	5.425	2.0	
	2	5.295	5.266	5.326	1.8	10.5
delta-BHC	1	5.499	5.469	5.529	2.1	
	2	5.457	5.428	5.488	1.9	10.0
Dieldrin	1	6.632	6.601	6.661	2.0	
	2	6.467	6.436	6.496	2.1	4.9
Endosulfan I	1	6.465	6.434	6.494	2.1	
	2	6.281	6.251	6.311	2.0	4.9
Endosulfan II	1	6.953	6.923	6.983	2.0	
	2	6.827	6.796	6.856	2.2	9.5
Endosulfan Sulfate	1	7.592	7.560	7.620	2.1	
	2	7.284	7.254	7.314	2.2	4.7
Endrin	1	6.794	6.762	6.822	2.2	
	2	6.673	6.643	6.703	2.2	0.0
Endrin Aldehyde	1	7.263	7.232	7.292	1.9	
	2	7.076	7.045	7.105	2.3	14.0
Endrin Ketone	1	7.801	7.770	7.830	2.0	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

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			FROM	TO		
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gamma-BHC (Lindane)	1	5.344	5.314	5.374	1.9	
	2	5.245	5.216	5.276	1.7	11.1
gamma-Chlordane	1	6.285	6.255	6.315	1.9	
	2	6.154	6.124	6.184	1.9	0.0
Heptachlor	1	5.624	5.595	5.655	1.5	
	2	5.488	5.459	5.519	1.4	6.9
Heptachlor Epoxide	1	6.201	6.171	6.231	2.0	
	2	6.030	6.001	6.061	1.9	5.1
Hexachlorobenzene	1	5.070	5.040	5.100	1.5	
	2	4.982	4.952	5.012	1.6	6.5
Methoxychlor	1	7.438	7.407	7.467	1.9	
	2	7.551	7.521	7.581	2.0	5.1

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated laboratory blank as well as in the sample.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
RL-11	Elevated reporting limit due to high concentration of target compounds.
S-12	Surrogate recovery is outside of control limits on confirmatory column, but within control limits on primary column. Data validation is not affected.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Water	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA

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CERTIFICATIONS

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Analyte	Certifications
SW-846 8081B in Water	
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8260D in Water	
Acetone	CT,ME,NH,VA,NY
Acrylonitrile	CT,ME,NH,VA,NY
tert-Amyl Methyl Ether (TAME)	ME,NH,VA,NY
Benzene	CT,ME,NH,VA,NY
Bromobenzene	ME,NY
Bromochloromethane	ME,NH,VA,NY
Bromodichloromethane	CT,ME,NH,VA,NY
Bromoform	CT,ME,NH,VA,NY
Bromomethane	CT,ME,NH,VA,NY
2-Butanone (MEK)	CT,ME,NH,VA,NY
tert-Butyl Alcohol (TBA)	ME,NH,VA,NY
n-Butylbenzene	ME,VA,NY
sec-Butylbenzene	ME,VA,NY
tert-Butylbenzene	ME,VA,NY
tert-Butyl Ethyl Ether (TBEE)	ME,NH,VA,NY
Carbon Disulfide	CT,ME,NH,VA,NY
Carbon Tetrachloride	CT,ME,NH,VA,NY
Chlorobenzene	CT,ME,NH,VA,NY
Chlorodibromomethane	CT,ME,NH,VA,NY
Chloroethane	CT,ME,NH,VA,NY
Chloroform	CT,ME,NH,VA,NY
Chloromethane	CT,ME,NH,VA,NY
2-Chlorotoluene	ME,NH,VA,NY
4-Chlorotoluene	ME,NH,VA,NY

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CERTIFICATIONS

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Analyte	Certifications
SW-846 8260D in Water	
1,2-Dibromo-3-chloropropane (DBCP)	ME,NY
1,2-Dibromoethane (EDB)	ME,NY
Dibromomethane	ME,NH,VA,NY
1,2-Dichlorobenzene	CT,ME,NH,VA,NY
1,3-Dichlorobenzene	CT,ME,NH,VA,NY
1,4-Dichlorobenzene	CT,ME,NH,VA,NY
trans-1,4-Dichloro-2-butene	ME,NH,VA,NY
Dichlorodifluoromethane (Freon 12)	ME,NH,VA,NY
1,1-Dichloroethane	CT,ME,NH,VA,NY
1,2-Dichloroethane	CT,ME,NH,VA,NY
1,1-Dichloroethylene	CT,ME,NH,VA,NY
cis-1,2-Dichloroethylene	ME,NY
trans-1,2-Dichloroethylene	CT,ME,NH,VA,NY
1,2-Dichloropropane	CT,ME,NH,VA,NY
1,3-Dichloropropane	ME,VA,NY
2,2-Dichloropropane	ME,NH,VA,NY
1,1-Dichloropropene	ME,NH,VA,NY
cis-1,3-Dichloropropene	CT,ME,NH,VA,NY
trans-1,3-Dichloropropene	CT,ME,NH,VA,NY
Diethyl Ether	ME,NY
Diisopropyl Ether (DIPE)	ME,NH,VA,NY
1,4-Dioxane	ME,NY
Ethylbenzene	CT,ME,NH,VA,NY
Hexachlorobutadiene	CT,ME,NH,VA,NY
2-Hexanone (MBK)	CT,ME,NH,VA,NY
Isopropylbenzene (Cumene)	ME,VA,NY
p-Isopropyltoluene (p-Cymene)	CT,ME,NH,VA,NY
Methyl Acetate	ME,NY
Methyl tert-Butyl Ether (MTBE)	CT,ME,NH,VA,NY
Methyl Cyclohexane	NY
Methylene Chloride	CT,ME,NH,VA,NY
4-Methyl-2-pentanone (MIBK)	CT,ME,NH,VA,NY
Naphthalene	ME,NH,VA,NY
n-Propylbenzene	CT,ME,NH,VA,NY
Styrene	CT,ME,NH,VA,NY
1,1,1,2-Tetrachloroethane	CT,ME,NH,VA,NY
1,1,2,2-Tetrachloroethane	CT,ME,NH,VA,NY
Tetrachloroethylene	CT,ME,NH,VA,NY
Toluene	CT,ME,NH,VA,NY
1,2,3-Trichlorobenzene	ME,NH,VA,NY
1,2,4-Trichlorobenzene	CT,ME,NH,VA,NY
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,ME,NH,VA,NY
1,1,2-Trichloroethane	CT,ME,NH,VA,NY
Trichloroethylene	CT,ME,NH,VA,NY
Trichlorofluoromethane (Freon 11)	CT,ME,NH,VA,NY
1,2,3-Trichloropropane	ME,NH,VA,NY

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VA,NY
1,2,4-Trimethylbenzene	ME,VA,NY
1,3,5-Trimethylbenzene	ME,VA,NY
Vinyl Chloride	CT,ME,NH,VA,NY
m+p Xylene	CT,ME,NH,VA,NY
o-Xylene	CT,ME,NH,VA,NY

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

23H2452
KKS

https://www.pacelabs.com/

Doc # 380 Rev 1_03242017

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 1

CHAIN OF CUSTODY RECORD (New York)

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: EA Engineering
Address: 269 W. Jefferson St, Syracuse NY 13202
Phone: 315 380 1346
Project Name: Three Star Anodizing
Project Location: Wappingers Falls, NY
Project Number: NYSDEC # ~~[illegible]~~ 314058 EA #116025223/0008
Project Manager: Mike Muller (EA) Kyle Stuckey (PACE)
Pace Analytical Quote Name/Number: Cullaut #141621
Invoice Recipient:
Sampled By: Moriah Gilkey

Requested Turnaround Time
7-Day ☐ 10-Day ☒
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other: Cat B Deliverables
CLP Like Data Pkg Required: ☐
Email To: michaelmuller@eaest.com
Fax To #:

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	VOC - 8260	Pesticides - 8081	Tal Metals 6010B No Hg	# of Containers	Preservation Code	Container Code
1	314058-MW-1-08152023 (MQ)	08/15/23	1425		X	GW	U	X	X	X	3	H	V
2	314058-MW-2-08152023	08/15/23	1251		X	GW		X	X	X	3	H	V
3	314058-MW-10-08152023	08/15/23	0940		X	GW		X	X	X	3	H	V
4	314058-MW-12-08152023	08/15/23	1028		X	GW		X	X	X	3	H	V
5	314058-MW-13-08152023	08/15/23	1119		X	GW		X	X	X	3	H	V
6	314058-MW-15D-08152023	08/15/23	1515		X	GW		X	X	X	3	H	V
7	314058-MW-18-08152023	08/15/23	1400		X	GW		X	X	X	3	H	V
8	314058-EB-02 ~~08152023~~ (MQ)	08/15/23	(MQ) 1535					X			3	H	V
9	314058-FB-02 ~~08152023~~ (MQ)	08/15/23	1540					X			3	H	V
10	314058-TB-02	08/15/23	Lab prepared					X			2	H	V

ANALYSIS REQUESTED

Preservation of Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

Comments:
- No mercury on Tal 23 metals 6010B

one of one Cooler

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:	Received by: (signature)	Date/Time:
Morgan Gilkey	08/15/23 1730		
		5.0°C	8-16-23 0952

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375

Deliverables
☒ Enhanced Data Package
☐ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☐ NY Regulatory EDD
☐ NY Regs Hits-Only EDD

Other
NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Table of Contents

FedEx Sign Up or Log In

FedEx® Tracking

DELIVERED

Wednesday

8/16/23 at 9:52 AM

Signed for by: H.CHRISTIAN

Obtain proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 4 pieces

TRACKING ID

782535305442

FROM
HUNT VALLEY, MD US

Label Created
8/15/23 4:34 PM

WE HAVE YOUR PACKAGE
NEWBURGH, NY
8/15/23 5:27 PM

IN TRANSIT
WINDSOR LOCKS, CT
8/16/23 7:43 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
8/16/23 8:24 AM

DELIVERED
East Longmeadow, MA US

Delivered
8/16/23 at 9:52 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL SUBMIT

MORE OPTIONS

Manage Delivery

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client EA Engineering

Project Three Star Anodizing

MCP/RCP Required N/A

Deliverable Package Requirement CAT B

Location Wapingers Falls, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time AAM/8-16-23/0952

Back-Sheet By / Date / Time AAM/8-16-23/1425

Temperature Method Temp Gun # 5

Temp ✓ < 6° C Actual Temperature 5.0°C

Rush Samples: Yes / (No) Notify

Short Hold: Yes (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☑	☐
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: N/A ☑ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	Pace ANALYTICAL SERVICES
Effective Date: 07/13/2023	

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics										VOA Vials				Other / Fill in				
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Sulfuric	Unpreserved	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact					
	1 Liter				1 Liter			250mL		100mL	1 Liter		500mL		250mL																	
															Plastics																	
1										2									-					2								
2																																
3																																
4																																
5																																
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Qualtrax ID: 120836

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August 31, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

Project Location: Wappingers Falls, NY
Client Job Number:
Project Number: 314058
Laboratory Work Order Number: 23H2476

Enclosed are results of analyses for samples as received by the laboratory on August 16, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager

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NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 8/31/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 314058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H2476

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Wappingers Falls, NY

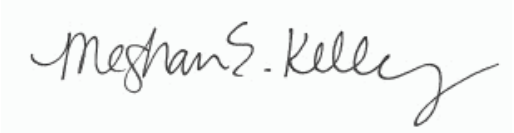
FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
314058-MW-1-08152023	23H2476-01	Ground Water		SW-846 8270E	
314058-MW-2-08152023	23H2476-02	Ground Water		SW-846 8270E	
314058-MW-10-08152023	23H2476-03	Ground Water		SW-846 8270E	
314058-MW-12-08152023	23H2476-04	Ground Water		SW-846 8270E	
314058-MW-13-08152023	23H2476-05	Ground Water		SW-846 8270E	
314058-MW-14D-08152023	23H2476-06	Ground Water		SW-846 8270E	
314058-MW-18-08152023	23H2476-07	Ground Water		SW-846 8270E	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2476

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 Sampled: 8/15/2023 14:25

Sample ID: 23H2476-01

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.19	0.032	µg/L	1		SW-846 8270E	8/22/23	8/30/23 14:22	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	32.0	15-110		8/30/23 14:22

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Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2476

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 Sampled: 8/15/2023 12:51

Sample ID: 23H2476-02

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.19	0.032	µg/L	1		SW-846 8270E	8/22/23	8/30/23 14:42	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	27.4	15-110		8/30/23 14:42

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2476

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2476-03

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.51	0.19	0.032	µg/L	1		SW-846 8270E	8/22/23	8/30/23 15:02	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	23.1	15-110		8/30/23 15:02

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2476

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2476-04

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.28	0.19	0.031	µg/L	1		SW-846 8270E	8/22/23	8/30/23 15:23	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	27.0	15-110		8/30/23 15:23

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Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2476

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 Sampled: 8/15/2023 11:19

Sample ID: 23H2476-05

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	7.9	0.22	0.036	µg/L	1		SW-846 8270E	8/22/23	8/30/23 15:43	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	31.2	15-110		8/30/23 15:43

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2476

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 Sampled: 8/15/2023 15:15

Sample ID: 23H2476-06

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.69	0.20	0.032	µg/L	1		SW-846 8270E	8/22/23	8/30/23 16:03	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	24.4	15-110		8/30/23 16:03

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2476

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2476-07

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.032	µg/L	1		SW-846 8270E	8/22/23	8/30/23 16:23	CJM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	32.9	15-110		8/30/23 16:23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:SW-846 3510C **Analytical Method:SW-846 8270E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2476-01 [314058-MW-1-08152023]	B349753	1030	1.00	08/22/23
23H2476-02 [314058-MW-2-08152023]	B349753	1030	1.00	08/22/23
23H2476-03 [314058-MW-10-08152023]	B349753	1030	1.00	08/22/23
23H2476-04 [314058-MW-12-08152023]	B349753	1040	1.00	08/22/23
23H2476-05 [314058-MW-13-08152023]	B349753	900	1.00	08/22/23
23H2476-06 [314058-MW-14D-08152023]	B349753	1010	1.00	08/22/23
23H2476-07 [314058-MW-18-08152023]	B349753	1010	1.00	08/22/23

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QUALITY CONTROL

1,4-Dioxane by isotope dilution GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B349753 - SW-846 3510C										
Blank (B349753-BLK1)				Prepared: 08/22/23 Analyzed: 08/30/23						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	*3.29*		µg/L	10.0		32.9	15-110			
LCS (B349753-BS1)				Prepared: 08/22/23 Analyzed: 08/30/23						
1,4-Dioxane	9.06	0.20	µg/L	10.0		90.6	40-140			
Surrogate: 1,4-Dioxane-d8	*3.30*		µg/L	10.0		33.0	15-110			
LCS Dup (B349753-BSD1)				Prepared: 08/22/23 Analyzed: 08/30/23						
1,4-Dioxane	10.5	0.20	µg/L	10.0		105	40-140	14.9	30	
Surrogate: 1,4-Dioxane-d8	*3.15*		µg/L	10.0		31.5	15-110			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
1,4-Dioxane	NY,NH

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024

Pace Analytical

Phone: 612-607-6400
Fax: 612-607-6344

23-12476
KKS

https://www.pacelabs.com/

Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Page 1 of 1

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: EA Engineering
Address: 2nd N Jefferson St, Syracuse, NY
Phone: 315 380 1340
Project Name: Three Star-Anodizing
Project Location: Wappingers Falls, NY
Project Number: NYSDEC #314058 EA#16025.23/0008
Project Manager: Mike Miller(EA) Kyle Stuckey(Pace)
Pace Analytical Quote Name/Number Call Out #14621
Invoice Recipient:
Sampled By: Monica Gilkey

Turnaround Time Requested
7-Day ☐ 10-Day ☒
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other: Cat B Deliverables
CLP Like Data Pkg Required: ☐
Email To: michaelmiller@eaest.com
Fax To #:

| Pace Analytical Work Order# | Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite | Grab | [1]Matrix Code | Conc Code | 14-Dioxane-8270 Sim | | |

FedEx Sign Up or Log In

FedEx® Tracking

DELIVERED

Wednesday

8/16/23 at 9:52 AM

Signed for by: H.CHRISTIAN

Obtain proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 4 pieces

TRACKING ID

782535305453

FROM
HUNT VALLEY, MD US

Label Created
8/15/23 4:34 PM

WE HAVE YOUR PACKAGE
NEWBURGH, NY
8/15/23 5:27 PM

IN TRANSIT
WINDSOR LOCKS, CT
8/16/23 7:40 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
8/16/23 7:50 AM

DELIVERED
East Longmeadow, MA US

Delivered
8/16/23 at 9:52 AM

View travel history

Want updates on this shipment? Enter your email and we will do the rest!

YOUR EMAIL SUBMIT

MORE OPTIONS

Manage Delivery

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client EA Engineering

Project 3 star Anodizing

MCP/RCP Required NA

Deliverable Package Requirement NA

Location MY

PWSID# (When Applicable) NA

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time AMM 8/16/23 952

Back-Sheet By / Date / Time SC 8/16/23 1492

Temperature Method Gun # 5

Temp < 6° C Actual Temperature 4.0, 2.2

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

recieve 1 broken amber for MW1-14D & MW18

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☑ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist	
	Effective Date: 07/13/2023	

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics										VOA Vials					Other / Fill in					
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	1 Liter			250mL		100mL	1 Liter		500mL		250mL															
	Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Unpreserved	Trizma	Sulfuric	Nitric	NaOH	Ammonium Acetate	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact						
1	2																													
2	2																													
3	2																													
4	6																													
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Quaitrax ID: 120836

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

September 14, 2023

Michael Miller
NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202

Project Location: Wappingers Falls, NY
Client Job Number:
Project Number: 314058
Laboratory Work Order Number: 23H2505

Enclosed are results of analyses for samples as received by the laboratory on August 16, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Kyle K. Stuckey
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

NYDEC_EA Engineering, Science & Tech. - NY
269 W. Jefferson Street
Syracuse, NY 13202
ATTN: Michael Miller

REPORT DATE: 9/14/2023

PURCHASE ORDER NUMBER: SMPC0001

PROJECT NUMBER: 314058

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23H2505

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Wappingers Falls, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
314058-MW-1-08152023	23H2505-01	Ground Water		Draft Method 1633	
314058-MW-2-08152023	23H2505-02	Ground Water		Draft Method 1633	
314058-MW-10-08152023	23H2505-03	Ground Water		Draft Method 1633	
314058-MW-12-08152023	23H2505-04	Ground Water		Draft Method 1633	
314058-MW-13-08152023	23H2505-05	Ground Water		Draft Method 1633	
314058-MW-14D-08152023	23H2505-06	Ground Water		Draft Method 1633	
314058-MW-18-08152023	23H2505-07	Ground Water		Draft Method 1633	
314058-EB-02	23H2505-08	Equipment Blank Water		Draft Method 1633	
314058-FB-02	23H2505-09	Field Blank		Draft Method 1633	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

Draft Method 1633

Qualifications:

H-01

Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.

Analyte & Samples(s) Qualified:

Total Suspended Solids

23H2505-01[314058-MW-1-08152023], 23H2505-02[314058-MW-2-08152023], 23H2505-03[314058-MW-10-08152023], 23H2505-04[314058-MW-12-08152023], 23H2505-05[314058-MW-13-08152023], 23H2505-06[314058-MW-14D-08152023], 23H2505-07[314058-MW-18-08152023]

Z-01

Extracted internal standard outside of control limits. Analyte is a known difficult compound.

Analyte & Samples(s) Qualified:

13C2-4:2FTS

23H2505-08[314058-EB-02]

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS

23H2505-08[314058-EB-02]

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 | Sampled: 8/15/2023 14:25

Sample ID: 23H2505-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	5.1	3.6	1.3	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluoropentanoic acid (PFPeA)	1.2	1.8	0.31	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorohexanoic acid (PFHxA)	1.3	0.90	0.19	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluoroheptanoic acid (PFHpA)	1.7	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorooctanoic acid (PFOA)	4.6	0.90	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorononanoic acid (PFNA)	0.81	0.90	0.17	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorodecanoic acid (PFDA)	ND	0.90	0.17	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.90	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorobutanesulfonic acid (PFBS)	1.8	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.90	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorohexanesulfonic acid (PFHxS)	0.84	0.90	0.19	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorooctanesulfonic acid (PFOS)	10	0.90	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.90	0.27	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	0.63	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	0.89	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	0.98	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.90	0.37	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.90	0.40	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.90	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.0	2.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.0	2.2	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	0.94	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	0.62	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.6	0.77	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.6	0.87	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.0	1.6	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	9.2	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	7.9	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 | Sampled: 8/15/2023 14:25

Sample ID: 23H2505-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	0.36	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.78	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:04	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	55.8	10-130		9/9/23 8:04
13C5-PFPeA	73.4	35-150		9/9/23 8:04
13C5-PFHxA	77.3	55-150		9/9/23 8:04
13C4-PFHpA	76.8	55-150		9/9/23 8:04
13C8-PFOA	77.2	60-140		9/9/23 8:04
13C9-PFNA	77.5	55-140		9/9/23 8:04
13C6-PFDA	77.7	50-140		9/9/23 8:04
13C7-PFUnA	76.2	30-140		9/9/23 8:04
13C2-PFDoA	65.3	10-150		9/9/23 8:04
13C2-PFTeDA	60.1	10-130		9/9/23 8:04
13C3-PFBS	75.8	55-150		9/9/23 8:04
13C3-PFHxS	74.4	55-150		9/9/23 8:04
13C8-PFOS	74.0	45-140		9/9/23 8:04
13C2-4:2FTS	102	60-200		9/9/23 8:04
13C2-6:2FTS	94.2	60-200		9/9/23 8:04
13C2-8:2FTS	70.6	50-200		9/9/23 8:04
13C8-PFOSA	64.0	30-130		9/9/23 8:04
D3-NMeFOSA	51.6	15-130		9/9/23 8:04
D5-NEtFOSA	48.0	10-130		9/9/23 8:04
D3-NMeFOSAA	68.7	45-200		9/9/23 8:04
D5-NEtFOSAA	67.3	10-200		9/9/23 8:04
D7-NMeFOSE	51.1	10-150		9/9/23 8:04
D9-NEtFOSE	47.1	10-150		9/9/23 8:04
13C3-HFPO-DA	78.5	25-160		9/9/23 8:04

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-1-08152023 Sampled: 8/15/2023 14:25

Sample ID: 23H2505-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1	H-01	Draft Method 1633	8/28/23	8/29/23 14:12	LL

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 | Sampled: 8/15/2023 12:51

Sample ID: 23H2505-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.6	3.6	1.3	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluoropentanoic acid (PFPeA)	4.0	1.8	0.31	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorohexanoic acid (PFHxA)	7.7	0.90	0.19	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluoroheptanoic acid (PFHpA)	2.9	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorooctanoic acid (PFOA)	9.0	0.90	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorononanoic acid (PFNA)	0.61	0.90	0.17	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorodecanoic acid (PFDA)	0.18	0.90	0.17	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.90	0.22	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorobutanesulfonic acid (PFBS)	6.2	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluoropentanesulfonic acid (PFPeS)	8.2	0.90	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorohexanesulfonic acid (PFHxS)	130	0.90	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluoroheptanesulfonic acid (PFHpS)	5.3	0.90	0.27	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorooctanesulfonic acid (PFOS)	450	0.90	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.90	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	0.63	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	0.89	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	0.97	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.90	0.37	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.90	0.40	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.90	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.0	2.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.0	2.2	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	0.94	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	0.62	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.6	0.76	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.6	0.87	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.0	1.6	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	9.2	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	7.9	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 | Sampled: 8/15/2023 12:51

Sample ID: 23H2505-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	0.36	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.78	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:20	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	60.1	10-130		9/9/23 8:20
13C5-PFPeA	104	35-150		9/9/23 8:20
13C5-PFHxA	102	55-150		9/9/23 8:20
13C4-PFHpA	104	55-150		9/9/23 8:20
13C8-PFOA	98.9	60-140		9/9/23 8:20
13C9-PFNA	103	55-140		9/9/23 8:20
13C6-PFDA	102	50-140		9/9/23 8:20
13C7-PFUnA	95.2	30-140		9/9/23 8:20
13C2-PFDoA	92.5	10-150		9/9/23 8:20
13C2-PFTeDA	89.9	10-130		9/9/23 8:20
13C3-PFBS	104	55-150		9/9/23 8:20
13C3-PFHxS	101	55-150		9/9/23 8:20
13C8-PFOS	97.9	45-140		9/9/23 8:20
13C2-4:2FTS	117	60-200		9/9/23 8:20
13C2-6:2FTS	104	60-200		9/9/23 8:20
13C2-8:2FTS	80.7	50-200		9/9/23 8:20
13C8-PFOSA	94.9	30-130		9/9/23 8:20
D3-NMeFOSA	81.5	15-130		9/9/23 8:20
D5-NEtFOSA	80.9	10-130		9/9/23 8:20
D3-NMeFOSAA	97.6	45-200		9/9/23 8:20
D5-NEtFOSAA	96.5	10-200		9/9/23 8:20
D7-NMeFOSE	82.4	10-150		9/9/23 8:20
D9-NEtFOSE	76.8	10-150		9/9/23 8:20
13C3-HFPO-DA	109	25-160		9/9/23 8:20

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY Sample Description: Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-2-08152023 Sampled: 8/15/2023 12:51

Sample ID: 23H2505-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	18	10	mg/L	1	H-01	Draft Method 1633	8/28/23	8/29/23 15:15	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2505-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	7.1	3.8	1.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluoropentanoic acid (PFPeA)	4.0	1.9	0.33	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorohexanoic acid (PFHxA)	7.3	0.95	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluoroheptanoic acid (PFHpA)	2.7	0.95	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorooctanoic acid (PFOA)	9.2	0.95	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorononanoic acid (PFNA)	0.67	0.95	0.18	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorodecanoic acid (PFDA)	ND	0.95	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.95	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.95	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.95	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.95	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorobutanesulfonic acid (PFBS)	6.3	0.95	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluoropentanesulfonic acid (PFPeS)	8.5	0.95	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorohexanesulfonic acid (PFHxS)	140	0.95	0.19	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluoroheptanesulfonic acid (PFHpS)	5.3	0.95	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorooctanesulfonic acid (PFOS)	460	0.95	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.95	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.95	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.95	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.66	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	0.93	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.95	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.95	0.39	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.95	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.95	0.42	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.95	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.5	2.5	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.5	2.3	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	0.99	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.65	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.81	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	0.92	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.5	1.7	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	9.7	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	47	8.3	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2505-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.38	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.82	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:36	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	57.5	10-130		9/9/23 8:36
13C5-PFPeA	97.2	35-150		9/9/23 8:36
13C5-PFHxA	97.9	55-150		9/9/23 8:36
13C4-PFHpA	99.3	55-150		9/9/23 8:36
13C8-PFOA	92.1	60-140		9/9/23 8:36
13C9-PFNA	101	55-140		9/9/23 8:36
13C6-PFDA	97.7	50-140		9/9/23 8:36
13C7-PFUnA	102	30-140		9/9/23 8:36
13C2-PFDoA	92.0	10-150		9/9/23 8:36
13C2-PFTeDA	86.5	10-130		9/9/23 8:36
13C3-PFBS	97.1	55-150		9/9/23 8:36
13C3-PFHxS	95.0	55-150		9/9/23 8:36
13C8-PFOS	94.4	45-140		9/9/23 8:36
13C2-4:2FTS	109	60-200		9/9/23 8:36
13C2-6:2FTS	98.4	60-200		9/9/23 8:36
13C2-8:2FTS	76.8	50-200		9/9/23 8:36
13C8-PFOSA	91.7	30-130		9/9/23 8:36
D3-NMeFOSA	76.9	15-130		9/9/23 8:36
D5-NEtFOSA	75.2	10-130		9/9/23 8:36
D3-NMeFOSAA	95.1	45-200		9/9/23 8:36
D5-NEtFOSAA	90.9	10-200		9/9/23 8:36
D7-NMeFOSE	77.5	10-150		9/9/23 8:36
D9-NEtFOSE	72.0	10-150		9/9/23 8:36
13C3-HFPO-DA	106	25-160		9/9/23 8:36

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-10-08152023 | Sampled: 8/15/2023 09:40

Sample ID: 23H2505-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	16	10	mg/L	1	H-01	Draft Method 1633	8/28/23	8/29/23 14:12	LL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2505-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	7.0	3.8	1.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluoropentanoic acid (PFPeA)	5.6	1.9	0.33	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorohexanoic acid (PFHxA)	7.1	0.96	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluoroheptanoic acid (PFHpA)	5.2	0.96	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorooctanoic acid (PFOA)	14	0.96	0.22	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorononanoic acid (PFNA)	1.9	0.96	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorodecanoic acid (PFDA)	1.3	0.96	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.96	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorobutanesulfonic acid (PFBS)	2.2	0.96	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluoropentanesulfonic acid (PFPeS)	3.6	0.96	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorohexanesulfonic acid (PFHxS)	3.9	0.96	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluoroheptanesulfonic acid (PFHpS)	0.91	0.96	0.29	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorooctanesulfonic acid (PFOS)	31	0.96	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.67	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	0.95	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluorooctanesulfonamide (PFOSA)	0.33	0.96	0.29	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 8:51	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	0.40	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.96	0.42	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.96	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	2.5	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	2.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.66	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.82	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	0.93	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	1.7	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.8	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2505-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.83	ng/L	1		Draft Method 1633	9/6/23	9/9/23 8:51	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	49.7	10-130		9/9/23 8:51
13C5-PFPeA	66.5	35-150		9/9/23 8:51
13C5-PFHxA	71.3	55-150		9/9/23 8:51
13C4-PFHpA	71.5	55-150		9/9/23 8:51
13C8-PFOA	71.1	60-140		9/9/23 8:51
13C9-PFNA	74.6	55-140		9/9/23 8:51
13C6-PFDA	73.4	50-140		9/9/23 8:51
13C7-PFUnA	72.4	30-140		9/9/23 8:51
13C2-PFDoA	72.7	10-150		9/9/23 8:51
13C2-PFTeDA	65.0	10-130		9/9/23 8:51
13C3-PFBS	72.4	55-150		9/9/23 8:51
13C3-PFHxS	72.4	55-150		9/9/23 8:51
13C8-PFOS	72.2	45-140		9/9/23 8:51
13C2-4:2FTS	111	60-200		9/9/23 8:51
13C2-6:2FTS	104	60-200		9/9/23 8:51
13C2-8:2FTS	82.8	50-200		9/9/23 8:51
13C8-PFOSA	61.2	30-130		9/9/23 8:51
D3-NMeFOSA	54.8	15-130		9/9/23 8:51
D5-NEtFOSA	52.2	10-130		9/9/23 8:51
D3-NMeFOSAA	90.5	45-200		9/9/23 8:51
D5-NEtFOSAA	71.0	10-200		9/9/23 8:51
D7-NMeFOSE	55.0	10-150		9/9/23 8:51
D9-NEtFOSE	68.1	10-150		9/9/23 8:51
13C3-HFPO-DA	69.3	25-160		9/9/23 8:51

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-12-08152023 | Sampled: 8/15/2023 10:28

Sample ID: 23H2505-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1	H-01	Draft Method 1633	8/28/23	8/29/23 15:15	IS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 | Sampled: 8/15/2023 11:19

Sample ID: 23H2505-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.5	3.8	1.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluoropentanoic acid (PFPeA)	3.7	1.9	0.33	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorohexanoic acid (PFHxA)	3.3	0.95	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluoroheptanoic acid (PFHpA)	2.0	0.95	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorooctanoic acid (PFOA)	4.2	0.95	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorononanoic acid (PFNA)	ND	0.95	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorodecanoic acid (PFDA)	ND	0.95	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.95	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.95	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.95	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.95	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorobutanesulfonic acid (PFBS)	2.5	0.95	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.95	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.8	0.95	0.19	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.95	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorooctanesulfonic acid (PFOS)	2.4	0.95	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.95	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.95	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.95	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	0.66	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	0.94	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	1.0	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluorooctanesulfonamide (PFOSA)	0.37	0.95	0.29	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 9:07	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.95	0.39	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.95	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.95	0.42	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.95	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.5	2.5	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.5	2.3	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	0.99	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	0.65	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.8	0.81	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.8	0.92	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.5	1.7	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	47	9.7	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	47	8.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.46	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 | Sampled: 8/15/2023 11:19

Sample ID: 23H2505-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.38	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.82	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:07	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	38.6	10-130		9/9/23 9:07
13C5-PFPeA	69.0	35-150		9/9/23 9:07
13C5-PFHxA	70.6	55-150		9/9/23 9:07
13C4-PFHpA	68.9	55-150		9/9/23 9:07
13C8-PFOA	69.4	60-140		9/9/23 9:07
13C9-PFNA	71.6	55-140		9/9/23 9:07
13C6-PFDA	72.8	50-140		9/9/23 9:07
13C7-PFUnA	68.8	30-140		9/9/23 9:07
13C2-PFDoA	60.4	10-150		9/9/23 9:07
13C2-PFTeDA	56.1	10-130		9/9/23 9:07
13C3-PFBS	72.0	55-150		9/9/23 9:07
13C3-PFHxS	74.3	55-150		9/9/23 9:07
13C8-PFOS	69.6	45-140		9/9/23 9:07
13C2-4:2FTS	83.7	60-200		9/9/23 9:07
13C2-6:2FTS	84.7	60-200		9/9/23 9:07
13C2-8:2FTS	64.6	50-200		9/9/23 9:07
13C8-PFOSA	61.8	30-130		9/9/23 9:07
D3-NMeFOSA	55.9	15-130		9/9/23 9:07
D5-NEtFOSA	54.6	10-130		9/9/23 9:07
D3-NMeFOSAA	66.3	45-200		9/9/23 9:07
D5-NEtFOSAA	62.2	10-200		9/9/23 9:07
D7-NMeFOSE	52.7	10-150		9/9/23 9:07
D9-NEtFOSE	50.0	10-150		9/9/23 9:07
13C3-HFPO-DA	73.1	25-160		9/9/23 9:07

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-13-08152023 | Sampled: 8/15/2023 11:19

Sample ID: 23H2505-05

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	64	10	mg/L	1	H-01	Draft Method 1633	8/28/23	8/29/23 15:15	IS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 | Sampled: 8/15/2023 15:15

Sample ID: 23H2505-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	5.0	4.0	1.5	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluoropentanoic acid (PFPeA)	3.5	2.0	0.35	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorohexanoic acid (PFHxA)	2.9	1.0	0.22	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluoroheptanoic acid (PFHpA)	1.2	1.0	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorooctanoic acid (PFOA)	2.0	1.0	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorononanoic acid (PFNA)	ND	1.0	0.19	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorodecanoic acid (PFDA)	0.29	1.0	0.19	ng/L	1	J	Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluoroundecanoic acid (PFUnA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorododecanoic acid (PFDoA)	ND	1.0	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	1.0	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorobutanesulfonic acid (PFBS)	1.3	1.0	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	1.0	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorohexanesulfonic acid (PFHxS)	1.8	1.0	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.0	0.31	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorooctanesulfonic acid (PFOS)	4.5	1.0	0.32	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorononanesulfonic acid (PFNS)	ND	1.0	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	1.0	0.32	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	1.0	0.27	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	4.0	0.70	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	4.0	0.99	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	4.0	1.1	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.0	0.42	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.0	0.31	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
N-MeFOSAA (NMeFOSAA)	ND	1.0	0.44	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
N-EtFOSAA (NEtFOSAA)	ND	1.0	0.22	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	10	2.6	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	10	2.5	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	1.1	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.69	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.0	0.86	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.0	0.97	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	10	1.8	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	50	10	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	50	8.9	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	0.49	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	0.50	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 | Sampled: 8/15/2023 15:15

Sample ID: 23H2505-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	0.40	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	0.87	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:23	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	31.9	10-130		9/9/23 9:23
13C5-PFPeA	70.6	35-150		9/9/23 9:23
13C5-PFHxA	72.9	55-150		9/9/23 9:23
13C4-PFHpA	75.2	55-150		9/9/23 9:23
13C8-PFOA	68.6	60-140		9/9/23 9:23
13C9-PFNA	74.3	55-140		9/9/23 9:23
13C6-PFDA	72.8	50-140		9/9/23 9:23
13C7-PFUnA	74.5	30-140		9/9/23 9:23
13C2-PFDoA	68.1	10-150		9/9/23 9:23
13C2-PFTeDA	53.0	10-130		9/9/23 9:23
13C3-PFBS	72.5	55-150		9/9/23 9:23
13C3-PFHxS	70.6	55-150		9/9/23 9:23
13C8-PFOS	71.7	45-140		9/9/23 9:23
13C2-4:2FTS	87.0	60-200		9/9/23 9:23
13C2-6:2FTS	82.3	60-200		9/9/23 9:23
13C2-8:2FTS	62.3	50-200		9/9/23 9:23
13C8-PFOSA	60.8	30-130		9/9/23 9:23
D3-NMeFOSA	59.1	15-130		9/9/23 9:23
D5-NEtFOSA	57.1	10-130		9/9/23 9:23
D3-NMeFOSAA	68.5	45-200		9/9/23 9:23
D5-NEtFOSAA	65.0	10-200		9/9/23 9:23
D7-NMeFOSE	54.6	10-150		9/9/23 9:23
D9-NEtFOSE	50.3	10-150		9/9/23 9:23
13C3-HFPO-DA	79.7	25-160		9/9/23 9:23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-14D-08152023 | Sampled: 8/15/2023 15:15

Sample ID: 23H2505-06

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	22	10	mg/L	1	H-01	Draft Method 1633	8/28/23	8/28/23 12:48	LL

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2505-07

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.0	3.9	1.4	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluoropentanoic acid (PFPeA)	9.8	1.9	0.33	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorohexanoic acid (PFHxA)	7.8	0.96	0.21	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluoroheptanoic acid (PFHpA)	5.1	0.96	0.25	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorooctanoic acid (PFOA)	9.8	0.96	0.22	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorononanoic acid (PFNA)	1.6	0.96	0.18	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorodecanoic acid (PFDA)	0.53	0.96	0.18	ng/L	1	J	Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.96	0.25	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	0.24	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorobutanesulfonic acid (PFBS)	2.3	0.96	0.25	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluoropentanesulfonic acid (PFPeS)	0.33	0.96	0.23	ng/L	1	J	Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorohexanesulfonic acid (PFHxS)	3.0	0.96	0.20	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.96	0.29	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorooctanesulfonic acid (PFOS)	12	0.96	0.31	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.96	0.28	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	0.26	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.67	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.95	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.0	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	0.40	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	0.30	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.96	0.42	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.96	0.21	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	2.5	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	2.4	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.66	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.82	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.93	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	1.7	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.8	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.5	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2505-07

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.83	ng/L	1		Draft Method 1633	9/12/23	9/13/23 15:22	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	79.5	10-130		9/13/23 15:22
13C5-PFPeA	79.8	35-150		9/13/23 15:22
13C5-PFHxA	78.8	55-150		9/13/23 15:22
13C4-PFHpA	79.7	55-150		9/13/23 15:22
13C8-PFOA	81.4	60-140		9/13/23 15:22
13C9-PFNA	78.0	55-140		9/13/23 15:22
13C6-PFDA	80.4	50-140		9/13/23 15:22
13C7-PFUnA	75.7	30-140		9/13/23 15:22
13C2-PFDoA	64.3	10-150		9/13/23 15:22
13C2-PFTeDA	57.5	10-130		9/13/23 15:22
13C3-PFBS	82.5	55-150		9/13/23 15:22
13C3-PFHxS	81.7	55-150		9/13/23 15:22
13C8-PFOS	77.4	45-140		9/13/23 15:22
13C2-4:2FTS	75.0	60-200		9/13/23 15:22
13C2-6:2FTS	69.8	60-200		9/13/23 15:22
13C2-8:2FTS	62.8	50-200		9/13/23 15:22
13C8-PFOSA	69.4	30-130		9/13/23 15:22
D3-NMeFOSA	53.6	15-130		9/13/23 15:22
D5-NEtFOSA	56.2	10-130		9/13/23 15:22
D3-NMeFOSAA	66.9	45-200		9/13/23 15:22
D5-NEtFOSAA	60.4	10-200		9/13/23 15:22
D7-NMeFOSE	55.6	10-150		9/13/23 15:22
D9-NEtFOSE	51.6	10-150		9/13/23 15:22
13C3-HFPO-DA	81.1	25-160		9/13/23 15:22

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-MW-18-08152023 | Sampled: 8/15/2023 14:00

Sample ID: 23H2505-07

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1	H-01	Draft Method 1633	8/28/23	8/29/23 15:15	IS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-EB-02 | Sampled: 8/15/2023 15:35

Sample ID: 23H2505-08

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	3.9	1.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluoropentanoic acid (PFPeA)	ND	1.9	0.34	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.97	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.97	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorooctanoic acid (PFOA)	ND	0.97	0.22	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorononanoic acid (PFNA)	ND	0.97	0.19	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorodecanoic acid (PFDA)	ND	0.97	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.97	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.97	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.97	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.97	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.97	0.25	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.97	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.97	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.97	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.97	0.31	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.97	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.97	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.97	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	0.68	ng/L	1	Z-01	Draft Method 1633	9/6/23	9/9/23 9:54	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	0.96	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	1.1	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.97	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.97	0.40	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.97	0.30	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.97	0.43	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.97	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.7	2.5	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.7	2.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	1.0	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	0.67	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.9	0.83	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.9	0.94	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.7	1.7	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	9.9	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	8.5	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.47	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	0.48	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-EB-02 | Sampled: 8/15/2023 15:35

Sample ID: 23H2505-08

Sample Matrix: Equipment Blank Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	0.39	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.84	ng/L	1		Draft Method 1633	9/6/23	9/9/23 9:54	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	72.6		10-130		9/9/23 9:54
13C5-PFPeA	74.7		35-150		9/9/23 9:54
13C5-PFHxA	71.4		55-150		9/9/23 9:54
13C4-PFHpA	69.8		55-150		9/9/23 9:54
13C8-PFOA	71.0		60-140		9/9/23 9:54
13C9-PFNA	72.7		55-140		9/9/23 9:54
13C6-PFDA	72.1		50-140		9/9/23 9:54
13C7-PFUnA	74.6		30-140		9/9/23 9:54
13C2-PFDoA	69.6		10-150		9/9/23 9:54
13C2-PFTeDA	70.7		10-130		9/9/23 9:54
13C3-PFBS	68.2		55-150		9/9/23 9:54
13C3-PFHxS	70.3		55-150		9/9/23 9:54
13C8-PFOS	71.4		45-140		9/9/23 9:54
13C2-4:2FTS	**58.8**	*	60-200	Z-01	9/9/23 9:54
13C2-6:2FTS	64.8		60-200		9/9/23 9:54
13C2-8:2FTS	64.0		50-200		9/9/23 9:54
13C8-PFOSA	63.3		30-130		9/9/23 9:54
D3-NMeFOSA	61.9		15-130		9/9/23 9:54
D5-NEtFOSA	63.3		10-130		9/9/23 9:54
D3-NMeFOSAA	69.5		45-200		9/9/23 9:54
D5-NEtFOSAA	67.5		10-200		9/9/23 9:54
D7-NMeFOSE	63.8		10-150		9/9/23 9:54
D9-NEtFOSE	59.8		10-150		9/9/23 9:54
13C3-HFPO-DA	80.5		25-160		9/9/23 9:54

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-EB-02 | Sampled: 8/15/2023 15:35

Sample ID: 23H2505-08

Sample Matrix: Equipment Blank Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	8/26/23	8/26/23 10:51	IS

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-FB-02 | Sampled: 8/15/2023 15:40

Sample ID: 23H2505-09

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	3.6	1.3	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluoropentanoic acid (PFPeA)	ND	1.8	0.31	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.90	0.19	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorooctanoic acid (PFOA)	ND	0.90	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorononanoic acid (PFNA)	ND	0.90	0.17	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorodecanoic acid (PFDA)	ND	0.90	0.17	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.90	0.22	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.90	0.23	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.90	0.21	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.90	0.18	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.90	0.27	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.90	0.29	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.90	0.26	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.90	0.24	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	0.62	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	0.88	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	0.97	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.90	0.37	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.90	0.28	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.90	0.39	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.90	0.20	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.0	2.4	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.0	2.2	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	0.94	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	0.62	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
9Cl-PF3ONS (F53B Minor)	ND	3.6	0.76	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
11Cl-PF3OUdS (F53B Major)	ND	3.6	0.87	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.0	1.6	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	9.2	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	7.9	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.44	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	0.45	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-FB-02 | Sampled: 8/15/2023 15:40

Sample ID: 23H2505-09

Sample Matrix: Field Blank

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	0.36	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.78	ng/L	1		Draft Method 1633	9/6/23	9/9/23 10:09	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	72.5	10-130		9/9/23 10:09
13C5-PFPeA	71.8	35-150		9/9/23 10:09
13C5-PFHxA	71.7	55-150		9/9/23 10:09
13C4-PFHpA	69.7	55-150		9/9/23 10:09
13C8-PFOA	70.4	60-140		9/9/23 10:09
13C9-PFNA	73.6	55-140		9/9/23 10:09
13C6-PFDA	71.8	50-140		9/9/23 10:09
13C7-PFUnA	74.6	30-140		9/9/23 10:09
13C2-PFDoA	65.4	10-150		9/9/23 10:09
13C2-PFTeDA	65.9	10-130		9/9/23 10:09
13C3-PFBS	70.9	55-150		9/9/23 10:09
13C3-PFHxS	71.1	55-150		9/9/23 10:09
13C8-PFOS	73.5	45-140		9/9/23 10:09
13C2-4:2FTS	60.5	60-200		9/9/23 10:09
13C2-6:2FTS	68.1	60-200		9/9/23 10:09
13C2-8:2FTS	68.3	50-200		9/9/23 10:09
13C8-PFOSA	61.9	30-130		9/9/23 10:09
D3-NMeFOSA	54.0	15-130		9/9/23 10:09
D5-NEtFOSA	56.4	10-130		9/9/23 10:09
D3-NMeFOSAA	70.2	45-200		9/9/23 10:09
D5-NEtFOSAA	68.2	10-200		9/9/23 10:09
D7-NMeFOSE	60.1	10-150		9/9/23 10:09
D9-NEtFOSE	56.4	10-150		9/9/23 10:09
13C3-HFPO-DA	79.2	25-160		9/9/23 10:09

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Project Location: Wappingers Falls, NY | Sample Description: | Work Order: 23H2505

Date Received: 8/16/2023

Field Sample #: 314058-FB-02 | Sampled: 8/15/2023 15:40

Sample ID: 23H2505-09

Sample Matrix: Field Blank

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Suspended Solids	ND	10	mg/L	1		Draft Method 1633	8/26/23	8/26/23 10:51	IS

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23H2505-08 [314058-EB-02]	B350255	50.0	08/26/23
23H2505-09 [314058-FB-02]	B350255	50.0	08/26/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23H2505-06 [314058-MW-14D-08152023]	B350304	50.0	08/28/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23H2505-01 [314058-MW-1-08152023]	B350375	50.0	08/28/23
23H2505-03 [314058-MW-10-08152023]	B350375	50.0	08/28/23

Draft Method 1633

Lab Number [Field ID]	Batch	Initial [mL]	Date
23H2505-02 [314058-MW-2-08152023]	B350397	50.0	08/28/23
23H2505-04 [314058-MW-12-08152023]	B350397	50.0	08/28/23
23H2505-05 [314058-MW-13-08152023]	B350397	50.0	08/28/23
23H2505-07 [314058-MW-18-08152023]	B350397	50.0	08/28/23

Prep Method:Draft Method 1633 Analytical Method:Draft Method 1633 Leachates were extracted on 8/28/2023 per NO PREP in Batch B350375

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2505-01 [314058-MW-1-08152023]	B350902	554	5.00	09/06/23
23H2505-02 [314058-MW-2-08152023]	B350902	557	5.00	09/06/23
23H2505-03 [314058-MW-10-08152023]	B350902	528	5.00	09/06/23
23H2505-04 [314058-MW-12-08152023]	B350902	522	5.00	09/06/23
23H2505-05 [314058-MW-13-08152023]	B350902	527	5.00	09/06/23
23H2505-06 [314058-MW-14D-08152023]	B350902	497	5.00	09/06/23
23H2505-08 [314058-EB-02]	B350902	516	5.00	09/06/23
23H2505-09 [314058-FB-02]	B350902	558	5.00	09/06/23

Prep Method:Draft Method 1633 Analytical Method:Draft Method 1633 Leachates were extracted on 8/28/2023 per NO PREP in Batch B350397

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23H2505-07RE1 [314058-MW-18-08152023]	B351647	519	5.00	09/12/23

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350902 - Draft Method 1633										
Blank (B350902-BLK1)				Prepared: 09/06/23 Analyzed: 09/09/23						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.98	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.98	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.8	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*90.2*		ng/L	98.4		91.6	10-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350902 - Draft Method 1633										
Blank (B350902-BLK1)				Prepared: 09/06/23 Analyzed: 09/09/23						
Surrogate: 13C5-PFPeA	*43.5*		ng/L	49.2		88.5	35-150			
Surrogate: 13C5-PFHxA	*22.2*		ng/L	24.6		90.2	55-150			
Surrogate: 13C4-PFHpA	*21.3*		ng/L	24.6		86.6	55-150			
Surrogate: 13C8-PFOA	*22.2*		ng/L	24.6		90.1	60-140			
Surrogate: 13C9-PFNA	*11.4*		ng/L	12.3		92.4	55-140			
Surrogate: 13C6-PFDA	*11.1*		ng/L	12.3		89.9	50-140			
Surrogate: 13C7-PFUnA	*11.1*		ng/L	12.3		90.1	30-140			
Surrogate: 13C2-PFDoA	*10.3*		ng/L	12.3		83.7	10-150			
Surrogate: 13C2-PFTeDA	*10.4*		ng/L	12.3		84.6	10-130			
Surrogate: 13C3-PFBS	*21.7*		ng/L	24.6		88.3	55-150			
Surrogate: 13C3-PFHxS	*22.6*		ng/L	24.6		91.7	55-150			
Surrogate: 13C8-PFOS	*22.5*		ng/L	24.6		91.3	45-140			
Surrogate: 13C2-4:2FTS	*39.2*		ng/L	49.2		79.7	60-200			
Surrogate: 13C2-6:2FTS	*38.7*		ng/L	49.2		78.7	60-200			
Surrogate: 13C2-8:2FTS	*40.3*		ng/L	49.2		81.9	50-200			
Surrogate: 13C8-PFOSA	*19.8*		ng/L	24.6		80.3	30-130			
Surrogate: D3-NMeFOSA	*16.9*		ng/L	24.6		68.7	15-130			
Surrogate: D5-NEtFOSA	*18.2*		ng/L	24.6		73.8	10-130			
Surrogate: D3-NMeFOSAA	*43.1*		ng/L	49.2		87.7	45-200			
Surrogate: D5-NEtFOSAA	*39.7*		ng/L	49.2		80.7	10-200			
Surrogate: D7-NMeFOSE	*190*		ng/L	246		77.1	10-150			
Surrogate: D9-NEtFOSE	*184*		ng/L	246		74.7	10-150			
Surrogate: 13C3-HFPO-DA	*97.0*		ng/L	98.4		98.6	25-160			
LCS (B350902-BS1)				Prepared: 09/06/23 Analyzed: 09/09/23						
Perfluorobutanoic acid (PFBA)	90.9	3.9	ng/L	93.4		97.3	58-148			
Perfluoropentanoic acid (PFPeA)	44.2	1.9	ng/L	46.7		94.7	54-152			
Perfluorohexanoic acid (PFHxA)	22.6	0.97	ng/L	23.3		96.8	55-152			
Perfluoroheptanoic acid (PFHpA)	22.1	0.97	ng/L	23.3		94.9	54-154			
Perfluorooctanoic acid (PFOA)	21.9	0.97	ng/L	23.3		93.8	52-161			
Perfluorononanoic acid (PFNA)	21.8	0.97	ng/L	23.3		93.3	59-149			
Perfluorodecanoic acid (PFDA)	22.7	0.97	ng/L	23.3		97.1	52-147			
Perfluoroundecanoic acid (PFUnA)	22.6	0.97	ng/L	23.3		96.7	48-159			
Perfluorododecanoic acid (PFDoA)	21.5	0.97	ng/L	23.3		92.3	64-142			
Perfluorotridecanoic acid (PFTrDA)	22.2	0.97	ng/L	23.3		95.3	49-148			
Perfluorotetradecanoic acid (PFTeDA)	21.9	0.97	ng/L	23.3		93.6	47-161			
Perfluorobutanesulfonic acid (PFBS)	19.9	0.97	ng/L	20.7		96.2	62-144			
Perfluoropentanesulfonic acid (PFPeS)	21.2	0.97	ng/L	21.9		96.6	59-151			
Perfluorohexanesulfonic acid (PFHxS)	19.3	0.97	ng/L	21.4		90.3	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	20.8	0.97	ng/L	22.2		93.6	55-152			
Perfluorooctanesulfonic acid (PFOS)	19.8	0.97	ng/L	21.7		91.4	58-149			
Perfluorononanesulfonic acid (PFNS)	20.9	0.97	ng/L	22.5		92.8	52-148			
Perfluorodecanesulfonic acid (PFDS)	19.7	0.97	ng/L	22.5		87.4	51-147			
Perfluorododecanesulfonic acid (PFDoS)	18.5	0.97	ng/L	22.6		81.7	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	85.6	3.9	ng/L	87.5		97.8	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	86.4	3.9	ng/L	88.7		97.4	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	89.9	3.9	ng/L	89.9		100	63-152			
Perfluorooctanesulfonamide (PFOSA)	22.2	0.97	ng/L	23.3		95.2	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	20.2	0.97	ng/L	23.3		86.7	63-145			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350902 - Draft Method 1633										
LCS (B350902-BS1)				Prepared: 09/06/23 Analyzed: 09/09/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	19.8	0.97	ng/L	23.3		84.9	65-139			
N-MeFOSAA (NMeFOSAA)	22.3	0.97	ng/L	23.3		95.6	58-144			
N-EtFOSAA (NEtFOSAA)	23.7	0.97	ng/L	23.3		102	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	224	9.7	ng/L	233		95.9	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	231	9.7	ng/L	233		99.0	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	87.4	3.9	ng/L	93.4		93.6	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	75.2	3.9	ng/L	88.1		85.4	68-146			
9Cl-PF3ONS (F53B Minor)	79.7	3.9	ng/L	87.5		91.0	56-156			
11Cl-PF3OUdS (F53B Major)	73.6	3.9	ng/L	88.1		83.6	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	181	9.7	ng/L	233		77.3	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	964	49	ng/L	1170		82.6	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	886	49	ng/L	1170		75.9	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	40.2	1.9	ng/L	41.6		96.8	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	39.8	1.9	ng/L	46.7		85.2	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	41.4	1.9	ng/L	46.7		88.7	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	47.2	1.9	ng/L	46.7		101	48-161			
Surrogate: 13C4-PFBA	*81.9*		ng/L	97.3		84.2	10-130			
Surrogate: 13C5-PFPeA	*40.6*		ng/L	48.6		83.4	35-150			
Surrogate: 13C5-PFHxA	*19.9*		ng/L	24.3		81.8	55-150			
Surrogate: 13C4-PFHpA	*19.6*		ng/L	24.3		80.7	55-150			
Surrogate: 13C8-PFOA	*19.3*		ng/L	24.3		79.5	60-140			
Surrogate: 13C9-PFNA	*10.1*		ng/L	12.2		82.9	55-140			
Surrogate: 13C6-PFDA	*10.2*		ng/L	12.2		83.5	50-140			
Surrogate: 13C7-PFUnA	*10.3*		ng/L	12.2		85.0	30-140			
Surrogate: 13C2-PFDoA	*10.1*		ng/L	12.2		82.9	10-150			
Surrogate: 13C2-PFTeDA	*9.75*		ng/L	12.2		80.2	10-130			
Surrogate: 13C3-PFBS	*19.4*		ng/L	24.3		79.8	55-150			
Surrogate: 13C3-PFHxS	*20.1*		ng/L	24.3		82.6	55-150			
Surrogate: 13C8-PFOS	*20.6*		ng/L	24.3		84.8	45-140			
Surrogate: 13C2-4:2FTS	*36.0*		ng/L	48.6		74.0	60-200			
Surrogate: 13C2-6:2FTS	*39.4*		ng/L	48.6		80.9	60-200			
Surrogate: 13C2-8:2FTS	*38.7*		ng/L	48.6		79.5	50-200			
Surrogate: 13C8-PFOSA	*17.7*		ng/L	24.3		72.9	30-130			
Surrogate: D3-NMeFOSA	*15.7*		ng/L	24.3		64.5	15-130			
Surrogate: D5-NEtFOSA	*16.3*		ng/L	24.3		67.0	10-130			
Surrogate: D3-NMeFOSAA	*39.6*		ng/L	48.6		81.4	45-200			
Surrogate: D5-NEtFOSAA	*37.7*		ng/L	48.6		77.5	10-200			
Surrogate: D7-NMeFOSE	*175*		ng/L	243		71.8	10-150			
Surrogate: D9-NEtFOSE	*165*		ng/L	243		67.7	10-150			
Surrogate: 13C3-HFPO-DA	*87.2*		ng/L	97.3		89.7	25-160			
MRL Check (B350902-MRL1)				Prepared: 09/06/23 Analyzed: 09/09/23						
Perfluorobutanoic acid (PFBA)	6.12	3.9	ng/L	7.87		77.7	44-157			
Perfluoropentanoic acid (PFPeA)	2.75	2.0	ng/L	3.93		69.8	57-148			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350902 - Draft Method 1633										
MRL Check (B350902-MRL1)				Prepared: 09/06/23 Analyzed: 09/09/23						
Perfluorohexanoic acid (PFHxA)	1.25	0.98	ng/L	1.97		63.5	62-149			
Perfluoroheptanoic acid (PFHpA)	1.27	0.98	ng/L	1.97		64.7	56-150			
Perfluorooctanoic acid (PFOA)	1.29	0.98	ng/L	1.97		65.5	57-161			
Perfluorononanoic acid (PFNA)	1.21	0.98	ng/L	1.97		61.5	53-157			
Perfluorodecanoic acid (PFDA)	1.24	0.98	ng/L	1.97		63.0	43-158			
Perfluoroundecanoic acid (PFUnA)	1.27	0.98	ng/L	1.97		64.8	50-155			
Perfluorododecanoic acid (PFDoA)	1.29	0.98	ng/L	1.97		65.6	60-141			
Perfluorotridecanoic acid (PFTrDA)	1.29	0.98	ng/L	1.97		65.4	52-140			
Perfluorotetradecanoic acid (PFTeDA)	1.17	0.98	ng/L	1.97		59.5	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.21	0.98	ng/L	1.75		69.4	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.20	0.98	ng/L	1.85		64.8	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.24	0.98	ng/L	1.80		69.1	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.12	0.98	ng/L	1.87		59.5	51-150			
Perfluorooctanesulfonic acid (PFOS)	1.20	0.98	ng/L	1.82		66.0	43-162			
Perfluorononanesulfonic acid (PFNS)	1.17	0.98	ng/L	1.89		61.8	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.18	0.98	ng/L	1.90		62.0	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.12	0.98	ng/L	1.91		58.8	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	4.93	3.9	ng/L	7.38		66.9	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	5.37	3.9	ng/L	7.48		71.8	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	5.35	3.9	ng/L	7.57		70.7	46-165			
Perfluorooctanesulfonamide (PFOSA)	1.30	0.98	ng/L	1.97		66.1	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	1.27	0.98	ng/L	1.97		64.4	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.25	0.98	ng/L	1.97		63.5	49-156			
N-MeFOSAA (NMeFOSAA)	1.39	0.98	ng/L	1.97		70.7	32-160			
N-EtFOSAA (NEtFOSAA)	1.37	0.98	ng/L	1.97		69.6	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	13.2	9.8	ng/L	19.7		66.9	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	13.4	9.8	ng/L	19.7		68.0	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.40	3.9	ng/L	7.87		81.3	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	5.49	3.9	ng/L	7.43		73.9	61-148			
9Cl-PF3ONS (F53B Minor)	5.68	3.9	ng/L	7.38		77.1	44-167			
11Cl-PF3OUdS (F53B Major)	5.30	3.9	ng/L	7.43		71.3	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	12.5	9.8	ng/L	19.7		63.7	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	66.5	49	ng/L	98.4		67.6	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	60.8	49	ng/L	98.4		61.8	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.92	2.0	ng/L	3.50		83.4	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.05	2.0	ng/L	3.93		77.6	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.10	2.0	ng/L	3.93		78.8	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.78	2.0	ng/L	3.93		96.0	47-160			
Surrogate: 13C4-PFBA	*80.3*		ng/L	98.4		81.6	10-130			
Surrogate: 13C5-PFPeA	*40.9*		ng/L	49.2		83.2	35-150			
Surrogate: 13C5-PFHxA	*20.3*		ng/L	24.6		82.5	55-150			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350902 - Draft Method 1633										
MRL Check (B350902-MRL1)				Prepared: 09/06/23 Analyzed: 09/09/23						
Surrogate: 13C4-PFHpA	*19.4*		ng/L	24.6		78.8	55-150			
Surrogate: 13C8-PFOA	*19.0*		ng/L	24.6		77.4	60-140			
Surrogate: 13C9-PFNA	*10.0*		ng/L	12.3		81.7	55-140			
Surrogate: 13C6-PFDA	*9.51*		ng/L	12.3		77.3	50-140			
Surrogate: 13C7-PFUnA	*9.71*		ng/L	12.3		79.0	30-140			
Surrogate: 13C2-PFDoA	*8.87*		ng/L	12.3		72.1	10-150			
Surrogate: 13C2-PFTeDA	*9.20*		ng/L	12.3		74.9	10-130			
Surrogate: 13C3-PFBS	*19.5*		ng/L	24.6		79.4	55-150			
Surrogate: 13C3-PFHxS	*20.5*		ng/L	24.6		83.3	55-150			
Surrogate: 13C8-PFOS	*20.0*		ng/L	24.6		81.3	45-140			
Surrogate: 13C2-4:2FTS	*33.6*		ng/L	49.2		68.3	60-200			
Surrogate: 13C2-6:2FTS	*37.1*		ng/L	49.2		75.5	60-200			
Surrogate: 13C2-8:2FTS	*36.5*		ng/L	49.2		74.3	50-200			
Surrogate: 13C8-PFOSA	*16.8*		ng/L	24.6		68.3	30-130			
Surrogate: D3-NMeFOSA	*14.1*		ng/L	24.6		57.3	15-130			
Surrogate: D5-NEtFOSA	*14.6*		ng/L	24.6		59.5	10-130			
Surrogate: D3-NMeFOSAA	*37.8*		ng/L	49.2		76.8	45-200			
Surrogate: D5-NEtFOSAA	*35.5*		ng/L	49.2		72.1	10-200			
Surrogate: D7-NMeFOSE	*167*		ng/L	246		67.9	10-150			
Surrogate: D9-NEtFOSE	*161*		ng/L	246		65.3	10-150			
Surrogate: 13C3-HFPO-DA	*87.1*		ng/L	98.4		88.6	25-160			
Batch B351647 - Draft Method 1633										
Blank (B351647-BLK1)				Prepared: 09/12/23 Analyzed: 09/13/23						
Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.99	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.99	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.99	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.99	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.99	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.99	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.99	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.99	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.99	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.99	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.99	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.99	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.99	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.99	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.99	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.99	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.99	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.99	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.99	ng/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351647 - Draft Method 1633										
Blank (B351647-BLK1)				Prepared: 09/12/23 Analyzed: 09/13/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.99	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.99	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.99	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	49	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Surrogate: 13C4-PFBA	*85.5*		ng/L	98.5		86.8	10-130			
Surrogate: 13C5-PFPeA	*42.7*		ng/L	49.3		86.7	35-150			
Surrogate: 13C5-PFHxA	*21.2*		ng/L	24.6		86.0	55-150			
Surrogate: 13C4-PFHpA	*21.1*		ng/L	24.6		85.6	55-150			
Surrogate: 13C8-PFOA	*21.0*		ng/L	24.6		85.0	60-140			
Surrogate: 13C9-PFNA	*10.1*		ng/L	12.3		82.1	55-140			
Surrogate: 13C6-PFDA	*10.4*		ng/L	12.3		84.1	50-140			
Surrogate: 13C7-PFUnA	*10.6*		ng/L	12.3		86.3	30-140			
Surrogate: 13C2-PFDoA	*9.76*		ng/L	12.3		79.2	10-150			
Surrogate: 13C2-PFTeDA	*9.67*		ng/L	12.3		78.5	10-130			
Surrogate: 13C3-PFBS	*20.9*		ng/L	24.6		85.0	55-150			
Surrogate: 13C3-PFHxS	*21.5*		ng/L	24.6		87.3	55-150			
Surrogate: 13C8-PFOS	*20.3*		ng/L	24.6		82.3	45-140			
Surrogate: 13C2-4:2FTS	*33.3*		ng/L	49.3		67.5	60-200			
Surrogate: 13C2-6:2FTS	*34.0*		ng/L	49.3		68.9	60-200			
Surrogate: 13C2-8:2FTS	*35.0*		ng/L	49.3		71.1	50-200			
Surrogate: 13C8-PFOSA	*19.2*		ng/L	24.6		77.8	30-130			
Surrogate: D3-NMeFOSA	*18.0*		ng/L	24.6		73.1	15-130			
Surrogate: D5-NEtFOSA	*18.5*		ng/L	24.6		75.2	10-130			
Surrogate: D3-NMeFOSAA	*38.5*		ng/L	49.3		78.1	45-200			
Surrogate: D5-NEtFOSAA	*36.6*		ng/L	49.3		74.3	10-200			
Surrogate: D7-NMeFOSE	*201*		ng/L	246		81.7	10-150			
Surrogate: D9-NEtFOSE	*193*		ng/L	246		78.2	10-150			
Surrogate: 13C3-HFPO-DA	*82.7*		ng/L	98.5		84.0	25-160			
LCS (B351647-BS1)				Prepared: 09/12/23 Analyzed: 09/13/23						
Perfluorobutanoic acid (PFBA)	95.2	3.9	ng/L	94.1		101	58-148			
Perfluoropentanoic acid (PFPeA)	46.5	2.0	ng/L	47.0		98.8	54-152			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351647 - Draft Method 1633										
LCS (B351647-BS1)				Prepared: 09/12/23 Analyzed: 09/13/23						
Perfluorohexanoic acid (PFHxA)	23.5	0.98	ng/L	23.5		99.7	55-152			
Perfluoroheptanoic acid (PFHpA)	23.1	0.98	ng/L	23.5		98.2	54-154			
Perfluorooctanoic acid (PFOA)	23.3	0.98	ng/L	23.5		99.0	52-161			
Perfluorononanoic acid (PFNA)	22.6	0.98	ng/L	23.5		96.1	59-149			
Perfluorodecanoic acid (PFDA)	23.5	0.98	ng/L	23.5		99.7	52-147			
Perfluoroundecanoic acid (PFUnA)	23.3	0.98	ng/L	23.5		99.0	48-159			
Perfluorododecanoic acid (PFDoA)	23.7	0.98	ng/L	23.5		101	64-142			
Perfluorotridecanoic acid (PFTrDA)	23.1	0.98	ng/L	23.5		98.3	49-148			
Perfluorotetradecanoic acid (PFTeDA)	24.0	0.98	ng/L	23.5		102	47-161			
Perfluorobutanesulfonic acid (PFBS)	20.3	0.98	ng/L	20.9		97.1	62-144			
Perfluoropentanesulfonic acid (PFPeS)	21.6	0.98	ng/L	22.1		97.6	59-151			
Perfluorohexanesulfonic acid (PFHxS)	20.2	0.98	ng/L	21.5		93.7	57-146			
Perfluoroheptanesulfonic acid (PFHpS)	22.3	0.98	ng/L	22.4		99.6	55-152			
Perfluorooctanesulfonic acid (PFOS)	20.1	0.98	ng/L	21.8		92.3	58-149			
Perfluorononanesulfonic acid (PFNS)	22.1	0.98	ng/L	22.6		97.8	52-148			
Perfluorodecanesulfonic acid (PFDS)	20.8	0.98	ng/L	22.7		91.8	51-147			
Perfluorododecanesulfonic acid (PFDoS)	20.8	0.98	ng/L	22.8		91.3	36-145			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	91.0	3.9	ng/L	88.2		103	67-146			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	87.3	3.9	ng/L	89.4		97.7	61-151			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	97.9	3.9	ng/L	90.6		108	63-152			
Perfluorooctanesulfonamide (PFOSA)	23.3	0.98	ng/L	23.5		98.9	61-148			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	21.9	0.98	ng/L	23.5		93.0	63-145			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	22.3	0.98	ng/L	23.5		94.9	65-139			
N-MeFOSAA (NMeFOSAA)	22.8	0.98	ng/L	23.5		97.0	58-144			
N-EtFOSAA (NEtFOSAA)	23.7	0.98	ng/L	23.5		101	59-146			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	235	9.8	ng/L	235		99.8	71-136			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	237	9.8	ng/L	235		101	69-137			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	90.6	3.9	ng/L	94.1		96.3	63-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	82.5	3.9	ng/L	88.8		92.9	68-146			
9Cl-PF3ONS (F53B Minor)	88.7	3.9	ng/L	88.2		101	56-156			
11Cl-PF3OUdS (F53B Major)	83.5	3.9	ng/L	88.8		94.0	46-156			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	223	9.8	ng/L	235		94.8	62-129			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1130	49	ng/L	1180		96.1	63-134			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1090	49	ng/L	1180		92.6	50-138			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	41.4	2.0	ng/L	41.9		98.9	56-151			
Perfluoro-3-methoxypropanoic acid (PFMPA)	44.6	2.0	ng/L	47.0		94.9	51-145			
Perfluoro-4-methoxybutanoic acid (PFMBA)	46.4	2.0	ng/L	47.0		98.6	55-148			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	46.5	2.0	ng/L	47.0		98.9	48-161			
Surrogate: 13C4-PFBA	*81.0*		ng/L	98.0		82.6	10-130			
Surrogate: 13C5-PFPeA	*39.9*		ng/L	49.0		81.4	35-150			
Surrogate: 13C5-PFHxA	*20.2*		ng/L	24.5		82.5	55-150			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351647 - Draft Method 1633										
LCS (B351647-BS1)				Prepared: 09/12/23 Analyzed: 09/13/23						
Surrogate: 13C4-PFHpA	*20.0*		ng/L	24.5		81.8	55-150			
Surrogate: 13C8-PFOA	*20.4*		ng/L	24.5		83.1	60-140			
Surrogate: 13C9-PFNA	*10.3*		ng/L	12.3		84.0	55-140			
Surrogate: 13C6-PFDA	*10.5*		ng/L	12.3		86.0	50-140			
Surrogate: 13C7-PFUnA	*10.8*		ng/L	12.3		87.9	30-140			
Surrogate: 13C2-PFDoA	*9.69*		ng/L	12.3		79.1	10-150			
Surrogate: 13C2-PFTeDA	*9.54*		ng/L	12.3		77.9	10-130			
Surrogate: 13C3-PFBS	*19.9*		ng/L	24.5		81.3	55-150			
Surrogate: 13C3-PFHxS	*20.0*		ng/L	24.5		81.6	55-150			
Surrogate: 13C8-PFOS	*20.5*		ng/L	24.5		83.7	45-140			
Surrogate: 13C2-4:2FTS	*33.8*		ng/L	49.0		68.9	60-200			
Surrogate: 13C2-6:2FTS	*39.2*		ng/L	49.0		80.1	60-200			
Surrogate: 13C2-8:2FTS	*38.5*		ng/L	49.0		78.5	50-200			
Surrogate: 13C8-PFOSA	*18.9*		ng/L	24.5		77.0	30-130			
Surrogate: D3-NMeFOSA	*17.8*		ng/L	24.5		72.7	15-130			
Surrogate: D5-NEtFOSA	*18.5*		ng/L	24.5		75.4	10-130			
Surrogate: D3-NMeFOSAA	*39.6*		ng/L	49.0		80.7	45-200			
Surrogate: D5-NEtFOSAA	*38.2*		ng/L	49.0		78.0	10-200			
Surrogate: D7-NMeFOSE	*190*		ng/L	245		77.5	10-150			
Surrogate: D9-NEtFOSE	*185*		ng/L	245		75.4	10-150			
Surrogate: 13C3-HFPO-DA	*82.8*		ng/L	98.0		84.5	25-160			
MRL Check (B351647-MRL1)				Prepared: 09/12/23 Analyzed: 09/13/23						
Perfluorobutanoic acid (PFBA)	7.42	3.9	ng/L	7.83		94.8	44-157			
Perfluoropentanoic acid (PFPeA)	3.48	2.0	ng/L	3.91		89.0	57-148			
Perfluorohexanoic acid (PFHxA)	1.73	0.98	ng/L	1.96		88.6	62-149			
Perfluoroheptanoic acid (PFHpA)	1.55	0.98	ng/L	1.96		79.4	56-150			
Perfluorooctanoic acid (PFOA)	1.66	0.98	ng/L	1.96		85.0	57-161			
Perfluorononanoic acid (PFNA)	1.58	0.98	ng/L	1.96		81.0	53-157			
Perfluorodecanoic acid (PFDA)	1.72	0.98	ng/L	1.96		88.1	43-158			
Perfluoroundecanoic acid (PFUnA)	1.60	0.98	ng/L	1.96		81.5	50-155			
Perfluorododecanoic acid (PFDoA)	1.65	0.98	ng/L	1.96		84.1	60-141			
Perfluorotridecanoic acid (PFTrDA)	1.60	0.98	ng/L	1.96		81.9	52-140			
Perfluorotetradecanoic acid (PFTeDA)	1.65	0.98	ng/L	1.96		84.5	52-156			
Perfluorobutanesulfonic acid (PFBS)	1.54	0.98	ng/L	1.74		88.7	63-145			
Perfluoropentanesulfonic acid (PFPeS)	1.56	0.98	ng/L	1.84		84.8	58-144			
Perfluorohexanesulfonic acid (PFHxS)	1.55	0.98	ng/L	1.79		86.6	44-158			
Perfluoroheptanesulfonic acid (PFHpS)	1.54	0.98	ng/L	1.86		82.8	51-150			
Perfluorooctanesulfonic acid (PFOS)	1.46	0.98	ng/L	1.82		80.2	43-162			
Perfluorononanesulfonic acid (PFNS)	1.59	0.98	ng/L	1.88		84.6	46-151			
Perfluorodecanesulfonic acid (PFDS)	1.46	0.98	ng/L	1.89		77.4	50-144			
Perfluorododecanesulfonic acid (PFDoS)	1.52	0.98	ng/L	1.90		79.9	30-138			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	6.90	3.9	ng/L	7.34		94.1	52-158			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	6.48	3.9	ng/L	7.44		87.1	48-158			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.70	3.9	ng/L	7.53		102	46-165			
Perfluorooctanesulfonamide (PFOSA)	1.70	0.98	ng/L	1.96		86.9	47-163			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	1.84	0.98	ng/L	1.96		93.9	54-155			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.65	0.98	ng/L	1.96		84.1	49-156			
N-MeFOSAA (NMeFOSAA)	1.75	0.98	ng/L	1.96		89.6	32-160			

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QUALITY CONTROL

Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B351647 - Draft Method 1633										
MRL Check (B351647-MRL1)				Prepared: 09/12/23 Analyzed: 09/13/23						
N-EtFOSAA (NEtFOSAA)	1.81	0.98	ng/L	1.96		92.3	51-154			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	17.3	9.8	ng/L	19.6		88.2	56-151			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	17.1	9.8	ng/L	19.6		87.5	60-147			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	6.96	3.9	ng/L	7.83		89.0	58-154			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.05	3.9	ng/L	7.39		81.9	61-148			
9Cl-PF3ONS (F53B Minor)	6.39	3.9	ng/L	7.34		87.1	44-167			
11Cl-PF3OUdS (F53B Major)	5.94	3.9	ng/L	7.39		80.4	36-158			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	15.8	9.8	ng/L	19.6		80.7	32-161			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	80.7	49	ng/L	97.9		82.5	39-156			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	74.7	49	ng/L	97.9		76.4	36-149			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	2.96	2.0	ng/L	3.48		85.0	56-144			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.42	2.0	ng/L	3.91		87.4	48-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.34	2.0	ng/L	3.91		85.3	49-154			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	3.50	2.0	ng/L	3.91		89.3	47-160			
Surrogate: 13C4-PFBA	*80.2*		ng/L	97.9		81.9	10-130			
Surrogate: 13C5-PFPeA	*40.3*		ng/L	48.9		82.4	35-150			
Surrogate: 13C5-PFHxA	*19.9*		ng/L	24.5		81.4	55-150			
Surrogate: 13C4-PFHpA	*20.1*		ng/L	24.5		82.3	55-150			
Surrogate: 13C8-PFOA	*20.5*		ng/L	24.5		83.9	60-140			
Surrogate: 13C9-PFNA	*10.2*		ng/L	12.2		83.1	55-140			
Surrogate: 13C6-PFDA	*9.48*		ng/L	12.2		77.5	50-140			
Surrogate: 13C7-PFUnA	*9.86*		ng/L	12.2		80.6	30-140			
Surrogate: 13C2-PFDoA	*8.94*		ng/L	12.2		73.1	10-150			
Surrogate: 13C2-PFTeDA	*8.80*		ng/L	12.2		71.9	10-130			
Surrogate: 13C3-PFBS	*19.2*		ng/L	24.5		78.3	55-150			
Surrogate: 13C3-PFHxS	*20.0*		ng/L	24.5		81.9	55-150			
Surrogate: 13C8-PFOS	*20.1*		ng/L	24.5		82.2	45-140			
Surrogate: 13C2-4:2FTS	*30.3*		ng/L	48.9		61.8	60-200			
Surrogate: 13C2-6:2FTS	*36.8*		ng/L	48.9		75.3	60-200			
Surrogate: 13C2-8:2FTS	*36.3*		ng/L	48.9		74.2	50-200			
Surrogate: 13C8-PFOSA	*17.8*		ng/L	24.5		72.6	30-130			
Surrogate: D3-NMeFOSA	*16.1*		ng/L	24.5		65.7	15-130			
Surrogate: D5-NEtFOSA	*17.6*		ng/L	24.5		71.9	10-130			
Surrogate: D3-NMeFOSAA	*36.4*		ng/L	48.9		74.4	45-200			
Surrogate: D5-NEtFOSAA	*35.6*		ng/L	48.9		72.8	10-200			
Surrogate: D7-NMeFOSE	*181*		ng/L	245		74.0	10-150			
Surrogate: D9-NEtFOSE	*177*		ng/L	245		72.4	10-150			
Surrogate: 13C3-HFPO-DA	*80.9*		ng/L	97.9		82.7	25-160			

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B350304 - Draft Method 1633										
Blank (B350304-BLK1)				Prepared & Analyzed: 08/28/23						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B350304-BS1)				Prepared & Analyzed: 08/28/23						
Total Suspended Solids	184	2.5	mg/L	200		92.0	64.1-125			
Batch B350375 - Draft Method 1633										
Blank (B350375-BLK1)				Prepared: 08/28/23 Analyzed: 08/29/23						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B350375-BS1)				Prepared: 08/28/23 Analyzed: 08/29/23						
Total Suspended Solids	180	2.5	mg/L	200		90.0	64.1-125			
Batch B350397 - Draft Method 1633										
Blank (B350397-BLK1)				Prepared: 08/28/23 Analyzed: 08/29/23						
Total Suspended Solids	ND	5.0	mg/L							
LCS (B350397-BS1)				Prepared: 08/28/23 Analyzed: 08/29/23						
Total Suspended Solids	231	5.0	mg/L	200		116	64.1-125			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-01	Recommended sample holding time was exceeded, but analysis was performed before 2X the allowable holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
Z-01	Extracted internal standard outside of control limits. Analyte is a known difficult compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV

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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2024
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

Pace Analytical®

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https://www.pacelabs.com/

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23H2505

CHAIN OF CUSTODY RECORD (New York)

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: EA Engineering
Address: 269 W. Jefferson St, Syracuse NY 13202
Phone: 315 380 1346
Project Name: Three Star Anodizing
Project Location: Wappingers Falls, NY
Project Number: NYSDEC #314058 EA #16025.23/0008
Project Manager: Mike Miller (EA) Kyle Stuckey (AECOM)
Pace Analytical Quote Name/Number: Cullen #141621
Invoice Recipient:
Sampled By: Moriah Gilkey

Regulatory Requirements & Due Date
7-Day ☐ 10-Day ☐
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other: Cat B Deliverables
CLP Like Data Pkg Required: ☐
Email To: michaelmiller@aecom.com
Fax To #:

| Pace Analytical Work Order# | Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite | Grab | Matrix Code | Conc Code | PFAS 1633 w/ TOC | | |

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FedEx® Tracking

DELIVERED

Wednesday

8/16/23 at 9:52 AM

Signed for by: H.CHRISTIAN

Obtain proof of delivery

How was your delivery?

DELIVERY STATUS

Delivered

Shipment is 1 of 4 pieces

TRACKING ID

782535305464

FROM
HUNT VALLEY, MD US

Label Created
8/15/23 4:34 PM

WE HAVE YOUR PACKAGE
NEWBURGH, NY
8/15/23 5:27 PM

IN TRANSIT
WINDSOR LOCKS, CT
8/16/23 7:41 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
8/16/23 7:51 AM

DELIVERED
East Longmeadow, MA US

Delivered
8/16/23 at 9:52 AM

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MORE OPTIONS

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist
	Effective Date: 07/13/2023

Log In Back-Sheet

Client EA Engineering

Project 3 Star Anodrying

MCP/RCP Required No

Deliverable Package Requirement No

Location NY

PWSID# (When Applicable) NA

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time AMM 8/16/23 952

Back-Sheet By / Date / Time GK 8/16/23 1446

Temperature Method gun # 5

Temp < 6° C Actual Temperature 3.6

Rush Samples: Yes / (No) Notify

Short Hold: Yes / (No) Notify

Notes regarding Samples/COC outside of SOP:

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☐	☑
COC Relinquished	☑	☐
COC/Samples Labels Agree	☑	☐
All Samples in Good Condition	☑	☐
Samples Received within Holding Time	☑	☐
Is there enough Volume	☑	☐
Proper Media/Container Used	☑	☐
Splitting Samples Required	☐	☑
MS/MSD	☐	☑
Trip Blanks	☐	☑
Lab to Filters	☐	☑
COC Legible	☑	☐

COC Included: (Check all included)

Client ☑ Analysis ☑ Sampler Name ☑

Project ☑ IDs ☐ Collection Date/Time ☑

All Samples Proper pH: (N/A) ☐ ☐

Additional Container Notes

Note: West Virginia requires all samples to have their temperature taken. Note any outliers.

Qualtrax ID: 120836

Pace ANALYTICAL SERVICES

DC#_Title: ENV-FRM-ELON-0001 v07_Sample Receiving Checklist

Effective Date: 07/13/2023

Sample			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars																				
8oz Amb/Clear																						
4oz Amb/Clear																						
2oz Amb/Clear																						
Unpreserved	1 Liter	Ambers																				
HCL																						
Sulfuric																						
Sulfuric	250mL																					
Phosphoric																						
HCl																						
Unpreserved	100mL																					
Unpreserved	1 Liter	Plastics																				
Sulfuric																						
Unpreserved	500mL		2	2	2	2	2	2	2	2	2											
Sulfuric																						
Unpreserved	250mL																					
Trizma																						
Sulfuric																						
Nitric																						
NaOH																						
Ammonium Acetate																						
NaOH/Zinc																						
Unpreserved		VOA Vials																				
HCl																						
MeOH																						
D.I. Water																						
BiSulfate																						
Col/Bact		Other / Fill in																				
125 plastic			—	—	—	—	—	—	—													

Qualtrax ID: 120836

Appendix E

Data Usability Summary Report

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DATA VALIDATION REPORT

Three Star Anodizing

SDG: 23C1364

Chemical Analyses Performed by:

Con-Test
Pace Analytical Laboratory

Prepared by

ENVIRONMENTAL DATA SERVICES, LTD.

Prepared for

EA Engineering, Science and Technology, Inc.

October 5, 2023

5 Brilliant Avenue, Pittsburgh, PA 15215
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ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR VOLATILES

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science and Technology, Inc.

LABORATORY: Con-Test, Pace Analytical Laboratory

SAMPLE DELIVERY GROUP: 23C1364

SAMPLE DATES: 03/08/2023

This sample delivery group consist of the following samples:

Sample Identification	Laboratory Identification
314058-OA-1-0323	23C1364-01
314058-IA-1-0323	23C1364-02
314058-IA-2-0323	23C1364-03
314058-IA-4-0323	23C1364-04
314058-IA-5-0323	23C1364-05
314058-FD-1-0323	23C1364-06

The samples described above were analyzed via methods USEPA TO-15 and/or USEPA TO-15 SIM to determine the concentrations of trace volatile organic analytes (VOAs) in air samples.

Project specific quality assurance (QA) objectives, as well as the USEPA Region II SOP, Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15 Data Validation, HW-31, Rev. 6, June 2014 have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. The second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.”

1. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this delivery group were prepared and analyzed within the holding time specified in the validation guidelines.

2. BLANK CONTAMINATION

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

Method blanks were prepared and analyzed in association with the samples in this delivery group at the specified frequency. Upon examination of method blank data, no analyte was positively identified at a concentration equal to or above the method detection limit (MDL) in any associated method blank.

Storage Blanks

No storage blanks were required for this sample delivery group (SDG).

Trip Blanks

No trip blanks were submitted in association with this SDG.

Field Blanks

No field blanks were submitted in association with this SDG.

3. MASS SPECTROMETER TUNING

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

The tuning standard for volatiles is bromofluorobenzene (BFB).

All tunes associated with this SDG were fully compliant.

4. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 24-hour analytical sequence, denoted as a "closing" calibration verification and ascertains acceptable performance at the conclusion of the analytical sequence.

Note, no closing continuing calibration verifications were performed in association with this SDG.

Response Factor

The relative response factor (RRF) measures the instruments responses to specific chemical compounds. The RRFs for the volatile organic analysis (VOA) target compound list (TCL) must be ≥0.05 in both the initial and continuing calibrations with exception of poor response compounds, where RRFs must be ≥0.01. Additionally, the RRF in the closing continuing calibration must be ≥0.01. A value less than the respective criteria indicates serious detection and quantitation problems. If the mean RRF of the initial calibration or the continuing calibration RRF is <0.05, or <0.01 for poor response compounds, or the RRF for the closing continuing calibration is <0.01 for any analyte, those analytes detected in environmental samples will be qualified as estimated. All non-detects for those analytes will be rejected.

The RRF values in all initial and continuing calibrations were found to be acceptable in all cases.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

The following QC criteria have been applied for this project:

The %RSD of initial calibration must be <30%.

An RSD value outside initial calibration limit indicates the potential for quantitation errors. For this reason, all positive results are qualified as estimated. Severe performance failures (RSD >90%) require qualification of non-detected results as well.

The %D for continuing calibration must be <30%.

A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as estimated, and non-detects are qualified with "UJ".

All initial calibration and continuing calibration %RSD and %D values were within defined QC criteria with the following exceptions.

The %D values for the target analytes benzyl chloride, hexachlorobutadiene and naphthalene were outside of acceptance limits for the continuing calibration verification (CCV) analyzed on instrument SYSJ on 03/23/2023. All samples in this SDG are associated with the non-compliant CCV. The sample results reported for the impacted target analytes have been qualified estimated "J" or "UJ" as appropriate on this basis.

5. **INTERNAL STANDARDS PERFORMANCE**

Internal standard performance criteria are meant to ensure that the gas chromatography/mass spectrometry (GC/MS) sensitivity and response are stable during every experimental run.

The internal standard area count must not vary by more than a factor of two from the associated continuing calibration standard. The retention time of the internal standard must not vary by more than +/- 20 seconds from the associated continuing calibration standard. The area count must be within -60% to +140% range of the associated standard. If area count is >140% non-detected results are not qualified while positive results are qualified "J", estimated. However, when an observed area count is <60%, positive results are qualified "J" estimated while non-detected results are rejected.

The reported analysis for all samples, lab control sample, and associated method blanks had internal standard areas and retention times within QC criteria in all cases.

6. COMPOUND IDENTIFICATION

Volatile

The TCL compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound, and have ion spectra which has a ratio of the primary and secondary ion intensities within 20% of that in the standard compound. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

All identification criteria were met. Therefore, no analytes were qualified for compound identification.

Volatile Tentatively Identified Compounds

Tentatively Identified Compounds (TICs) were reported by the laboratory and reviewed for quality assurance. For all TIC results where there is presumptive evidence of a match, being greater than or equal to an 85% match, the results are qualified "NJ", tentatively identified. If the non-target compound is reported as an unknown, the result is qualified "J", estimated. Likewise, if it is determined that the identification of a TIC is unacceptable, the tentative identification of the compound is changed to "unknown" and the result is qualified "J", estimated.

Tentatively identified compounds were not reported by the laboratory and were not evaluated for this program.

7. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

All LCS accuracy indicators were favorable or did not require qualification of sample results with the following exceptions.

The observed recoveries for hexachlorobutadiene and naphthalene were lower than the lowest acceptance limit. All samples in this SDG are associated with the non-compliant LCS. Potential low bias is indicated. The sample results reported for the impacted target analytes have been qualified estimated "J" or "UJ", as appropriate on this basis.

8. REPORTING

Samples 314058-IA-2-0323 and 314058-FD-1-0323 were analyzed at a dilution to bring the concentration of target analytes within the calibrated range; the reported compound quantitation limits in the diluted analysis were adjusted upwards accordingly. No other dilution, re-extraction, or reanalysis was performed on the samples associated with this SDG.

9. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

10. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 314058-IA-2-0323 and 314058-FD-1-0323 were submitted as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Clean canisters were used to transport air samples in this SDG. All criteria were met to ensure containers were appropriate for sample storage.

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Volatiles		**Major**	**Minor**
Holding Time	x		
Method Blanks	x		
Storage Blanks	NA		
Trip Blanks	NA		
Field Blanks	NA		
Mass Spectrometer Tuning	x		
Calibration Response Factor	x		
Calibration Percent Relative Standard Deviation and Percent Difference			x
Internal Standards	x		
Compound Identification - Volatile	x		
Tentatively Identified Compounds - Volatile	NA		
Laboratory Control Sample			x
Reporting	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

DATA VALIDATION REPORT

Three Star Anodizing

SDGs: 23H2240, 23H2245, 23H2273, 23H2452, 23H2476, and 23H2505

Chemical Analyses Performed by:

Con-Test, A Pace Analytical Laboratory

Prepared by

ENVIRONMENTAL DATA SERVICES, LTD.

Prepared for

EA Engineering, Science and Technology, Inc.

September 11, 2024

5 Brilliant Avenue, Pittsburgh, PA 15215
412.408.3288 I www.eds-pa.com

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR DISSOLVED METALS

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUP: 23H2240

SAMPLE DATES: 08/14/2023

The above sample delivery groups (SDGs) consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-3-08142023	23H2240-01
314058-MW-4-08142023	23H2240-02
314058-MW-5-08142023	23H2240-03
314058-MW-9R-08142023	23H2240-04
314058-MW-11-08142023	23H2240-05
314058-MW-15D-08142023	23H2240-06
314058-MW-16-08142023	23H2240-07
314058-FD-1	23H2240-08

The samples described above were analyzed via United States Environmental Protection Agency (USEPA) SW-846 Method 6010 to determine the concentrations of metals.

Project specific quality assurance (QA) objectives and the USEPA Region II SOP, Hazardous Waste Support Section SOP No. HW-3a Revision 1 ISM02.2 ICP-AES Data Validation, September 2016, and the United States Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Superfund Methods Data Review, OLEM 9240.1-66 EPA-542-R-20-006, November 2020, (USEPA 2020) have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

All data users should note two facts. First, an "R" flag means that the associated value is unusable due to significant quality control (QC) problems, the data is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on any data tables even as a last resort. Second, no analyte concentration, even if it passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

1. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes in the samples whose holding time has been exceeded will be qualified as estimated, "J-", or unusable, "R", if holding times are grossly exceeded.

The samples in this delivery group were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples contained in this delivery group were prepared and analyzed within the holding times established in the method and validation criteria.

2. BLANK CONTAMINATION

Quality assurance blanks, which include method, trip, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blank Contamination

Method blanks were evaluated at the proper frequency. No problems requiring result qualification were found for this criterion.

Field or Rinse Blank Contamination

No samples were submitted as field /rinse blanks in association with this SDG.

3. CALIBRATION

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data.

Initial and Continuing Calibration Verification

The initial calibration curve and its verification demonstrate that the instrument is capable of giving acceptable performance at the beginning of the analytical sequence. The continuing calibration verification standards provide information as to the continuing stability of the calibration curve.

All initial and continuing calibration verifications that bracketed sample analyses associated with the samples in this SDG were within acceptance limits.

Initial and Continuing Calibration Blanks

Qualification of sample results due to ICB contamination affects all samples in the analytical sequence while CCB contamination only affects samples immediately after or before the non-compliant CCB. If the highest level of contamination is found in the field or method blank, all samples are qualified based on that observation.

All initial and continuing calibration blanks (ICB/CCBs) were analyzed at the proper frequency. All ICB and CCBs associated with the samples in this SDG were evaluated. No problems were found for this criterion.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

No sample was submitted for MS/MSD evaluation in association with this SDG.

5. LABORATORY DUPLICATE

The laboratory duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

No sample was analyzed as a laboratory duplicate in association with this SDG.

6. LABORATORY CONTROL SAMPLE

The laboratory control sample (LCS) is a quality control sample of known concentration, which is processed along with a batch of samples. The percent recovery of the LCS can be used to assess the accuracy of the analytical procedure performed by a specific individual, during a specific time period, and utilizing the same reagents and equipment as those used for sample analyses. The LCS data is independent of sample matrix and the results may formulate a basis for qualification.

LCS and LCS duplicates were processed at the proper frequency. Upon evaluation, all precision and accuracy indicators were favorable.

7. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 314058-MW-16-08142023 and 314058-FD-1 were analyzed as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated with the exceptions of barium and manganese. The results reported for impacted analytes in the field duplicate pair have been qualified "J" on this basis.

8. ICP INTERFERENCE CHECK SAMPLE

An ICP interference check sample (ICS) must be analyzed for ICP-AES. All elements in the ICP-AES interference check sample solution ICSA should exhibited recoveries within acceptance limits (+/- CRQL of the true/mean value or +/-20% of the true value, whichever is greater) for the aqueous matrix. All elements in the ICP-AES solution ICSAB should exhibited acceptable recoveries (80-120% limits).

ICSA and ICSB solutions were properly analyzed and upon evaluation, found to be acceptable.

9. ICP SERIAL DILUTION

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high (concentration in the original sample is greater than 50 times the MDL, the percent difference between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 10. For a serial dilution analysis that does not meet the technical criteria, the action was applied to all samples of the same matrix.

No sample was analyzed as a serial dilution in association with the samples in this SDG.

10. OTHER

None.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Metals		Major	Minor
Holding Time/Sample Handling	x		
Method Blank	x		
Field or Rinse Blank	NA		
Initial Calibration	x		
Initial and Continuing Calibration Verification	x		
Initial and Continuing Calibration Blanks	x		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Duplicate	NA		
Laboratory Control Sample	x		
Field Duplicate			x
ICP Interference Check Sample	x		
ICP Serial Dilution	NA		
Other	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR PESTICIDES

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUPS: 23H2240

SAMPLE DATE: 08/14/2023

The above sample delivery groups consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-3-08142023	23H2240-01
314058-MW-4-08142023	23H2240-02
314058-MW-5-08142023	23H2240-03
314058-MW-9R-08142023	23H2240-04
314058-MW-11-08142023	23H2240-05
314058-MW-15D-08142023	23H2240-06
314058-MW-16-08142023	23H2240-07
314058-FD-1	23H2240-08

The samples described above were analyzed via United States Environmental Protection Agency (USEPA) SW846 Method 8081B to determine the concentrations of organochlorine pesticides.

This Data Usability Summary Report (DUSR) has been prepared in general compliance with NYSDEC Analytical Services Protocols, USEPA National Functional Guidelines as well as the USEPA Region II SOP, Validating Pesticide Compounds Organochlorine Pesticides by Gas Chromatography SW-846 Method 8081B, HW-44 Rev. 1.1, December 2010.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region II Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. CHAIN OF CUSTODY AND TRAFFIC REPORTS

All chain of custody and traffic reports were present for all samples.

2. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives data may not be valid.

The samples in this sample delivery group (SDG) were received by the laboratory within the proper temperature range as specified in the validation guidance.

All reported samples were prepared and analyzed within the holding time specified in the validation guideline.

3. BLANK CONTAMINATION

Quality assurance blanks which include; method, storage, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination of samples during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blank

Method blanks were prepared and analyzed at the specified frequency. Upon examination of method blank data, no analyte was positively identified at a concentration equal to or above the method detection limit (MDL) in any associated method blank.

Field Blank

No samples were submitted as field /rinse blanks in association with this SDG.

4. CALIBRATION

Percent Relative Standard Deviation and Percent Difference

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to assess the stability of the specific compound response factor (RF) over increasing concentration. Percent difference (%D) compares the RF of the continuing calibration check to the mean RF from the initial calibration. The %D is a measure of the instrument's daily performance. For the PCB fraction, if initial calibration %RSD exceeds 20% (or the coefficient of determination greater than 0.990) or %D exceeds 20% for any analyte, all associated positive results are qualified as estimated, "J" or estimated non-detects, "UJ". If %RSD and %D grossly exceed QC criteria, non-detect data may be qualified "R". For the pesticide fraction, if %RSD exceeds limits outlined in validation guidance (or the coefficient of determination greater than 0.990), qualify all associated positive results "J". If the %D exceeds 20% for any analyte, qualify all associated positive results "J" and non-detects "UJ". If %RSD and %D grossly exceed QC criteria, non-detect data may be qualified "R".

Pesticide Fraction

A multi-point initial calibration employing all target analytes was used to demonstrate instrumental linearity. Initial calibration standards were complete for each column. The %RSD values for all analytes on both analytical columns were within validation guidelines.

Continuing calibrations were analyzed at the proper frequencies. Percent difference in a multi-component continuing calibration verification was assessed. Values for all target analytes met validation criteria on the reporting analytical column. No data qualification was necessary on this basis.

5. **INTERNAL STANDARD**

An internal standard calibration technique was employed. Bracketed calibration verification standards are not required. However, the retention times of the internal standards and the area responses of the internal standards are to be checked. All internal standards are required to have retention time shifts less than 30 seconds from the retention time of the most recent calibration standard and maintain internal standard areas between -50 to +100%. A retention time shift of greater than 30 seconds and/or and internal standard peak area outside the limit requires reanalysis of sample. All sample extracts are spiked with internal standard prior to analysis and are included in each of the calibration standards.

Internal standards were not used for pesticide analyses.

6. **SURROGATES/SYSTEM MONITORING COMPOUNDS**

All samples are spiked with surrogate/system monitoring compounds (SMC) prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Surrogate recovery summaries were present for the samples in this delivery group. All observed surrogate standard recoveries for sample results reported by the validator were within validation acceptance limits for pesticides with the following exceptions.

The observed surrogate recovery for sample 314058-MW-3-08142023 was lower than the lowest acceptance limits. The results for the associated sample were all not detected and have been qualified "UJ" on this basis.

7. COMPOUND IDENTIFICATION

The retention times of positively reported compounds must fall within the calculated retention time windows for the two-gas chromatographic (GC) columns. Additionally, the %Relative Percent Difference (RPD) of the positive results obtained on the two GC columns must be ≤ 40%.

Pesticide Fraction

Retention Time

All criteria were acceptable.

Relative Percent Difference

All criteria were acceptable.

8. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

The matrix spike/matrix spike duplicate (MS/MSD) data are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

Sample 314058-MW-15D-08142023 was submitted for MS/MSD for pesticide evaluation in association with this SDG. Upon evaluation, all accuracy and precision indicators were acceptable.

9. **LABORATORY CONTROL SAMPLE**

A laboratory control sample (LCS) and LCS duplicate (LCSD) were processed along with the samples in each delivery group. The laboratory applied in-house QC criteria. Both in-house and Region 2 criteria were applied.

All observed precision and accuracy indicators were acceptable.

10. **REPORTING**

This package reports the sample to the base reporting limit. Sample dilutions were not needed to report the target analytes in this data set.

11. **OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION**

None.

12. DATA COMPLETENESS

All criteria were met.

13. **FIELD DUPLICATE**

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method including sampling, analysis, and site heterogeneity.

Samples 314058-MW-16-08142023 and 314058-FD-1 were analyzed as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.

14. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Pesticides		**Major**	**Minor**
Chains of Custody and Traffic Report	x		
Holding Time/Sample Handling	x		
Method Blanks	x		
Field Blanks	NA		
Percent Relative Standard Deviation and Percent Difference	x		
Internal Standard	NA		
Surrogates/System Monitoring Compounds			x
Compound Identification/Retention Time	x		
Compound Identification/Relative Percent Difference	x		
Matrix Spike/Matrix Spike Duplicate	x		
Laboratory Control Sample	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR VOLATILES

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUPS: 23H2240

SAMPLE DATES: 08/14/2023

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-3-08142023	23H2240-01
314058-MW-4-08142023	23H2240-02
314058-MW-5-08142023	23H2240-03
314058-MW-9R-08142023	23H2240-04
314058-MW-11-08142023	23H2240-05
314058-MW-15D-08142023	23H2240-06
314058-MW-16-08142023	23H2240-07
314058-FD-1	23H2240-08
314058-EB-01	23H2240-09
314058-FB-01	23H2240-10
310458-TB-01	23H2240-11

The samples described above were analyzed via USEPA SW-846 8260C to determine the concentrations of low/medium volatile organic analytes (VOAs).

Project specific quality assurance (QA) objectives, as well as the USEPA Region II SOP, Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP NO. HW-24 Revision 4, September 2014 have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R,” rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. The second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. **HOLDING TIME/SAMPLE HANDLING**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this SDG were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples in this SDG were prepared and analyzed within the holding time specified in the validation guidelines.

2. **BLANK CONTAMINATION**

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

Method blanks were prepared and analyzed in association with the samples in this SDG at the specified frequency. Upon examination of method blank data, no analyte was positively identified at a concentration equal to or above the method detection limit (MDL) in any associated method blank.

Storage Blanks

No storage blanks were submitted in association with this SDG.

Trip Blanks

Sample 310458-TB-01 was submitted as a trip blank in association with all samples in this SDG. No problems were found for this criterion requiring qualification of sample results.

Field Blanks

Samples 314058-EB-01 and 314058-FB-01 were submitted as equipment/field blanks in association with this SDG. No problems were found for this criterion requiring qualification of sample results.

3. **MASS SPECTROMETER TUNING**

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

The tuning standard for volatiles is bromofluorobenzene (BFB).

All tunes associated with these SDGs were fully compliant.

4. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification, and ascertains acceptable performance at the conclusion of the analytical sequence.

Response Factor

The relative response factor (RRF) measures the instruments responses to specific chemical compounds. The RRFs for the VOA target compound list (TCL) compounds must be greater than the RRFs listed in Region II validation guidelines. A value less than the respective criteria indicates serious detection and quantitation problems. If the mean RRF of the initial calibration or the continuing calibration RRF is below the specified limit for any analyte, those analytes detected in environmental samples will be qualified as estimated. All non-detects for those analytes will be rejected.

The RRF values in all initial and continuing calibrations for method 8260C were found to be acceptable with the following exception. The observed RRF for 1,4-dioxane was outside acceptance limits in the initial calibration, initial calibration verification (ICV), and continuing calibration verification (CCV) associated with all the samples in this SDG. The sample results for 1,4-dioxane were all not detected and have been qualified "R" on this basis.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

The following QC criteria have been applied for this project:

The %RSD of initial calibration must be ≤20%.

A %RSD value outside initial calibration limit indicates the potential for quantitation errors. For this reason, all positive results are qualified as estimated and non-detect results are qualified using professional judgement.

The %D for opening continuing calibration must be ≤30%

A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as "J," estimated, and non-detects are qualified with "UJ."

All initial calibration and continuing calibration %RSD and %D values were within defined QC criteria with the following exceptions.

The observed %Ds for the acetone, bromomethane, and chloromethane were outside of acceptance limit the ICV associated with all the samples in this SDG. The results reported for the impacted analytes in the associated samples have been qualified "J" or "UJ", as appropriate on this basis.

The observed %Ds for the analytes listed below were outside of acceptance limit in the CCV associated with all the samples in this SDG. The results reported for the impacted analytes in the associated samples have been qualified "J" or "UJ", as appropriate on this basis.

bromochloromethane	*bromomethane*	*carbon tetrachloride*
chloroethane	*chloromethane*	

Please note, the laboratory did not perform closing continuing calibration verifications. Therefore, those criteria were not evaluated during validation. No qualification was applied on this basis.

5. **INTERNAL STANDARDS PERFORMANCE**

Internal standard performance criteria are meant to ensure that the gas chromatography/mass spectrometry (GC/MS) sensitivity and response are stable during every experimental run.

The internal standard area count must not vary by more than a factor of two from the associated continuing calibration standard. The retention time of the internal standard must not vary by more than +/- 30 seconds from the associated continuing calibration standard. The area count must be within -50% to +200% range of the associated standard. If area count is >200%, non-detected results are not qualified while positive results associated with the non-compliant internal standard are qualified "J," estimated. However, when an observed area count is <50%, positive results associated with the non-compliant are qualified "J," estimated, while non-detected results are rejected.

Internal standard area counts are within acceptance criteria for all samples.

6. **SURROGATES**

All samples are spiked with surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique. The observed recovery must be within laboratory limits as outlined in the project specific validation guidance.

The reported sample analyses had observed surrogate recoveries within the established acceptance limits in all cases.

7. COMPOUND IDENTIFICATION

Volatile

The project target analyte compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary ion intensities within 20% of that in the standard compound. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

All samples were evaluated, and all identification criteria were met. Therefore, no analytes were qualified for compound identification.

Volatile Tentatively Identified Compounds

Tentatively Identified Compounds (TICs) were reported by the laboratory and reviewed for quality assurance. For all TIC results where there is presumptive evidence of a match, being greater than or equal to 85% match, the results are qualified "NJ," tentatively identified. If the non-target compound is reported as an unknown, the result is qualified "J," estimated. Likewise, if it is determined that the identification of a TIC is unacceptable, the tentative identification of the compound is changed to "unknown" and the result is qualified "J," estimated.

Volatile TICs were not reported.

8. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

Sample 314058-MW-15D-08142023 was submitted for MS/MSD analyses in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable or did not require qualification of sample results.

9. **LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE**

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

LCS/LCS duplicate evaluations were processed at the proper frequency. Upon evaluation all accuracy and precision criteria were acceptable.

10. **REPORTING**

Dilutions were analyzed as necessary to bring positive instrument signals within the linear range.

11. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

12. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 314058-MW-16-08142023 and 314058-FD-1 were analyzed as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.

13. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Volatiles		**Major**	**Minor**
Holding Time	x		
Method Blanks	x		
Storage Blanks	NA		
Trip Blanks	x		
Field Blanks	x		
Mass Spectrometer Tuning	x		
Calibration Response Factor	x		
Calibration Percent Relative Standard Deviation and Percent Difference			x
Internal Standards	x		
Surrogates	x		
Compound Identification - Volatile	x		
Tentatively Identified Compounds - Volatile	NA		
Matrix Spike/Matrix Spike Duplicate	x		
Laboratory Control Sample/Laboratory Control Sample Duplicate	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR 1,4-DIOXANE

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUPS: 23H2245

SAMPLE DATES: 08/14/2023

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-11-08142023	23H2245-01
314058-MW-5-08142023	23H2245-02
314058-MW-4-08142023	23H2245-03
314058-MW-15D-08142023	23H2245-04
314058-MW-16-08142023	23H2245-05
314058-MW-9R-08142023	23H2245-06
314058-MW-3-08142023	23H2245-07
314058-FD-1-08142023	23H2245-08

The samples described above were analyzed via USEPA SW-846 8270E SIM to determine the concentrations of 1,4-dioxane. The method was modified to include isotopic dilution quantitation.

Project specific quality assurance (QA) objectives, as well as the USEPA Region II SOP, Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, HW-22 Revision 5, December 2010, have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R,” rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this delivery group were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples in this delivery group were prepared and analyzed within the holding time specified in the validation guidelines.

2. BLANK CONTAMINATION

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

No problems were found for this criterion.

Field Blanks

No sample was submitted as an equipment blank in association with this SDG.

3. MASS SPECTROMETER TUNING

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

The tuning standard for semivolatiles is decafluorotriphenylphosphine (DFTPP).

All instrument tunes were fully compliant.

4. CALIBRATION

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification and ascertains acceptable performance at the conclusion of the analytical sequence.

Response Factor

The relative response factor (RRF) measures the instrument's responses to specific chemical compounds. The response factors for the base neutral acid (BNA) target compound list (TCL) analytes must be ≥0.05 in both the initial and continuing calibrations. A value less than the respective criteria indicates serious detection and quantitation problems. If the mean RRF of the

initial calibration or the continuing calibration RRF is <0.05 for any analyte, those analytes detected in environmental samples will be qualified as estimated. All non-detects for those analytes will be rejected.

The RRF values in all initial and continuing calibrations were found to be acceptable in all cases.

Note: No closing continuing calibration was performed.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

The following QC criteria have been applied for this project:

The %RSD of initial calibration must be <20%.

An RSD value outside the initial calibration limit indicates the potential for quantitation errors. For this reason, all positive and non-detected results are qualified as estimated. Severe performance failures (RSD >90%) requires rejection of non-detected results.

The %D for continuing calibration must be <20%.

A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as estimated "J," and non-detects are qualified with "UJ."

All initial calibration and continuing calibration %RSD and %D values were within defined quality control criteria without exception.

Note: No closing continuing calibration was performed.

5. INTERNAL STANDARDS PERFORMANCE

Internal standard performance criteria are meant to ensure that the gas chromatograph/mass spectrometer (GC/MS) sensitivity and response are stable during every experimental run.

The internal standard area count must not vary by more than a factor of two from the associated continuing calibration standard. The retention time of the internal standard must not vary by more than +/-30 seconds from the associated continuing calibration standard. The area count must be within -50% to 200% range of the associated standard. If area count is >200%, non-detected results are not qualified while positive results are qualified "J," estimated. When an observed area count is <50%, results are qualified "J" or "UJ" as appropriate; however, should area counts be <25%, all associated non-detects are qualified "R," rejected.

The reported sample analyses and associated method blank had internal standard areas and retention times within QC criteria or did not require qualification of sample results.

6. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique.

The reported sample analyses and method blank had observed surrogate recoveries within the limits established by the laboratory in all cases.

7. COMPOUND IDENTIFICATION

Semivolatile

The project target analyte compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary ion intensities within 20% of that in the standard compound. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

All identification criteria were met. Therefore, no analytes were qualified for compound identification.

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

Sample 314058-MW-15D-08142023 was submitted for MS/MSD analyses in association with this SDG. Upon evaluation all precision and accuracy indicators were favorable.

9. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

No problems were found for this criterion.

10. REPORTING

Dilutions were analyzed as necessary to bring positive instrument signals within the linear range.

11. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

12. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 314058-MW-16-08142023 and 314058-FD-1-08142023 samples were analyzed as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.

13. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
1,4-Dioxane		**Major**	**Minor**
Holding Time/Sample Handling	x		
Method Blanks	x		
Field Blanks	NA		
Mass Spectrometer Tuning	x		
Calibration Response Factor	x		
Calibration Percent Relative Standard Deviation and Percent Difference	x		
Internal Standards Performance	x		
Surrogates	x		
Compound Identification - Semivolatile	x		
Tentatively Identified Compounds - Semivolatile	NA		
Matrix Spike/Matrix Spike Duplicate	x		
Laboratory Control Sample	x		
Other Quality Control Data out of Linear Range	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
UJ-	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise, and the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR PER-FLUORINATED ALKYL ACIDS

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUP: 23H2273

SAMPLE DATES: 08/14/2023

This sample delivery group (SDG) consists of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-3-08142023	23H2273-01
314058-MW-4-08142023	23H2273-02
314058-MW-5-08142023	23H2273-03
314058-MW-11-08142023	23H2273-04
314058-MW-9R-08142023	23H2273-05
314058-MW-15D-08142023	23H2273-06
314058-MW-16-08142023	23H2273-07
314058-FD-01	23H2273-08
314058-EB-01	23H2273-09
314058-FB-01	23H2273-10

Performance criteria specified in the analytical method, USEPA Draft Method 1633, Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS, August 2021; as well as the New York Department of Environmental Conservation Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs, January 2021, have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with "R," rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, "All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. The second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error."

1. **HOLDING TIME/SAMPLE HANDLING**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this SDG were received by the laboratory within the proper temperature range. All holding time criteria were met.

2. **BLANK CONTAMINATION**

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

Method blanks were prepared and analyzed in association with the samples in this SDG at the specified frequency. No problems were found for this criterion.

Calibration Blanks

No problems were found for this criterion.

Field Blanks

Samples 314058-EB-01 and 314058-FB-01 were submitted as equipment / field blanks in association with the samples in this SDG. No problems were found with this criterion.

3. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification and ascertains acceptable performance at the conclusion of the analytical sequence.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

An RSD value outside the initial calibration limit indicates the potential for quantitation errors. For this reason, all positive and non-detected results are qualified as estimated. Severe performance failures (RSD >90%) requires rejection of non-detected results. The following QC criteria have been applied for this project: The %RSD of initial calibration must be <20%.

The %D for all analytes in the continuing calibration must be <30% with the exception of the lowest level continuing calibration which must have all a %D for all analytes <50%. A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as estimated "J," and non-detects are qualified with "UJ."

All initial calibration and continuing calibration %RSD and %D values were within defined QC criteria for all target analytes.

4. **ISOTOPE DILUTION STANDARDS / SURROGATES**

All samples are spiked with isotope dilution or surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique.

No problems were found for this criterion with the following exceptions. The observed recoveries for labeled standard 13C2-4:2FTS were less than the lowest acceptance limit during the analyses of samples 314058-MW-5-08142023, 314058-EB-01, and 314058-FB-01. The results reported for the associated target analyte in the impacted samples have been qualified "UJ" on this basis.

5. **COMPOUND IDENTIFICATION**

Per-fluorinated Compounds

The project target analyte compounds are identified on the LC/MS/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra with primary and when available secondary characteristic ions present. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

The actual ratios of quantifier ion to qualifier ion or the laboratory's criteria were not provided by the laboratory for evaluation. In addition, signal to noise ratios for quantifier ions were not provided by the laboratory for evaluation. Therefore, these criteria were not assessed.

6. MATRIX SPIKE/MATRIX DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix. A matrix duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

Sample 314058-MW-15D-08142023 was submitted for MS/MSD evaluation in association with this SDG. Upon evaluation all accuracy and precision indicators were acceptable or did not result in a need to qualify sample results.

7. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

No problems were found for this criterion.

8. REPORTING

No problems were found for this criterion.

9. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

10. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

Samples 314058-MW-16-08142023 and 314058-FD-01 were analyzed as a field duplicate pair in association with this SDG. Adequate field precision was demonstrated.

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Per-fluorinated Compounds		Major	Minor
Holding Time/Sample Handling	x		
Method Blanks / Calibration Blanks	x		
Field Blanks	x		
Calibration Percent Relative Standard Deviation and Percent Difference	x		
Isotope Dilution Standards / Surrogates			x
Compound Identification	x		
Matrix Spike/Matrix Duplicate	x		
Laboratory Control Sample	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
EMPC	The result is an estimated maximum potential concentration.

Table 3
PFAS Definitions Table

	CAS Number	Compound	Abbreviation(s)
1	151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA, PFECA B
2	113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid	PFEESA, PES
3	4151-50-2	N-ethylperfluoro-1-octanesulfonamide	NEtFOSA, NEtPFOSA
4	31506-32-8	N-methylperfuoro-1octanesulfonamide	NMeFOSA, NMePFOSA
5	377-73-1	Perfluoro-3-methoxypropanoic acid	PFMPA, PRMOPrA, PFECA F
6	375-73-5	Perfluorobutanesulfonic acid	PFBS
7	863090-89-5	Perfluoro-4-methoxybutanoic acid	PFMBA, PFMOBA, PFECA A
8	2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid	NMeFOSAA
9	13252-13-6	Hexafluoropropylene Oxide Dimer Acid	HFPO-DA, Gen-X, HFPODA
10	2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid	NEtFOSAA
11	375-22-4	Perfluorobutanoic acid	PFBA
12	335-67-1	Perfluorooctanoic acid	PFOA
13	2706-91-4	Perfluoropentanesulfonic acid	PFPeS
14	754-91-6	Perfluorooctanesulfonamide	FOSA, PFOSA
15	1763-23-1	Perfluorooctanesulfonic acid	PFOS
16	2706-90-3	Perfluoropentanoic acid	PFPeA
17	2058-94-8	Perfluoroundecanoic acid	PFUnA, PFUnDA
18	376-06-7	Perfluorotetradecanoic acid	PFTeA, PFTeDA
19	72629-94-8	Perfluorotridecanoic acid	PFTriA, PFTrDA
20	375-95-1	Perfluorononanoic acid	PFNA
21	79780-39-5	Perfluorododecanesulfonic acid	PFDoS
22	307-55-1	Perfluorododecanoic acid	PFDoA, PFDoDA
23	335-77-3	Perfluorodecanesulfonic acid	PFDS
24	335-76-2	Perfluorodecanoic acid	PFDA
25	375-92-8	Perfluoroheptanesulfonic Acid	PFHpS
26	307-24-4	Perfluorohexanoic acid	PFHxA
27	68259-12-1	Perfluorononanesulfonic acid	PFNS
28	375-85-9	Perfluoroheptanoic acid	PFHpA
29	355-46-4	Perfluorohexanesulfonic acid	PFHxS
30	763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11CL-PF3Ouds, F-53 Minor
31	27619-97-2	6:2-Fluorotelomersulfonic acid	6:2 FTS
32	812-70-4	7:3 Fluorotelomer carboxylic acid	7:3 FTCA
33	756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS
34	39108-34-4	8:2-Fluotelomersulfonic acid	8:2 FTS
35	914637-49-3	5:3 Fluorotelomer carboxylic acid	5:3 FTCA
36	1691-99-2	2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	NEtPFOSAE, NEtFOSE
37	919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid	DONA, ADONA
38	757124-72-4	4:2-Fluorotelomersulfonic acid	4:2 FTS

	CAS Number	Compound	Abbreviation(s)
39	24448-09-7	2-(N-methylperfluoro-1-octanesulfonamido) ethanol	NMePFOSAE, NMeFOSE
40	356-02-5	3-Perfluoropropylpropanoic acid	3:3 FTCA

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR TOTAL METALS

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUP: 23H2452

SAMPLE DATES: 08/15/2023

The above sample delivery groups (SDGs) consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-1-08152023	23H2452-01
314058-MW-2-08152023	23H2452-02
314058-MW-10-08152023	23H2452-03
314058-MW-12-08152023	23H2452-04
314058-MW-13-08152023	23H2452-05
314058-MW-14D-08152023	23H2452-06
314058-MW-18-08152023	23H2452-07

The samples described above were analyzed via United States Environmental Protection Agency (USEPA) SW-846 Method 6010 to determine the concentrations of metals.

Project specific quality assurance (QA) objectives and the USEPA Region II SOP, Hazardous Waste Support Section SOP No. HW-3a Revision 1 ISM02.2 ICP-AES Data Validation, September 2016, and the United States Environmental Protection Agency (USEPA) National Functional Guidelines for Inorganic Superfund Methods Data Review, OLEM 9240.1-66 EPA-542-R-20-006, November 2020, (USEPA 2020) have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

All data users should note two facts. First, an "R" flag means that the associated value is unusable due to significant quality control (QC) problems, the data is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on any data tables even as a last resort. Second, no analyte concentration, even if it passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

1. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes in the samples whose holding time has been exceeded will be qualified as estimated, "J-", or unusable, "R", if holding times are grossly exceeded.

The samples in this delivery group were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples contained in this delivery group were prepared and analyzed within the holding times established in the method and validation criteria.

2. BLANK CONTAMINATION

Quality assurance blanks, which include method, trip, field, or rinse blanks, are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blank Contamination

Method blanks were evaluated at the proper frequency. No problems were found for this criterion with the following exception. Aluminum was positively identified in the method blanks associated with all samples in this SDG. Positive results reported for the impacted analyte in the associated samples have been evaluated and qualified as appropriate per validation guidance.

Field or Rinse Blank Contamination

No samples were submitted as field /rinse blanks in association with this SDG.

3. CALIBRATION

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data.

Initial and Continuing Calibration Verification

The initial calibration curve and its verification demonstrate that the instrument is capable of giving acceptable performance at the beginning of the analytical sequence. The continuing calibration verification standards provide information as to the continuing stability of the calibration curve.

All initial and continuing calibration verifications that bracketed sample analyses associated with the samples in this SDG were within acceptance limits.

Initial and Continuing Calibration Blanks

Qualification of sample results due to ICB contamination affects all samples in the analytical sequence while CCB contamination only affects samples immediately after or before the non-compliant CCB. If the highest level of contamination is found in the field or method blank, all samples are qualified based on that observation.

All initial and continuing calibration blanks (ICB/CCBs) were analyzed at the proper frequency. All ICB and CCBs associated with the samples in this SDG were evaluated. No problems were found for this criterion.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

No sample was submitted for MS/MSD evaluation in association with this SDG.

5. LABORATORY DUPLICATE

The laboratory duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

No sample was analyzed as a laboratory duplicate in association with this SDG.

6. LABORATORY CONTROL SAMPLE

The laboratory control sample (LCS) is a quality control sample of known concentration, which is processed along with a batch of samples. The percent recovery of the LCS can be used to assess the accuracy of the analytical procedure performed by a specific individual, during a specific time period, and utilizing the same reagents and equipment as those used for sample analyses. The LCS data is independent of sample matrix and the results may formulate a basis for qualification.

LCS and LCS duplicates were processed at the proper frequency. Upon evaluation, all precision and accuracy indicators were favorable.

7. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

No samples were analyzed as a field duplicate pair in association with this SDG.

8. ICP INTERFERENCE CHECK SAMPLE

An ICP interference check sample (ICS) must be analyzed for ICP-AES. All elements in the ICP-AES interference check sample solution ICSA should exhibited recoveries within acceptance limits (+/- CRQL of the true/mean value or +/-20% of the true value, whichever is greater) for the aqueous matrix. All elements in the ICP-AES solution ICSAB should exhibited acceptable recoveries (80-120% limits).

ICSA and ICSB solutions were properly analyzed and upon evaluation, found to be acceptable.

9. ICP SERIAL DILUTION

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high (concentration in the original sample is greater than 50 times the MDL, the percent difference between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 10. For a serial dilution analysis that does not meet the technical criteria, the action was applied to all samples of the same matrix.

No sample was analyzed as a serial dilution in association with the samples in this SDG.

10. OTHER

None.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Metals		Major	Minor
Holding Time/Sample Handling	x		
Method Blank			x
Field or Rinse Blank	NA		
Initial Calibration	x		
Initial and Continuing Calibration Verification	x		
Initial and Continuing Calibration Blanks	x		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Duplicate	NA		
Laboratory Control Sample	x		
Field Duplicate	NA		
ICP Interference Check Sample	x		
ICP Serial Dilution	NA		
Other	x		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR PESTICIDES

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUP: 23H2452

SAMPLE DATE: 08/15/2023

The above sample delivery groups consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-1-08152023	23H2452-01
314058-MW-2-08152023	23H2452-02
314058-MW-10-08152023	23H2452-03
314058-MW-12-08152023	23H2452-04
314058-MW-13-08152023	23H2452-05
314058-MW-14D-08152023	23H2452-06
314058-MW-18-08152023	23H2452-07

The samples described above were analyzed via United States Environmental Protection Agency (USEPA) SW846 Method 8081B to determine the concentrations of organochlorine pesticides.

This Data Usability Summary Report (DUSR) has been prepared in general compliance with NYSDEC Analytical Services Protocols, USEPA National Functional Guidelines as well as the USEPA Region II SOP, Validating Pesticide Compounds Organochlorine Pesticides by Gas Chromatography SW-846 Method 8081B, HW-44 Rev. 1.1, December 2010.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R”, rejected. Data qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region II Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. CHAIN OF CUSTODY AND TRAFFIC REPORTS

All chain of custody and traffic reports were present for all samples.

2. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives data may not be valid.

The samples in this sample delivery group (SDG) were received by the laboratory within the proper temperature range as specified in the validation guidance.

All reported samples were prepared and analyzed within the holding time specified in the validation guideline.

3. BLANK CONTAMINATION

Quality assurance blanks which include; method, storage, trip, field, or rinse blanks are prepared to identify any contamination which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination of samples during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blank

Method blanks were prepared and analyzed at the specified frequency. Upon examination of method blank data, no analyte was positively identified at a concentration equal to or above the method detection limit (MDL) in any associated method blank.

Field Blank

No samples were submitted as field /rinse blanks in association with this SDG.

4. CALIBRATION

Percent Relative Standard Deviation and Percent Difference

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to assess the stability of the specific compound response factor (RF) over increasing concentration. Percent difference (%D) compares the RF of the continuing calibration check to the mean RF from the initial calibration. The %D is a measure of the instrument's daily performance. For the PCB fraction, if initial calibration %RSD exceeds 20% (or the coefficient of determination greater than 0.990) or %D exceeds 20% for any analyte, all associated positive results are qualified as estimated, "J" or estimated non-detects, "UJ". If %RSD and %D grossly exceed QC criteria, non-detect data may be qualified "R". For the pesticide fraction, if %RSD exceeds limits outlined in validation guidance (or the coefficient of determination greater than 0.990), qualify all associated positive results "J". If the %D exceeds 20% for any analyte, qualify all associated positive results "J" and non-detects "UJ". If %RSD and %D grossly exceed QC criteria, non-detect data may be qualified "R".

Pesticide Fraction

A multi-point initial calibration employing all target analytes was used to demonstrate instrumental linearity. Initial calibration standards were complete for each column. The %RSD values for all analytes on both analytical columns were within validation guidelines.

Continuing calibrations were analyzed at the proper frequencies. Percent difference in a multi-component continuing calibration verification was assessed. Values for all target analytes met validation criteria on the reporting analytical column with the following exceptions.

The observed %D for hexachlorobenzene was outside acceptance limits in the CCV associated sample 314058-MW-13-08152023. The result for the impacted analyte in the associated sample was not detected and has been qualified "UJ" on this basis.

5. **INTERNAL STANDARD**

An internal standard calibration technique was employed. Bracketed calibration verification standards are not required. However, the retention times of the internal standards and the area responses of the internal standards are to be checked. All internal standards are required to have retention time shifts less than 30 seconds from the retention time of the most recent calibration standard and maintain internal standard areas between -50 to +100%. A retention time shift of greater than 30 seconds and/or and internal standard peak area outside the limit requires reanalysis of sample. All sample extracts are spiked with internal standard prior to analysis and are included in each of the calibration standards.

Internal standards were not used for pesticide analyses.

6. **SURROGATES/SYSTEM MONITORING COMPOUNDS**

All samples are spiked with surrogate/system monitoring compounds (SMC) prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

Surrogate recovery summaries were present for the samples in this delivery group. All observed surrogate standard recoveries for sample results reported by the validator were within validation acceptance limits for pesticides.

7. COMPOUND IDENTIFICATION

The retention times of positively reported compounds must fall within the calculated retention time windows for the two-gas chromatographic (GC) columns. Additionally, the %Relative Percent Difference (RPD) of the positive results obtained on the two GC columns must be ≤ 40%.

Pesticide Fraction

Retention Time

All criteria were acceptable.

Relative Percent Difference

All criteria were acceptable.

8. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

The matrix spike/matrix spike duplicate (MS/MSD) data are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

No sample was submitted for MS/MSD for pesticide evaluation in association with this SDG.

9. **LABORATORY CONTROL SAMPLE**

A laboratory control sample (LCS) and LCS duplicate (LCSD) were processed along with the samples in each delivery group. The laboratory applied in-house QC criteria. Both in-house and Region 2 criteria were applied.

All observed precision and accuracy indicators were acceptable.

10. **REPORTING**

This package reports the sample to the base reporting limit. Sample dilutions were not needed to report the target analytes in this data set.

11. **OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION**

None.

12. DATA COMPLETENESS

All criteria were met.

13. **FIELD DUPLICATE**

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method including sampling, analysis, and site heterogeneity.

No samples were analyzed as a field duplicate pair in association with this SDG.

14. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Pesticides		**Major**	**Minor**
Chains of Custody and Traffic Report	x		
Holding Time/Sample Handling	x		
Method Blanks	x		
Field Blanks	NA		
Percent Relative Standard Deviation and Percent Difference			x
Internal Standard	NA		
Surrogates/System Monitoring Compounds	x		
Compound Identification/Retention Time	x		
Compound Identification/Relative Percent Difference	x		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Control Sample	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	NA		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR VOLATILES

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUPS: 23H2452

SAMPLE DATES: 08/15/2023

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-1-08152023	23H2452-01
314058-MW-2-08152023	23H2452-02
314058-MW-10-08152023	23H2452-03
314058-MW-12-08152023	23H2452-04
314058-MW-13-08152023	23H2452-05
314058-MW-14D-08152023	23H2452-06
314058-MW-18-08152023	23H2452-07
314058-EB-02	23H2452-08
314058-FB-02	23H2452-09
314058-TB-02	23H2452-10

The samples described above were analyzed via USEPA SW-846 8260C to determine the concentrations of low/medium volatile organic analytes (VOAs).

Project specific quality assurance (QA) objectives, as well as the USEPA Region II SOP, Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP NO. HW-24 Revision 4, September 2014 have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R,” rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. **HOLDING TIME/SAMPLE HANDLING**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this SDG were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples in this SDG were prepared and analyzed within the holding time specified in the validation guidelines.

2. **BLANK CONTAMINATION**

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

Method blanks were prepared and analyzed in association with the samples in this SDG at the specified frequency. Upon examination of method blank data, no analyte was positively identified at a concentration equal to or above the method detection limit (MDL) in any associated method blank.

Storage Blanks

No storage blanks were submitted in association with this SDG.

Trip Blanks

Sample 314058-TB-02 was submitted as a trip blank in association with all samples in this SDG. No problems were found for this criterion.

Field Blanks

Samples 314058-EB-02 and 314058-FB-02 were submitted as equipment/field blanks in association with this SDG. No problems were found for this criterion.

3. **MASS SPECTROMETER TUNING**

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

The tuning standard for volatiles is bromofluorobenzene (BFB).

All tunes associated with these SDGs were fully compliant.

4. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification, and ascertains acceptable performance at the conclusion of the analytical sequence.

Response Factor

The relative response factor (RRF) measures the instruments responses to specific chemical compounds. The RRFs for the VOA target compound list (TCL) compounds must be greater than the RRFs listed in Region II validation guidelines. A value less than the respective criteria indicates serious detection and quantitation problems. If the mean RRF of the initial calibration or the continuing calibration RRF is below the specified limit for any analyte, those analytes detected in environmental samples will be qualified as estimated. All non-detects for those analytes will be rejected.

The RRF values in all initial and continuing calibrations for method 8260C were found to be acceptable with the following exception. The observed RRF for 1,4-dioxane was outside acceptance limits in the initial calibration, initial calibration verification (ICV), and continuing calibration verification (CCV) associated with all the samples in this SDG. The sample results for 1,4-dioxane were all not detected and have been qualified "R" on this basis.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

The following QC criteria have been applied for this project:

The %RSD of initial calibration must be ≤20%.

A %RSD value outside initial calibration limit indicates the potential for quantitation errors. For this reason, all positive results are qualified as estimated and non-detect results are qualified using professional judgement.

The %D for opening continuing calibration must be ≤30%

A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as "J," estimated, and non-detects are qualified with "UJ."

All initial calibration and continuing calibration %RSD and %D values were within defined QC criteria with the following exceptions.

The observed %Ds for the acetone, bromomethane, and chloromethane were outside of acceptance limit the ICV associated with all the samples in this SDG. The results reported for the impacted analytes in the associated samples have been qualified "J" or "UJ", as appropriate on this basis.

The observed %Ds for the analytes listed below were outside of acceptance limit in the CCV associated with all the samples in this SDG. The results reported for the impacted analytes in the associated samples were all not detected and have been qualified "UJ" on this basis.

bromochloromethane	*bromomethane*	*2,2-dichloropropane*
chloromethane	*naphthalene*	

Please note, the laboratory did not perform closing continuing calibration verifications. Therefore, those criteria were not evaluated during validation. No qualification was applied on this basis.

5. **INTERNAL STANDARDS PERFORMANCE**

Internal standard performance criteria are meant to ensure that the gas chromatography/mass spectrometry (GC/MS) sensitivity and response are stable during every experimental run.

The internal standard area count must not vary by more than a factor of two from the associated continuing calibration standard. The retention time of the internal standard must not vary by more than +/- 30 seconds from the associated continuing calibration standard. The area count must be within -50% to +200% range of the associated standard. If area count is >200%, non-detected results are not qualified while positive results associated with the non-compliant internal standard are qualified "J," estimated. However, when an observed area count is <50%, positive results associated with the non-compliant are qualified "J," estimated, while non-detected results are rejected.

Internal standard area counts are within acceptance criteria for all samples.

6. **SURROGATES**

All samples are spiked with surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique. The observed recovery must be within laboratory limits as outlined in the project specific validation guidance.

The reported sample analyses had observed surrogate recoveries within the established acceptance limits in all cases.

7. COMPOUND IDENTIFICATION

Volatile

The project target analyte compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary ion intensities within 20% of that in the standard compound. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

All samples were evaluated, and all identification criteria were met. Therefore, no analytes were qualified for compound identification.

Volatile Tentatively Identified Compounds

Tentatively Identified Compounds (TICs) were reported by the laboratory and reviewed for quality assurance. For all TIC results where there is presumptive evidence of a match, being greater than or equal to 85% match, the results are qualified "NJ," tentatively identified. If the non-target compound is reported as an unknown, the result is qualified "J," estimated. Likewise, if it is determined that the identification of a TIC is unacceptable, the tentative identification of the compound is changed to "unknown" and the result is qualified "J," estimated.

Volatile TICs were not reported.

8. **MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

No sample was submitted for MS/MSD analyses in association with this SDG.

9. **LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE**

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

LCS/LCS duplicate evaluations were processed at the proper frequency. Upon evaluation all accuracy and precision criteria were acceptable.

10. **REPORTING**

Dilutions were analyzed as necessary to bring positive instrument signals within the linear range.

11. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

12. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

No samples were submitted as a field duplicate pair in association with this SDG.

13. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Volatiles		**Major**	**Minor**
Holding Time	x		
Method Blanks	x		
Storage Blanks	NA		
Trip Blanks	x		
Field Blanks	x		
Mass Spectrometer Tuning	x		
Calibration Response Factor	x		
Calibration Percent Relative Standard Deviation and Percent Difference			x
Internal Standards	x		
Surrogates	x		
Compound Identification - Volatile	x		
Tentatively Identified Compounds - Volatile	NA		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Control Sample/Laboratory Control Sample Duplicate	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	NA		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR 1,4-DIOXANE

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUPS: 23H2476

SAMPLE DATES: 08/15/2023

The above sample delivery group (SDG) consist of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-1-08152023	23H2476-01
314058-MW-2-08152023	23H2476-02
314058-MW-10-08152023	23H2476-03
314058-MW-12-08152023	23H2476-04
314058-MW-13-08152023	23H2476-05
314058-MW-14D-08152023	23H2476-06
314058-MW-18-08152023	23H2476-07

The samples described above were analyzed via USEPA SW-846 8270E SIM to determine the concentrations of 1,4-dioxane. The method was modified to include isotopic dilution quantitation.

Project specific quality assurance (QA) objectives, as well as the USEPA Region II SOP, Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, HW-22 Revision 5, December 2010, have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with “R,” rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, “All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. Second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error.”

1. HOLDING TIME/SAMPLE HANDLING

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this delivery group were received by the laboratory within the proper temperature range as specified in the validation guidance.

The samples in this delivery group were prepared and analyzed within the holding time specified in the validation guidelines.

2. BLANK CONTAMINATION

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

No problems were found for this criterion.

Field Blanks

No sample was submitted as an equipment blank in association with this SDG.

3. MASS SPECTROMETER TUNING

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances.

The tuning standard for semivolatiles is decafluorotriphenylphosphine (DFTPP).

All instrument tunes were fully compliant.

4. CALIBRATION

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification and ascertains acceptable performance at the conclusion of the analytical sequence.

Response Factor

The relative response factor (RRF) measures the instrument's responses to specific chemical compounds. The response factors for the base neutral acid (BNA) target compound list (TCL)

analytes must be ≥0.05 in both the initial and continuing calibrations. A value less than the respective criteria indicates serious detection and quantitation problems. If the mean RRF of the initial calibration or the continuing calibration RRF is <0.05 for any analyte, those analytes detected in environmental samples will be qualified as estimated. All non-detects for those analytes will be rejected.

The RRF values in all initial and continuing calibrations were found to be acceptable in all cases.

Note: No closing continuing calibration was performed.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

The following QC criteria have been applied for this project:

The %RSD of initial calibration must be <20%.

An RSD value outside the initial calibration limit indicates the potential for quantitation errors. For this reason, all positive and non-detected results are qualified as estimated. Severe performance failures (RSD >90%) requires rejection of non-detected results.

The %D for continuing calibration must be <20%.

A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as estimated "J," and non-detects are qualified with "UJ."

All initial calibration and continuing calibration %RSD and %D values were within defined quality control criteria without exception.

Note: No closing continuing calibration was performed.

5. INTERNAL STANDARDS PERFORMANCE

Internal standard performance criteria are meant to ensure that the gas chromatograph/mass spectrometer (GC/MS) sensitivity and response are stable during every experimental run.

The internal standard area count must not vary by more than a factor of two from the associated continuing calibration standard. The retention time of the internal standard must not vary by more than +/-30 seconds from the associated continuing calibration standard. The area count must be within -50% to 200% range of the associated standard. If area count is >200%, non-detected results are not qualified while positive results are qualified "J," estimated. When an observed area count is <50%, results are qualified "J" or "UJ" as appropriate; however, should area counts be <25%, all associated non-detects are qualified "R," rejected.

The reported sample analyses and associated method blank had internal standard areas and retention times within QC criteria or did not require qualification of sample results.

6. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique.

The reported sample analyses and method blank had observed surrogate recoveries within the limits established by the laboratory in all cases.

7. COMPOUND IDENTIFICATION

Semivolatile

The project target analyte compounds are identified on the GC/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary ion intensities within 20% of that in the standard compound. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

All identification criteria were met. Therefore, no analytes were qualified for compound identification.

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix.

No sample was submitted for MS/MSD analyses in association with this SDG.

9. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

No problems were found for this criterion.

10. REPORTING

Dilutions were analyzed as necessary to bring positive instrument signals within the linear range.

11. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

12. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

No samples were analyzed as a field duplicate pair in association with this SDG.

13. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
1,4-Dioxane		**Major**	**Minor**
Holding Time/Sample Handling	x		
Method Blanks	x		
Field Blanks	NA		
Mass Spectrometer Tuning	x		
Calibration Response Factor	x		
Calibration Percent Relative Standard Deviation and Percent Difference	x		
Internal Standards Performance	x		
Surrogates	x		
Compound Identification - Semivolatile	x		
Tentatively Identified Compounds - Semivolatile	NA		
Matrix Spike/Matrix Spike Duplicate	NA		
Laboratory Control Sample	x		
Other Quality Control Data out of Linear Range	x		
Field Duplicate	NA		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
UJ-	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise, and the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.

ENVIRONMENTAL DATA SERVICES, LTD.

DATA USABILITY SUMMARY REPORT FOR PER-FLUORINATED ALKYL ACIDS

PROJECT: Three Star Anodizing

CLIENT: EA Engineering, Science, and Technology, Inc.

LABORATORY: Con-Test, A Pace Analytical Laboratory

SAMPLE DELIVERY GROUP: 23H2505

SAMPLE DATES: 08/15/2023

This sample delivery group (SDG) consists of the following samples:

Client Sample ID	Laboratory Sample ID
314058-MW-1-08152023	23H2505-01
314058-MW-2-08152023	23H2505-02
314058-MW-10-08152023	23H2505-03
314058-MW-12-08152023	23H2505-04
314058-MW-13-08152023	23H2505-05
314058-MW-14D-08152023	23H2505-06
314058-MW-18-08152023	23H2505-07
314058-EB-02	23H2505-08
314058-FB-02	23H2505-09

Performance criteria specified in the analytical method, USEPA Draft Method 1633, Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS, August 2021; as well as the New York Department of Environmental Conservation Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs, January 2021, have been considered during validation of this data and its usability.

Table 1 provides a summary of major and minor data quality issues identified for this data set. All data are acceptable except those results which have been qualified with "R," rejected. Data validation qualifiers along with associated descriptions are provided in Table 2. All data qualification related to this group of samples is detailed on the attached sheets.

Per USEPA Region 2 Validation Guidance, "All data users should note two facts. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables even as a last resort. The second, no analyte concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error."

1. **HOLDING TIME/SAMPLE HANDLING**

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Proper sample handling and preservation also play a role in the chemical stability of analytes in the sample matrix. If samples are not collected and stored using proper containers and/or preservatives, data may not be valid.

The samples in this SDG were received by the laboratory within the proper temperature range. All holding time criteria were met.

2. **BLANK CONTAMINATION**

Quality assurance blanks include method, storage, trip, field, or rinse blanks. Blanks are prepared to identify any contamination, which may have been introduced into the samples during laboratory preparation and analysis or field activity. Method and storage blanks measure laboratory contamination. Trip blanks measure cross contamination during shipment. Field and rinse blanks measure cross contamination during field operations.

Method Blanks

Method blanks were prepared and analyzed in association with the samples in this SDG at the specified frequency. No problems were found for this criterion.

Calibration Blanks

No problems requiring were found for this criterion.

Field Blanks

Samples 314058-EB-02 and 314058-FB-02 were submitted as equipment / field blanks in association with the samples in this SDG. No problems were found with this criterion.

3. **CALIBRATION**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative results. The initial calibration curve demonstrates that the instrument is capable of giving acceptable performance at the beginning of an analytical sequence. The continuing calibration verifies that the instrument is continuing to provide satisfactory daily performance. Additionally, a continuing calibration is analyzed at the end of each 12-hour analytical sequence, denoted as a "closing" calibration verification and ascertains acceptable performance at the conclusion of the analytical sequence.

Percent Relative Standard Deviation and Percent Deviation

Percent relative standard deviation (%RSD) is calculated from the initial calibration and is used to indicate stability of a specific compound over the calibration range. Percent deviation (%D) compares the response factor of the continuing calibration with the mean response factor of the initial calibration. Therefore, %D is a measure of the instrument's daily performance.

An RSD value outside the initial calibration limit indicates the potential for quantitation errors. For this reason, all positive and non-detected results are qualified as estimated. Severe performance failures (RSD >90%) requires rejection of non-detected results. The following QC criteria have been applied for this project: The %RSD of initial calibration must be <20%.

The %D for all analytes in the continuing calibration must be <30% with the exception of the lowest level continuing calibration which must have all a %D for all analytes <50%. A value outside these limits indicates the potential for detection and quantitation errors. For these reasons, all positive results are qualified as estimated "J," and non-detects are qualified with "UJ."

All initial calibration and continuing calibration %RSD and %D values were within defined QC criteria for all target analytes.

4. **ISOTOPE DILUTION STANDARDS / SURROGATES**

All samples are spiked with isotope dilution or surrogate compounds prior to sample preparation and analyses to evaluate overall laboratory performance and efficiency of the analytical technique.

No problems were found for this criterion with the following exception. The observed recovery for labeled standard 13C2-4:2FTS was less than the lowest acceptance limit during the analysis of sample 314058-EB-02. The result reported for the associated target analyte in the impacted sample has been qualified "UJ" on this basis.

5. **COMPOUND IDENTIFICATION**

Per-fluorinated Compounds

The project target analyte compounds are identified on the LC/MS/MS by using the analytes relative retention time (RRT) and ion spectra. For the results to be a positive hit, the sample peak must be within ±0.06 RRT units of the standard compound and have ion spectra with primary and when available secondary characteristic ions present. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications.

The actual ratios of quantifier ion to qualifier ion or the laboratory's criteria were not provided by the laboratory for evaluation. In addition, signal to noise ratios for quantifier ions were not provided by the laboratory for evaluation. Therefore, these criteria were not assessed.

6. MATRIX SPIKE/MATRIX DUPLICATE

The matrix spike and matrix spike duplicate (MS/MSD) are generated to determine the precision and accuracy of the analytical procedure in a given sample matrix. A matrix duplicate sample analysis is performed to determine long-term precision of the analytical method in a given matrix. The relative percent difference (RPD) between the sample and its duplicate may be used to qualify data.

No sample was submitted for MS/MSD evaluation in association with this SDG.

7. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) is spiked with the same analytes at the same concentrations as the matrix spike. The LCS results are used to verify that the laboratory can perform the analysis in a clean matrix.

No problems were found for this criterion.

8. REPORTING

No problems were found for this criterion.

9. OTHER QUALITY CONTROL DATA OUT OF SPECIFICATION

None.

10. FIELD DUPLICATE

Field duplicates are two (or more) field samples collected at the same time in the same location. Each of the samples represents the same population and is carried through all steps of the sampling and analytical procedures in an identical manner. Field duplicate results are used to assess precision of the total method, including sampling, analysis, and site heterogeneity.

No samples were analyzed as a field duplicate pair in association with this SDG.

11. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

Overall, the laboratory data generated met the project goals and quality control criteria, with the exceptions identified in this report and as summarized in Table 1.

Table 1
Review Elements Summary

	Were acceptance criteria met?		
	Yes	No	
Per-fluorinated Compounds		Major	Minor
Holding Time/Sample Handling	x		
Method Blanks / Calibration Blanks	x		
Field Blanks	x		
Calibration Percent Relative Standard Deviation and Percent Difference	x		
Isotope Dilution Standards / Surrogates			x
Compound Identification	x		
Matrix Spike/Matrix Duplicate	NA		
Laboratory Control Sample	x		
Other Quality Control Data out of Specification	x		
Field Duplicate	NA		

Major= Major data quality issue identified resulting in rejection of data.
Minor= Minor data quality issue identified resulting in the qualification of data. Data qualification should be used to inform the data users of data limitations.
NA = Not applicable

Table 2
Data Validation Qualifiers

Data Qualifier	Definition
U	The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
EMPC	The result is an estimated maximum potential concentration.

Table 3
PFAS Definitions Table

	CAS Number	Compound	Abbreviation(s)
1	151772-58-6	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA, PFECA B
2	113507-82-7	Perfluoro (2-ethoxyethane) sulfonic acid	PFEESA, PES
3	4151-50-2	N-ethylperfluoro-1-octanesulfonamide	NEtFOSA, NEtPFOSA
4	31506-32-8	N-methylperfuoro-1octanesulfonamide	NMeFOSA, NMePFOSA
5	377-73-1	Perfluoro-3-methoxypropanoic acid	PFMPA, PRMOPrA, PFECA F
6	375-73-5	Perfluorobutanesulfonic acid	PFBS
7	863090-89-5	Perfluoro-4-methoxybutanoic acid	PFMBA, PFMOBA, PFECA A
8	2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid	NMeFOSAA
9	13252-13-6	Hexafluoropropylene Oxide Dimer Acid	HFPO-DA, Gen-X, HFPODA
10	2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid	NEtFOSAA
11	375-22-4	Perfluorobutanoic acid	PFBA
12	335-67-1	Perfluorooctanoic acid	PFOA
13	2706-91-4	Perfluoropentanesulfonic acid	PFPeS
14	754-91-6	Perfluorooctanesulfonamide	FOSA, PFOSA
15	1763-23-1	Perfluorooctanesulfonic acid	PFOS
16	2706-90-3	Perfluoropentanoic acid	PFPeA
17	2058-94-8	Perfluoroundecanoic acid	PFUnA, PFUnDA
18	376-06-7	Perfluorotetradecanoic acid	PFTeA, PFTeDA
19	72629-94-8	Perfluorotridecanoic acid	PFTriA, PFTrDA
20	375-95-1	Perfluorononanoic acid	PFNA
21	79780-39-5	Perfluorododecanesulfonic acid	PFDoS
22	307-55-1	Perfluorododecanoic acid	PFDoA, PFDoDA
23	335-77-3	Perfluorodecanesulfonic acid	PFDS
24	335-76-2	Perfluorodecanoic acid	PFDA
25	375-92-8	Perfluoroheptanesulfonic Acid	PFHpS
26	307-24-4	Perfluorohexanoic acid	PFHxA
27	68259-12-1	Perfluorononanesulfonic acid	PFNS
28	375-85-9	Perfluoroheptanoic acid	PFHpA
29	355-46-4	Perfluorohexanesulfonic acid	PFHxS
30	763051-92-9	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11CL-PF3Ouds, F-53 Minor
31	27619-97-2	6:2-Fluorotelomersulfonic acid	6:2 FTS
32	812-70-4	7:3 Fluorotelomer carboxylic acid	7:3 FTCA
33	756426-58-1	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS
34	39108-34-4	8:2-Fluotelomersulfonic acid	8:2 FTS
35	914637-49-3	5:3 Fluorotelomer carboxylic acid	5:3 FTCA
36	1691-99-2	2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	NEtPFOSAE, NEtFOSE
37	919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid	DONA, ADONA
38	757124-72-4	4:2-Fluorotelomersulfonic acid	4:2 FTS

	CAS Number	Compound	Abbreviation(s)
39	24448-09-7	2-(N-methylperfluoro-1-octanesulfonamido) ethanol	NMePFOSAE, NMeFOSE
40	356-02-5	3-Perfluoropropylpropanoic acid	3:3 FTCA

Appendix F

Full Analyte List Data Tables (June 2022)

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Table F-1: August 2023 Groundwater - Volatile Organic Compound Data

		Location ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-9R	MW-10
		Sample Name	314058-MW-1-08152023	314058-MW-2-08152023	314058-MW-3-08142023	314058-MW-4-08142023	314058-MW-5-08142023	314058-MW-9R-08142023	314058-MW-10-08152023
		Parent Sample ID							
		Sample Date	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOCs (8260C)									
1,1,1,2-Tetrachloroethane	5	µg/L	ND	ND	0.78 J	ND	ND	ND	ND
1,1,1-Trichloroethane (TCA)	5	µg/L	10	ND	ND	ND	ND	ND	0.27 J
1,1,2,2-Tetrachloroethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	5	µg/L	ND	0.41 J	ND	0.36 J	ND	20	ND
1,1,2-Trichloroethane	1	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	1.7	0.17 J	ND	0.83 J	ND	0.67 J	1.6
1,1-Dichloroethene	5	µg/L	0.33 J	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	0.04	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (Ethylene Dibromide)	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	µg/L	0.16 J	0.27 J	ND	0.95 J	ND	4.2	1.1
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trichlorobenzene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene (Mesitylene)	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	3	µg/L	ND	ND	ND	ND	ND	0.97 J	0.18 J
1,3-Dichloropropane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	µg/L	ND	ND	ND	ND	ND	4.6	0.60 J
1,4-Dioxane (P-Dioxane)	0.35	µg/L	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	NSL	µg/L	ND	ND	ND	0.19 J	ND	0.81 J	ND
2-Hexanone	50	µg/L	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Acetone	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzene	1	µg/L	ND	ND	ND	0.20 J	ND	ND	ND
Bromobenzene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromoform	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	60	µg/L	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	µg/L	ND	2.8	ND	0.57 J	ND	19	0.31 J
Chloroethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Chloroform	7	µg/L	0.35 J	ND	ND	ND	ND	ND	ND

Table F-1: August 2023 Groundwater - Volatile Organic Compound Data

		Location ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-9R	MW-10
		Sample Name	314058-MW-1-08152023	314058-MW-2-08152023	314058-MW-3-08142023	314058-MW-4-08142023	314058-MW-5-08142023	314058-MW-9R-08142023	314058-MW-10-08152023
		Parent Sample ID							
		Sample Date	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloromethane	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethylene	5	µg/L	5.3	13	0.50 J	2.6	ND	53	5.0
Cis-1,3-Dichloropropene	0.4	µg/L	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Diethyl Ether (Ethyl Ether)	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	µg/L	ND	ND	ND	ND	ND	6.6	ND
Hexachlorobutadiene	0.5	µg/L	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	5	µg/L	ND	ND	ND	ND	ND	ND	ND
m,p-Xylene	NSL	µg/L	ND	ND	ND	ND	ND	2.9	ND
Methyl Acetate	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	ND	ND	ND	ND	ND	ND	ND
N-Butylbenzene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
N-Propylbenzene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	ND	ND	ND	ND	ND	1.5	ND
Sec-Butylbenzene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Styrene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
T-Butylbenzene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Tert-Butyl Alcohol	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene (PCE)	5	µg/L	47	6.0	0.78 J	ND	ND	3.9	0.29 J
Tetrahydrofuran	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Toluene	5	µg/L	ND	ND	ND	ND	ND	0.51 J	ND
Trans-1,2-Dichloroethene	5	µg/L	0.32 J	0.60 J	ND	0.83 J	ND	1.3	0.99 J
Trans-1,3-Dichloropropene	0.4	µg/L	ND	ND	ND	ND	ND	ND	ND
Trans-1,4-Dichloro-2-Butene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	5	µg/L	7.6	12	1.2	0.25 J	ND	2.8	0.27 J
Trichlorofluoromethane	5	µg/L	0.24 J	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	µg/L	0.38 J	0.90 J	ND	11	ND	24	4.3

NOTES:
Results analyzed via EPA Method 8260C
µg/L=microgram(s) per liter
EPA=United States Environmental Protection Agency
ID=Identification
J=Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration
ND=Not detected
NSL=No screening level
VOC=Volatile organic compound
Shaded cells exceed screening levels

Table F-1: June 2022 Groundwater - Volatile Organic Compound Data

		Location ID	FD-1	MW-11	MW-12	MW-13	MW-15D	MW-16	MW-14D
		Sample Name	314058-FD-1-08142023	314058-MW-11-08142023	314058-MW-12-08152023	314058-MW-13-08152023	314058-MW-15D-08142023	314058-MW-16-08142023	314058-MW-14D-08152023
		Parent Sample ID	314058-MW-16-08142023						
		Sample Date	8/14/2023	8/14/2023	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOCs (8260C)									
1,1,1,2-Tetrachloroethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane (TCA)	5	µg/L	0.92 J	ND	0.21 J	ND	2.9	0.66 J	18
1,1,2,2-Tetrachloroethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	5	µg/L	ND	ND	0.64 J	ND	1.6 J	0.76 J	11
1,1,2-Trichloroethane	1	µg/L	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	µg/L	12	ND	4.5	0.24 J	9.4	7.4	7.2
1,1-Dichloroethene	5	µg/L	0.76 J	ND	ND	ND	ND	0.48 J	3.5 J
1,1-Dichloropropene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	NSL	µg/L	ND	ND	ND	ND	13	ND	ND
1,2-Dibromo-3-Chloropropane	0.04	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (Ethylene Dibromide)	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	3	µg/L	5.0	ND	19	0.34 J	15	3.0	ND
1,2-Dichloroethane	0.6	µg/L	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	1	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trichlorobenzene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene (Mesitylene)	NSL	µg/L	ND	ND	ND	ND	1.7 J	ND	ND
1,3-Dichlorobenzene	3	µg/L	ND	ND	ND	ND	2.6	ND	ND
1,3-Dichloropropane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	3	µg/L	2.2 J	ND	1.1	ND	8.2	1.5 J	ND
1,4-Dioxane (P-Dioxane)	0.35	µg/L	ND	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	NSL	µg/L	ND	ND	ND	ND	25	ND	ND
2-Hexanone	50	µg/L	ND	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	NSL	µg/L	ND	ND	ND	ND	9.7	ND	ND
Acetone	50	µg/L	ND	ND	ND	ND	ND	ND	14 J
Acrylonitrile	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Benzene	1	µg/L	ND	ND	ND	ND	3.8	ND	ND
Bromobenzene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromoform	50	µg/L	ND	ND	ND	ND	ND	ND	ND
Bromomethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	60	µg/L	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	5	µg/L	25	ND	21	ND	270	16	16
Chloroethane	5	µg/L	ND	ND	ND	ND	0.94 J	ND	ND
Chloroform	7	µg/L	ND	ND	ND	ND	ND	ND	ND

Table F-1: June 2022 Groundwater - Volatile Organic Compound Data

		Location ID	FD-1	MW-11	MW-12	MW-13	MW-15D	MW-16	MW-14D
		Sample Name	314058-FD-1-08142023	314058-MW-11-08142023	314058-MW-12-08152023	314058-MW-13-08152023	314058-MW-15D-08142023	314058-MW-16-08142023	314058-MW-14D-08152023
		Parent Sample ID	314058-MW-16-08142023						
		Sample Date	8/14/2023	8/14/2023	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Chloromethane	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethylene	5	µg/L	310	ND	11	0.33 J	33	210	660
Cis-1,3-Dichloropropene	0.4	µg/L	ND	ND	ND	ND	ND	ND	ND
Dibromomethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Diethyl Ether (Ethyl Ether)	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	µg/L	ND	ND	ND	ND	120	1.0 J	2.3 J
Hexachlorobutadiene	0.5	µg/L	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene (Cumene)	5	µg/L	ND	ND	ND	ND	1.6 J	ND	ND
m,p-Xylene	NSL	µg/L	ND	ND	ND	ND	51	ND	5.4 J
Methyl Acetate	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Methylcyclohexane	NSL	µg/L	ND	ND	ND	ND	0.62 J	ND	ND
Methylene Chloride	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	µg/L	ND	ND	ND	ND	1.4 J	ND	ND
N-Butylbenzene	5	µg/L	ND	ND	ND	ND	0.68 J	ND	ND
N-Propylbenzene	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
O-Xylene (1,2-Dimethylbenzene)	5	µg/L	3.7 J	ND	ND	ND	44	2.3	1.8 J
Sec-Butylbenzene	5	µg/L	ND	ND	ND	ND	1.7 J	ND	ND
Styrene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
T-Butylbenzene	5	µg/L	ND	ND	ND	ND	0.88 J	ND	ND
Tert-Butyl Alcohol	NSL	µg/L	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene (PCE)	5	µg/L	2.0 J	ND	ND	ND	0.42 J	1.6 J	16
Tetrahydrofuran	NSL	µg/L	ND	ND	ND	ND	16 J	ND	ND
Toluene	5	µg/L	1.5 J	ND	0.23 J	ND	19	1.0 J	1.7 J
Trans-1,2-Dichloroethene	5	µg/L	5.0	ND	2.6	ND	5.8	3.4	8.5
Trans-1,3-Dichloropropene	0.4	µg/L	ND	ND	ND	ND	ND	ND	ND
Trans-1,4-Dichloro-2-Butene	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	5	µg/L	1.4 J	ND	0.91 J	ND	ND	1.6 J	520
Trichlorofluoromethane	5	µg/L	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	2	µg/L	400	ND	26	ND	120	260	85

NOTES:
Results analyzed via EPA Method 8260C
µg/L=microgram(s) per liter
EPA=United States Environmental Protection Agency
ID=Identification
J=Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration
ND=Not detected
NSL=No screening level
VOC=Volatile organic compound
Shaded cells exceed screening levels

Table F-2: August 2023 Groundwater - TAL Metals Data

		Location ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-9R	MW-10
		Sample Name	314058-MW-1-08152023	314058-MW-2-08152023	314058-MW-3-08142023	314058-MW-4-08142023	314058-MW-5-08142023	314058-MW-9R-08142023	314058-MW-10-08152023
		Parent Sample ID							
		Sample Date	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals, Total (EPA 200.7/EPA 245.1)									
Aluminum	NSL	mg/L	0.087 B	0.10 B	ND	ND	0.041 J	1.6	ND
Antimony	0.003	mg/L	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.025	mg/L	ND	ND	ND	ND	ND	ND	0.0085 J
Barium	1	mg/L	0.018 J	0.036 J	0.016 J	0.14	0.067	0.070	0.022 J
Beryllium	0.003	mg/L	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.005	mg/L	ND	ND	ND	ND	ND	ND	ND
Calcium	NSL	mg/L	96	71	68	41	92	72	87
Chromium	0.05	mg/L	ND	ND	ND	ND	ND	0.028	0.023
Cobalt	NSL	mg/L	ND	ND	ND	ND	ND	0.0017 J	ND
Copper	0.2	mg/L	0.0048 J	ND	ND	ND	ND	ND	ND
Iron	0.3	mg/L	0.41	0.21	ND	1.1	ND	9.1	4.1
Lead	0.025	mg/L	ND	ND	ND	ND	ND	0.015	ND
Magnesium	35	mg/L	12	13	11	8.7	16	14	23
Manganese	0.3	mg/L	0.30	0.68	ND	0.087	0.031	2.4	0.37
Nickel	0.1	mg/L	ND	ND	ND	ND	ND	0.0027 J	0.0046 J
Potassium	NSL	mg/L	0.80	1.6 J	1.4 J	1.6 J	2.1	3.0	3.9
Selenium	0.01	mg/L	ND	ND	ND	ND	ND	ND	ND
Silver	0.05	mg/L	ND	ND	ND	ND	ND	ND	ND
Sodium	20	mg/L	12	42	26 B	29 B	32 B	52 B	29
Thallium	0.0005	mg/L	ND	ND	ND	ND	ND	ND	ND
Vanadium	NSL	mg/L	ND	ND	ND	ND	ND	0.0072 J	ND
Zinc	2	mg/L	ND	ND	ND	0.028	ND	0.027	0.0073 J
		Location ID	FD-1	MW-11	MW-12	MW-13	MW-15D	MW-16	MW-14D
		Sample Name	314058-FD-1-08142023	314058-MW-11-08142023	314058-MW-12-08152023	314058-MW-13-08152023	314058-MW-15D-08142023	314058-MW-16-08142023	314058-MW-14D-08152023
		Parent Sample ID	314058-MW-16-08142023						
		Sample Date	8/14/2023	8/14/2023	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Metals, Total (EPA 200.7/EPA 245.1)									
Aluminum	NSL	mg/L	0.023 J	ND	0.021 BJ	0.51 B	ND	0.026 J	0.49 B
Antimony	0.003	mg/L	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.025	mg/L	0.011	0.014	0.024	0.022	0.012	0.011	ND
Barium	1	mg/L	0.14	0.099	0.010 J	0.13	0.14	0.29	0.036 J
Beryllium	0.003	mg/L	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.005	mg/L	0.0015 J	0.0053	ND	ND	0.0014 J	ND	ND
Calcium	NSL	mg/L	95	140	61	110	96	85	65
Chromium	0.05	mg/L	ND	ND	0.080	ND	ND	ND	ND
Cobalt	NSL	mg/L	ND	ND	ND	ND	ND	ND	0.0019 J
Copper	0.2	mg/L	ND	ND	ND	ND	ND	ND	0.0086 J
Iron	0.3	mg/L	8.1	18	4.9	14	8.1	6.0	3.2
Lead	0.025	mg/L	ND	ND	ND	ND	ND	ND	ND
Magnesium	35	mg/L	12	18	13	20	12	19	15
Manganese	0.3	mg/L	6.9	0.41	0.43	1.5	7.5	3.4	0.65
Nickel	0.1	mg/L	ND	ND	0.13	ND	ND	ND	0.0033 J
Potassium	NSL	mg/L	5.3	5.9	34	4.1	4.8	3.5	4.1
Selenium	0.01	mg/L	ND	ND	ND	ND	ND	ND	ND
Silver	0.05	mg/L	ND	ND	ND	ND	ND	ND	ND
Sodium	20	mg/L	73 B	4.2 B	17	51	86 B	56 B	38
Thallium	0.0005	mg/L	ND	ND	ND	ND	ND	ND	ND
Vanadium	NSL	mg/L	ND	ND	ND	ND	ND	ND	ND
Zinc	2	mg/L	ND	0.016	1.0	ND	ND	ND	0.12

NOTES:
Results analyzed via EPA Method 200.7 and 245.1
B= Analyte is found in the associated laboratoy blank as well as in the sample
EPA=United States Environmental Protection Agency
ID=Identification
J=Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration
mg/L=milligram(s) per liter
ND=Not detected
NSL=No screening level
TAL=Target analyte list
Shaded cells exceed screening levels

Table F-3: August 2023 Groundwater - Emerging Contaminants Data

		Location ID	MW-1	MW-2	MW-3	MW-4	MW-5	MW-9R	MW-10
		Sample Name	314058-MW-1-08152023	314058-MW-2-08152023	314058-MW-3-08142023	314058-MW-4-08142023	314058-MW-5-08142023	314058-MW-9R-08142023	314058-MW-10-08152023
		Parent Sample ID							
		Sample Date	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
PFAS (EPA 537.1)									
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
N-deuterioethylperfluoro-1-octanesulfonamidoacetic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
N-deuteriomethylperfluoro-1-octanesulfonamidoacetic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Nonafluoro-3,6-dioxaheptanoic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoro(2-ethoxyethane)sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoro-3-methoxypropanoic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoro-4-methoxybutanoic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	1.8	6.2	0.94	1.2	2.3	1.5 J	6.3
Perfluorobutanoic Acid	NSL	ng/L	5.1	6.6	2.7 J	3.8	3.5 J	8.6 J	7.1
Perfluorodecanesulfonic acid (PFDS)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorodecanoic acid (PFDA)	NSL	ng/L	ND	0.18 J	ND	ND	ND	ND	ND
Perfluorododecanoic acid (PFDoA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	ND	5.3	ND	ND	ND	ND	5.3
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	1.7	2.9	1.4	1.7	0.37 J	1.4 J	2.7
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	0.84 J	130	1.2	1.5	3.0	2.5 J	140
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	1.3	7.7	1.6	2.0	0.67 J	3.2 J	7.3
Perfluorononanesulfonic Acid (PFNS)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorononanoic acid (PFNA)	NSL	ng/L	0.81 J	0.61 J	0.69 J	0.96	ND	ND	0.67 J
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	10	450	6.0	6.1	5.8	4.9 J	460
Perfluorooctanoic acid (PFOA)	6.7	ng/L	4.6	9.0	2.6	3.0	1.2	4.0 J	9.2
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	ND	8.2	ND	ND	0.32 J	ND	8.5
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	1.2 J	4.0	2.7	2.6	0.62 J	5.9 J	4.0
Perfluorotetradecanoic acid (PFTA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoroundecanoic Acid (PFUnA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND

Table F-3: August 2023 Groundwater - Emerging Contaminants Data

		Location ID	FD-1	MW-11	MW-12	MW-13	MW-15D	MW-16	MW-14D
		Sample Name	314058-FD-1-08142023	314058-MW-11-08142023	314058-MW-12-08152023	314058-MW-13-08152023	314058-MW-15D-08142023	314058-MW-16-08142023	314058-MW-14D-08152023
		Parent Sample ID	314058-MW-16-08142023						
		Sample Date	8/14/2023	8/14/2023	8/15/2023	8/15/2023	8/14/2023	8/14/2023	8/15/2023
Analyte	**Screening Level**	**Unit**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
PFAS (EPA 1633)									
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
N-deuterioethylperfluoro-1-octanesulfonamidoacetic acid	NSL	ng/L	ND	ND	ND	ND	0.49 J	ND	ND
N-deuteriomethylperfluoro-1-octanesulfonamidoacetic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Nonafluoro-3,6-dioxaheptanoic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoro(2-ethoxyethane)sulfonic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoro-3-methoxypropanoic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoro-4-methoxybutanoic acid	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorobutanesulfonic acid (PFBS)	NSL	ng/L	1.0	2.9	2.2	2.5	1.1	1.3	1.3
Perfluorobutanoic Acid	NSL	ng/L	4.2	3.7	7.0	6.5	3.4 J	3.6 J	5.0
Perfluorodecanesulfonic acid (PFDS)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorodecanoic acid (PFDA)	NSL	ng/L	1.0	ND	1.3	ND	0.22 J	0.83 J	0.29 J
Perfluorododecanoic acid (PFDoA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoroheptanesulfonic acid (PFHpS)	NSL	ng/L	ND	ND	0.91 J	ND	ND	ND	ND
Perfluoroheptanoic acid (PFHpA)	NSL	ng/L	1.3	1.6	5.2	2.0	1.4	1.2	1.2
Perfluorohexanesulfonic acid (PFHxS)	NSL	ng/L	0.99	1.1	3.9	1.8	2.1	1.0	1.8
Perfluorohexanoic acid (PFHxA)	NSL	ng/L	3.4	1.5	7.1	3.3	2.2	3.0	2.9
Perfluorononanesulfonic Acid (PFNS)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorononanoic acid (PFNA)	NSL	ng/L	0.63 J	ND	1.9	ND	1.4	0.60 J	ND
Perfluorooctane Sulfonamide (FOSA)	NSL	ng/L	ND	ND	0.33 J	0.37 J	ND	ND	ND
Perfluorooctanesulfonic acid (PFOS)	2.7	ng/L	4.4	22	31	2.4	6.9	4.3	4.5
Perfluorooctanoic acid (PFOA)	6.7	ng/L	2.6	10	14	4.2	3.4	2.5	2.0
Perfluoropentanesulfonic Acid (PFPeS)	NSL	ng/L	ND	ND	3.6	ND	ND	ND	ND
Perfluoropentanoic Acid (PFPeA)	NSL	ng/L	5.3	1.1 J	5.6	3.7	2.6	4.6	3.5
Perfluorotetradecanoic acid (PFTA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluorotridecanoic Acid (PFTriA/PFTrDA)	NSL	ng/L	ND	ND	ND	ND	ND	ND	ND
Perfluoroundecanoic Acid (PFUnA)	NSL	ng/L	0.43 J	ND	ND	ND	ND	0.45 J	ND

NOTES:
Results analyzed via EPA Method 1633
EPA=United States Environmental Protection Agency
ID=Identification
J=Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration
ng/L=nanogram(s) per liter
ND=Not detected
NSL=No screening level
PFAS=Per- and polyfluoroalkyl substances
Shaded cells exceed screening levels

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Appendix G

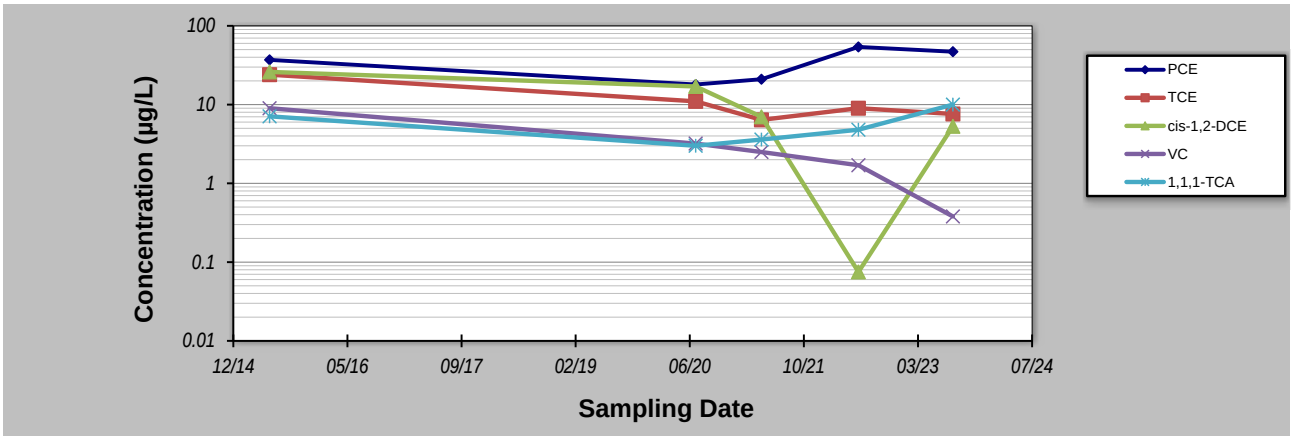
Mann-Kendall Work Sheets

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-1	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	PCE	TCE	cis-1,2-DCE	VC	1,1,1-TCA		
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	**37**	**24**	**26**	**9.0**	**7.1**		
2	7/14/2020	**18**	**11**	**17**	**3.2**	3.0		
3	4/28/2021	**21**	**6.4**	**7.0**	**2.5**	3.6		
4	6/27/2022	**54**	**9.0**	0.075	1.7	4.8		
5	8/15/2023	**47.00**	**7.60**	**5.30**	0.38	**10.00**		
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.45	0.62	0.93	0.99	0.50		
Mann-Kendall Statistic (S):		4	-6	-8	-10	4		
Confidence Factor:		75.8%	88.3%	95.8%	99.2%	75.8%		
Concentration Trend:		No Trend	Stable	Decreasing	Decreasing	No Trend		



Notes:

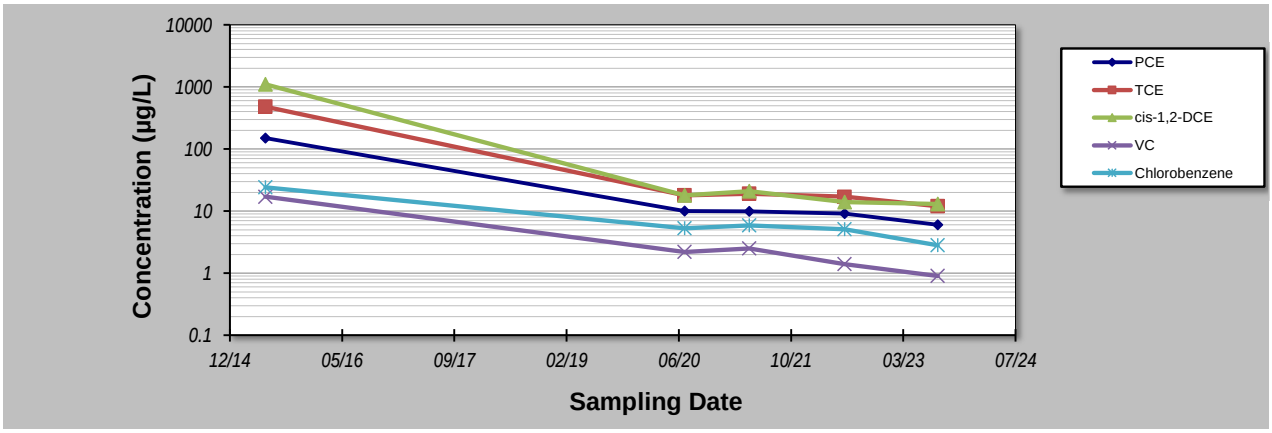
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-2	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	PCE	TCE	cis-1,2-DCE	VC	Chlorobenzene		
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	**150**	**480**	**1,105**	**17**	**24**		
2	7/14/2020	**10**	**18**	**18**	**2.2**	**5.3**		
3	4/28/2021	**9.9**	**19**	**21**	**2.5**	**5.9**		
4	6/27/2022	**9.1**	**17**	**14**	1.4	**5.1**		
5	8/15/2023	**6**	**12.00**	**13.00**	0.9	2.8		
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		**1.71**	**1.90**	**2.08**	**1.43**	**1.01**		
Mann-Kendall Statistic (S):		**-10**	**-8**	**-8**	**-8**	**-8**		
Confidence Factor:		**99.2%**	**95.8%**	**95.8%**	**95.8%**	**95.8%**		
Concentration Trend:		Decreasing	Decreasing	Decreasing	Decreasing	Decreasing		



Notes:

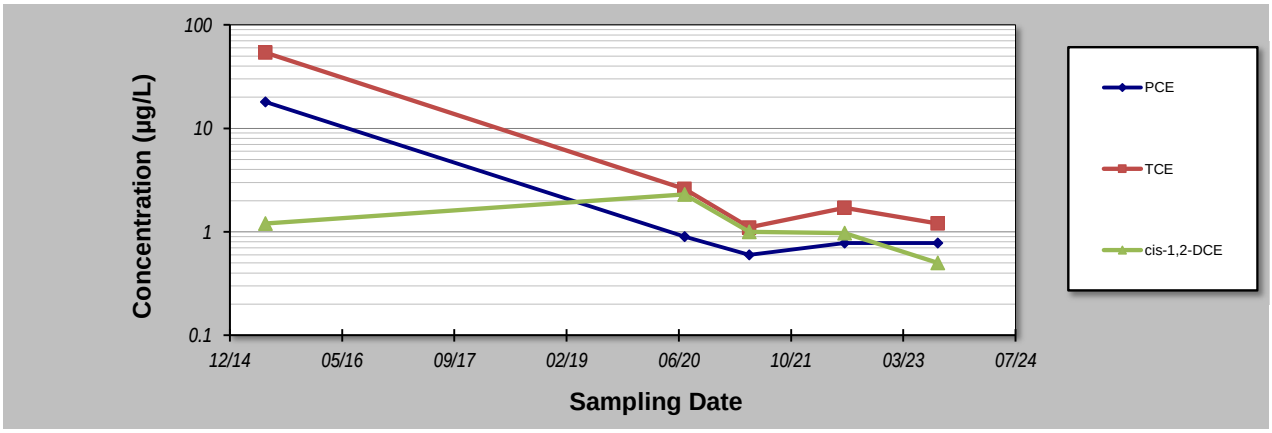
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-3	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	PCE	TCE	cis-1,2-DCE				
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	**18**	**54**	1.2				
2	7/14/2020	0.9	2.6	**2.3**				
3	4/28/2021	0.6	1.1	1.0				
4	6/27/2022	0.78	1.7	0.97				
5	8/15/2023	0.78	1.2	0.5				
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20								
Coefficient of Variation:		1.83	1.93	0.56				
Mann-Kendall Statistic (S):		-5	-6	-8				
Confidence Factor:		82.1%	88.3%	95.8%				
Concentration Trend:		No Trend	No Trend	Decreasing				



Notes:

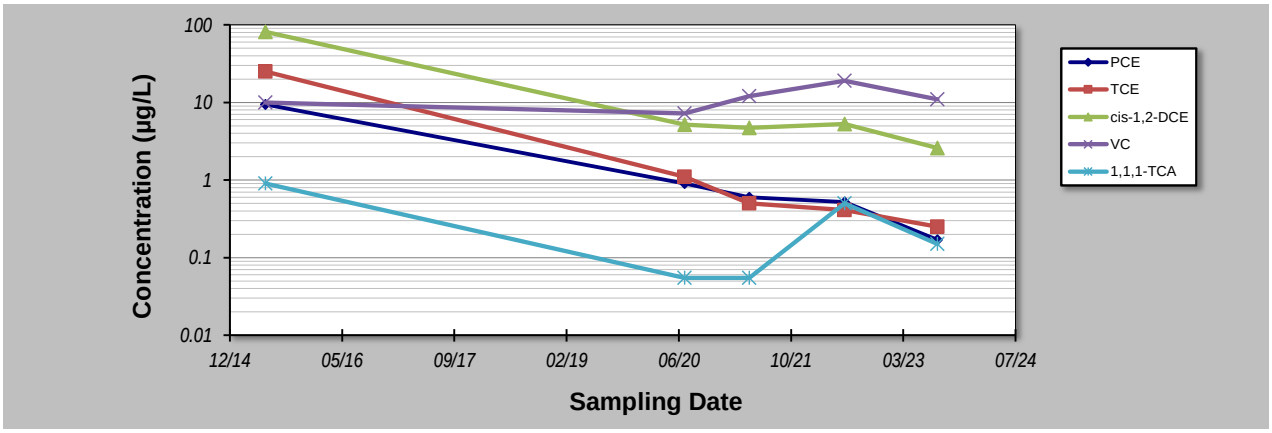
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-4	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	PCE	TCE	cis-1,2-DCE	VC	1,1,1-TCA		
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	**9.4**	**25**	**81**	**10**	0.9		
2	7/14/2020	0.9	1.1	**5.2**	**7.2**	0.055		
3	4/28/2021	0.6	0.5	4.7	**12**	0.055		
4	6/27/2022	0.52	0.41	**5.3**	**19**	0.50		
5	8/14/2023	0.17	0.25	2.6	**11**	0.15		
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Coefficient of Variation:		1.71	2.01	1.73	0.37	1.10		
Mann-Kendall Statistic (S):		-10	-10	-6	4	-1		
Confidence Factor:		99.2%	99.2%	88.3%	75.8%	50.0%		
Concentration Trend:		Decreasing	Decreasing	No Trend	No Trend	No Trend		



Notes:

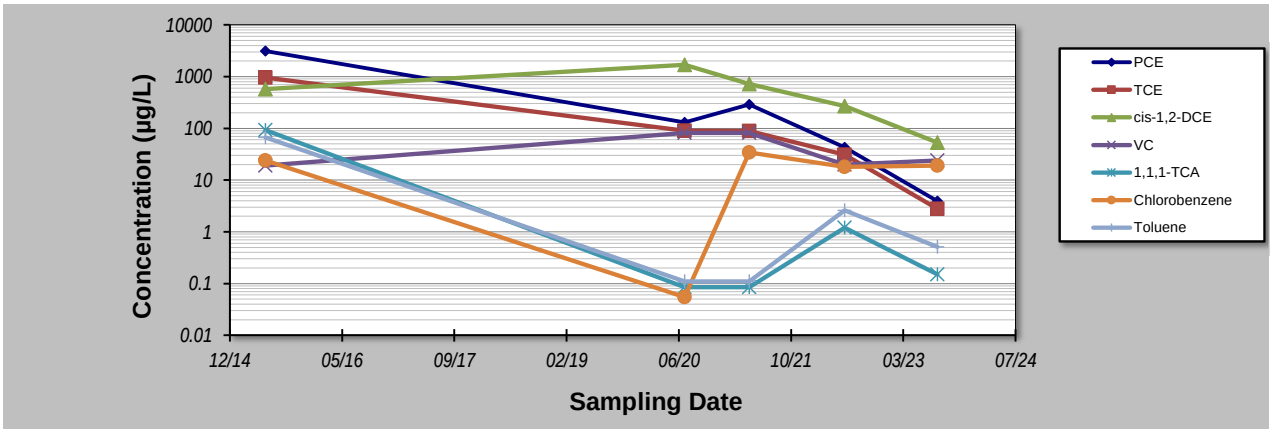
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-9R	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	PCE	TCE	cis-1,2-DCE	VC	1,1,1-TCA	Chlorobenzene	Toluene
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	**3,100**	**950**	**570**	**19**	**92**	**24**	**67**
2	7/14/2020	**130**	**90**	**1,700**	**81**	0.085	0.055	0.11
3	4/28/2021	**290**	**88**	**720**	**81**	0.085	**34**	0.11
4	6/27/2022	**43**	**31**	**270**	**20**	1.2	**18**	2.6
5	8/14/2023	3.9	2.8	**53.00**	**24.00**	0.15	**19**	0.51
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Coefficient of Variation:		1.88	1.73	0.96	0.73	2.19	0.65	2.11
Mann-Kendall Statistic (S):		-8	-10	-6	1	-1	0	-1
Confidence Factor:		95.8%	99.2%	88.3%	50.0%	50.0%	40.8%	50.0%
Concentration Trend:		Decreasing	Decreasing	Stable	No Trend	No Trend	Stable	No Trend



Notes:

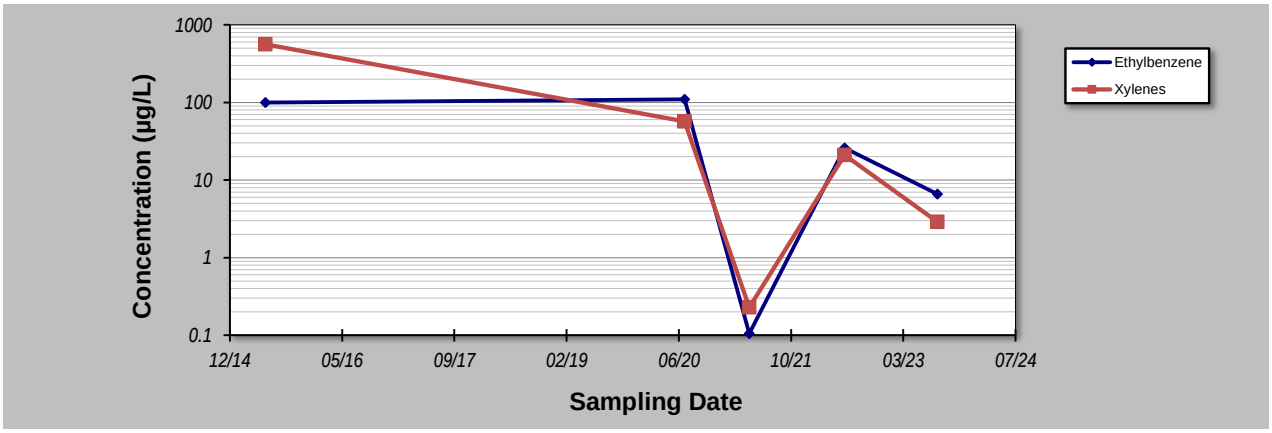
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-9R	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	Ethylbenzene	Xylenes					
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)					
1	6/4/2015	**100**	**560**				
2	7/14/2020	**110**	**57**				
3	4/28/2021	0.105	0.23				
4	6/27/2022	**26**	**21**				
5	8/14/2023	**6.6**	2.9				
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20							
Coefficient of Variation:		**1.08**	**1.89**				
Mann-Kendall Statistic (S):		**-4**	**-6**				
Confidence Factor:		**75.8%**	**88.3%**				
Concentration Trend:		No Trend	No Trend				



Notes:

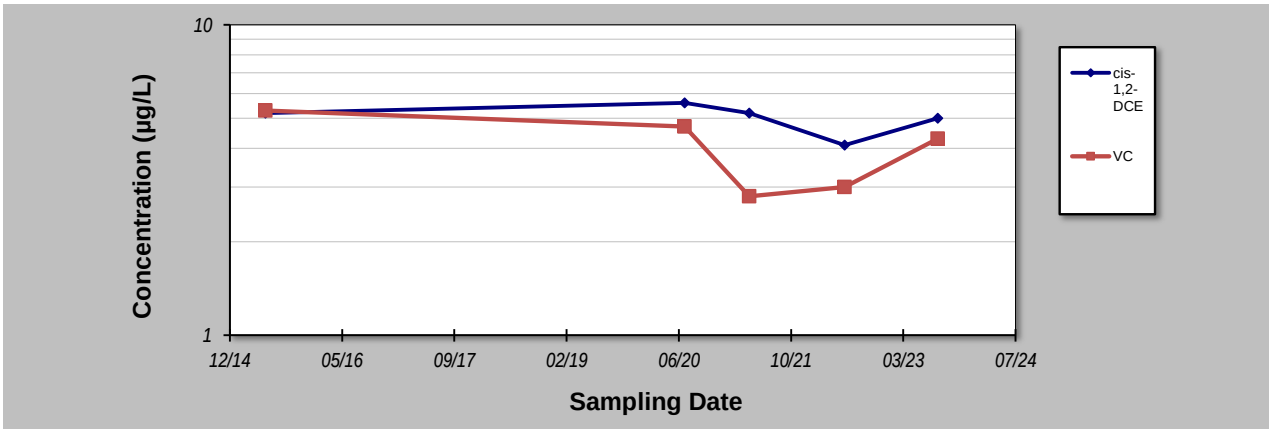
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-10	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	cis-1,2-DCE	VC					
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)					
1	6/4/2015	**5.2**	**5.3**				
2	7/14/2020	**5.6**	**4.7**				
3	4/28/2021	**5.2**	**2.8**				
4	6/27/2022	4.1	**3.0**				
5	8/15/2023	**5**	**4.3**				
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20							
Coefficient of Variation:		**0.11**	**0.27**				
Mann-Kendall Statistic (S):		**-5**	**-4**				
Confidence Factor:		**82.1%**	**75.8%**				
Concentration Trend:		Stable	Stable				



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

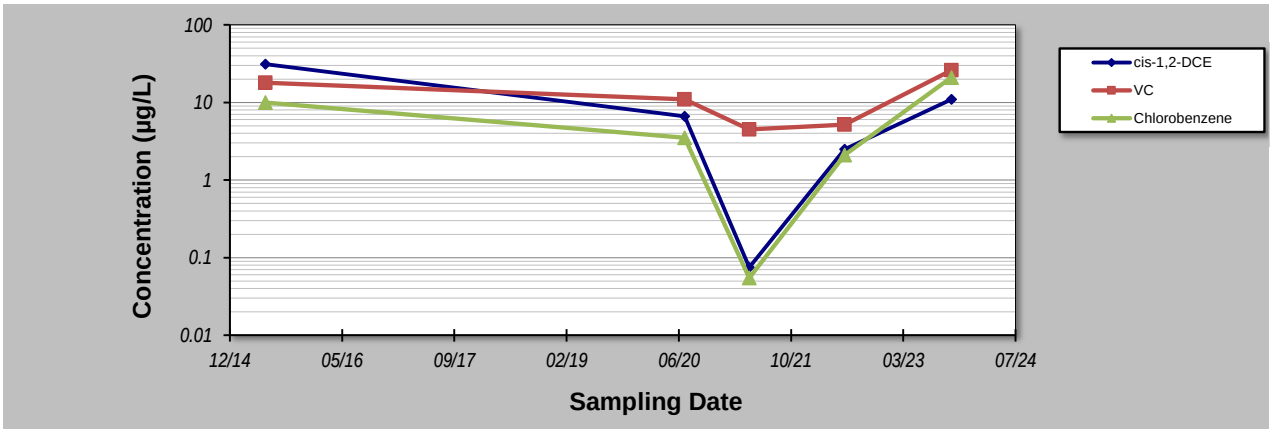
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: **16-Oct-23**
Facility Name: **Three Star Anodizing MW-12**
Conducted By: **EA Engineering**

Job ID: **314058**
Constituent: **VOC**
Concentration Units: **µg/L**

Sampling Point ID:	cis-1,2-DCE	VC	Chlorobenzene				
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	**31**	**18**	**10**				
2	7/14/2020	**6.6**	**11**	3.5				
3	4/28/2021	0.075	**4.5**	0.055				
4	6/27/2022	2.5	**5.2**	2.1				
5	10/16/2023	**11**	**26**	**21**				
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Coefficient of Variation:		1.20	0.70	1.16				
Mann-Kendall Statistic (S):		-2	0	0				
Confidence Factor:		59.2%	40.8%	40.8%				
Concentration Trend:		No Trend	Stable	No Trend				



Notes:

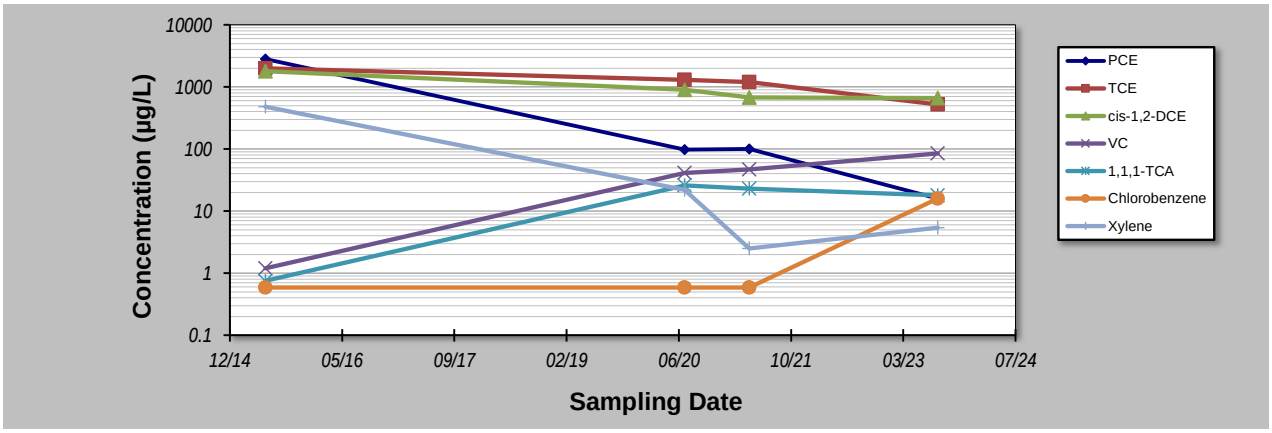
1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	16-Oct-23	Job ID:	314058
Facility Name:	Three Star Anodizing MW-14D	Constituent:	VOC
Conducted By:	EA Engineering	Concentration Units:	µg/L

Sampling Point ID:	PCE	TCE	cis-1,2-DCE	VC	1,1,1-TCA	Chlorobenzene	Xylene
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	**2800**	**2000**	**1800**	1.2	0.75	0.59	**480**
2	7/14/2020	**98**	**1300**	**900**	**41**	**26**	0.59	**22**
3	4/28/2021	**100**	**1200**	**680**	**47**	**23**	0.59	2.5
4	8/15/2023	**16**	**520**	**660**	**85**	**18**	**16**	**5.4**
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Coefficient of Variation:		1.81	0.48	0.53	0.79	0.67	1.73	1.84
Mann-Kendall Statistic (S):		-4	-6	-6	6	0	3	-4
Confidence Factor:		83.3%	95.8%	95.8%	95.8%	37.5%	72.9%	83.3%
Concentration Trend:		No Trend	Decreasing	Decreasing	Increasing	Stable	No Trend	No Trend



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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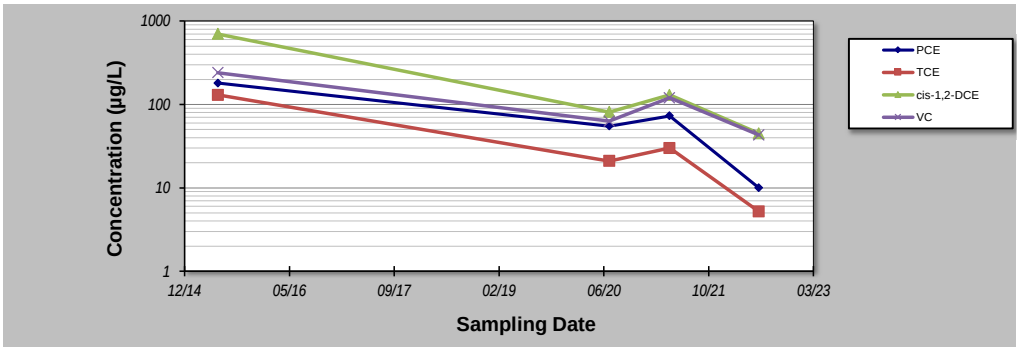
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GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date: 26-May-23
Facility Name: Three Star Anodizing PZ-2
Conducted By: A. Stoogenke and M. Miller

Job ID: 314058
Constituent: VOC
Concentration Units: µg/L

Sampling Point ID:	PCE	TCE	cis-1,2-DCE	VC			
Sampling Event	Sampling Date	VOC CONCENTRATION (µg/L)						
1	6/4/2015	180	130	700	240			
2	7/14/2020	55	21	81	63			
3	4/28/2021	73	30	130	120			
4	6/27/2022	10	5.2	45	43			
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20								
Coefficient of Variation:		0.91	1.22	1.29	0.76			
Mann-Kendall Statistic (S):		-4	-4	-4	-4			
Confidence Factor:		83.3%	83.3%	83.3%	83.3%			
Concentration Trend:		Stable	No Trend	No Trend	Stable			



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water* , 41(3):355-367, 2003.

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Appendix H

Inspection Forms

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EA Engineering, P.C. and its Affiliate EA Science and Technology

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three Star Anodizing PROJECT NUMBER: 34058

DATE OF INSPECTION: 08/15/23 INSPECTOR: M. Gilkey

WELL DESIGNATION: MW-9

WELL LOCATION: Granite business parking lot; 33 McKinnely St

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	8 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: OK		
Surface Drainage	Away from Wellhead [ ]	Toward Wellhead [X]	
Bollards Present?	Yes [ ]	No [X]	Describe: Flushmount NA
Well ID. Visible?	Yes [ ]	No [X]	Describe:
Lock Present and Functional?	Yes [ ]	No [X]	Describe: Flush mount NA
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good; Although there was surface water in casing, no water made it in the well		
Surface Water in Casing?	Yes [X]	No [ ]	Describe: well is located in surface drainage area
Well Casing Diameter	____ inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:

Downhole

Odor	Yes [ ]	No [X]	Describe:
PID Reading	____ ppm		
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: Soft		

Additional Comments:

Some sheen on purge water

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three Star Anodizing PROJECT NUMBER: 31405.8

DATE OF INSPECTION: 8/15/23 INSPECTOR: M. Gilkey

WELL DESIGNATION: MW-14D

WELL LOCATION: in hardwood parking lot; 33 McKinley St

Outward Appearance

Flushmount Diameter	6 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	8 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [ ] Other Asphalt
Integrity of Surface Seal/Apron	Describe: OK		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: Flushmount NA
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____
Lock Present and Functional?	Yes [ ]	No [X]	Describe: Flushmount NA
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____

Downhole

Odor	Yes [ ]	No [X]	Describe: ____
PID Reading	____ ppm		
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: ____		

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three Star Anodizing PROJECT NUMBER: 31405-8

DATE OF INSPECTION: 8/15/23 INSPECTOR: M. Gilkey

WELL DESIGNATION: MW-13

WELL LOCATION: Northwest of site

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	4 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good; missing well cover		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: OK;		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: in remote area; NA
Well ID. Visible?	Yes [ ]	No [X]	Describe:
Lock Present and Functional?	Yes [ ]	No [X]	Describe: missing well cover
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe:
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:

Downhole

Odor	Yes [ ]	No [X]	Describe:
PID Reading	____ ppm		
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe:		

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three Star Anodizing PROJECT NUMBER: 314058

DATE OF INSPECTION: 8/15/23 INSPECTOR: M. Gilkey

WELL DESIGNATION: MW-12

WELL LOCATION: Northeast of Three Star building; Next to brick pile

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]		
Approximate Stickup Height	4 feet	N/A [ ]		
Integrity of Protective Casing	Describe: Good			
Protective Casing Material	Steel [ ]	Stainless Steel [X]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: Good			
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [X]	Describe: ____	
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____	
Lock Present and Functional?	Yes [X]	No [ ]	Describe: ____	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: Good			
Integrity of Cap Seal	Describe: Good			
Surface Water in Casing?	Yes [ ]	No [X]	Describe: ____	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____	

Downhole

Odor	Yes [ ]	No [X]	Describe: ____	
PID Reading	____ ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: ____			

Additional Comments:

Well hard to access due to vegetation & brick/building debris pile.

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Threestar Anodizing PROJECT NUMBER: 314058

DATE OF INSPECTION: 8/15/2023 INSPECTOR: M. Gilkey

WELL DESIGNATION: MW-2

WELL LOCATION: Residential property back yard; 21 mc kinnely St

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]		
Approximate Stickup Height	4 feet	N/A [ ]		
Integrity of Protective Casing	Describe: Good; missing well cover			
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: Good			
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [X]	Describe: in yard NA	
Well ID. Visible?	Yes [ ]	No [X]	Describe: ____	
Lock Present and Functional?	Yes [ ]	No [X]	Describe: missing well cover	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: Good			
Integrity of Cap Seal	Describe: good			
Surface Water in Casing?	Yes [X]	No [ ]	Describe: minimal surface water; ø close to top of PVC	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe: ____	

Downhole

Odor	Yes [ ]	No [X]	Describe: ____	
PID Reading	____ ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: ____			

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: ThreeStar Anodizing PROJECT NUMBER: 314058

DATE OF INSPECTION: 8/15/23 INSPECTOR: M. Gilkey

WELL DESIGNATION: MW-1

WELL LOCATION: directly adjacent to Threestar building

Outward Appearance

Flushmount Diameter	_____ inches	N/A [X]	
Approximate Stickup Height	3 feet	N/A [ ]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other _____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: In remote area NA
Well ID. Visible?	Yes [ ]	No [X]	Describe:
Lock Present and Functional?	Yes [X]	~~No [ ]~~ (MG)	Describe: 3 digit combo (058)
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe:
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:

Downhole

Odor	Yes [ ]	No [X]	Describe:
PID Reading	0 ppm		
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe:		

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three Star Anodizing PROJECT NUMBER: 314058

DATE OF INSPECTION: 8/14/23 INSPECTOR: H. Bedell

WELL DESIGNATION: MW-9

WELL LOCATION: South west side Hardwood Bros. Parking lot

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]		
Approximate Stickup Height	_____ feet	N/A [X]		
Integrity of Protective Casing	Describe: Good			
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other _____	
Protective Casing Width or Dia.	8 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ]	Other _____
Integrity of Surface Seal/Apron	Describe: Good			
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [X]	Describe:	Flushmount N/A
Well ID. Visible?	Yes [ ]	No [X]	Describe:	
Lock Present and Functional?	Yes [ ]	No [X]	Describe:	Flush mount N/A
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:	

Inner Appearance

Integrity of Well Casing	Describe: Good			
Integrity of Cap Seal	Describe: Good			
Surface Water in Casing?	Yes [ ]	No [X]	Describe:	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:	

Downhole

Odor	Yes [ ]	No [X]	Describe:	
PID Reading	0.419 ppm			
Depth to Water (to top of casing)	_____ feet (nearest 0.01)	Depth to LNAPL	_____ feet (nearest 0.01)	N/A [ ]
Total Well Depth (to top of casing)	_____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: _____			

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Roxy Cleaner PROJECT NUMBER: 314058 - 1602523

DATE OF INSPECTION: 08/14/2023 INSPECTOR: M. Gilkey

WELL DESIGNATION: MW-16

WELL LOCATION: Hardwood Bros Parking lot; 33 Mc Kinley St.

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]	
Approximate Stickup Height	____ feet	N/A [X]	
Integrity of Protective Casing	Describe: Good		
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	8 inches		
Weep Hole in Protective Casing	Yes [ ]	No [X]	
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: Good		
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]	
Bollards Present?	Yes [ ]	No [X]	Describe: Flushmount NA
Well ID. Visible?	Yes [X]	No [ ]	Describe:
Lock Present and Functional?	Yes [ ]	No [X]	Describe: Flushmount NA
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:

Inner Appearance

Integrity of Well Casing	Describe: Good		
Integrity of Cap Seal	Describe: Good		
Surface Water in Casing?	Yes [ ]	No [X]	Describe:
Well Casing Diameter	2 inches		
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:

Downhole

Odor	Yes [X]	No [ ]	Describe: Sulfur
PID Reading	0.0 ppm		
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe:		

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three Star Anodizing PROJECT NUMBER: 314058

DATE OF INSPECTION: 8/14/23 INSPECTOR: H. Bedell

WELL DESIGNATION: MW-15D

WELL LOCATION: Hardwood Bros. Parking Lot (west side)

Outward Appearance

Flushmount Diameter	8 inches	N/A [ ]		
Approximate Stickup Height	____ feet	N/A [X]		
Integrity of Protective Casing	Describe: Good			
Protective Casing Material	Steel [X]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	8 inches			
Weep Hole in Protective Casing	Yes [ ]	No [X]		
Surface Seal/Apron Material	Cement [X]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: Good			
Surface Drainage	Away from Wellhead [X]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [X]	Describe:	Flushmount NA
Well ID. Visible?	Yes [X]	No [ ]	Describe:	
Lock Present and Functional?	Yes [ ]	No [X]	Describe:	Flushmount NA
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe:	

Inner Appearance

Integrity of Well Casing	Describe: Good			
Integrity of Cap Seal	Describe: Good			
Surface Water in Casing?	Yes [ ]	No [X]	Describe:	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [X]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [ ]	Expansion Plug [X]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [X]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [X]	Describe:	

Downhole

Odor	Yes [ ]	No [X]	Describe:	
PID Reading	22.7 ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe:			

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three-Star PROJECT NUMBER: 34058

DATE OF INSPECTION: 8/14/23 INSPECTOR: L. Casey

WELL DESIGNATION: MW-11

WELL LOCATION: field adjacent to building; nearer to site border

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]	
Approximate Stickup Height	2 feet	N/A [ ]	
Integrity of Protective Casing	Describe: good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [✓]	No [ ]	
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ] Other ____
Integrity of Surface Seal/Apron	Describe: good		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	~~Yes [X]~~ (MW)	No [X]	Describe: Remote Area NA
Well ID. Visible?	Yes [✓]	No [ ]	Describe: ____
Lock Present and Functional?	Yes [✓]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: good		
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [✓]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: ____

Downhole

Odor	Yes [ ]	No [✓]	Describe: ____
PID Reading	0.0 ppm		
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: ____		

Additional Comments:

EA Engineering, P.C. and its Affiliate
EA Science and Technology

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three-Star PROJECT NUMBER: 3140590

DATE OF INSPECTION: 8/14/23 INSPECTOR: L. Casey

WELL DESIGNATION: MW-3

WELL LOCATION: field adjacent to Lagoon

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]		
Approximate Stickup Height	2.5 feet	N/A [ ]		
Integrity of Protective Casing	Describe: good			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [✓]	No [ ]		
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: good			
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]		
Bollards Present?	~~Yes [✓]~~ (MW)	No [X]	Describe: remote area NA	
Well ID. Visible?	Yes [✓]	No [ ]	Describe: ____	
Lock Present and Functional?	Yes [✓]	No [ ]	Describe: ____	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: good			
Integrity of Cap Seal	Describe: good			
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ____	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [✓]	Expansion Plug [ ]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: ____	

Downhole

Odor	Yes [ ]	No [✓]	Describe: ____	
PID Reading	0.0 ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: ____			

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three - Star PROJECT NUMBER: 314058

DATE OF INSPECTION: 8/14/23 INSPECTOR: L. Casey

WELL DESIGNATION: MW-4

WELL LOCATION: field adjacent to lagoon

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]	
Approximate Stickup Height	2.5 feet	N/A [ ]	
Integrity of Protective Casing	Describe: good		
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____
Protective Casing Width or Dia.	4 inches		
Weep Hole in Protective Casing	Yes [✓]	No [ ]	
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓] Other ____
Integrity of Surface Seal/Apron	Describe: ____		
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]	
Bollards Present?	Yes [✓]	No [ ]	Describe: ____
Well ID. Visible?	Yes [✓]	No [ ]	Describe: ____
Lock Present and Functional?	Yes [✓]	No [ ]	Describe: ____
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____

Inner Appearance

Integrity of Well Casing	Describe: good		
Integrity of Cap Seal	Describe: good		
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ____
Well Casing Diameter	2 inches		
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]
Inner Cap	Threaded [ ]	Slip [✓]	Expansion Plug [ ] None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: ____

Downhole

Odor	Yes [ ]	No [✓]	Describe: ____
PID Reading	0.0 ppm		
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01) N/A [X]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)		
Sediment (Hard/Soft Bottom)	Describe: ____		

Additional Comments:

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GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three-Star Anod. PROJECT NUMBER: 31405B

DATE OF INSPECTION: 8/14/23 INSPECTOR: L. Casey

WELL DESIGNATION: MW-5

WELL LOCATION: field adjacent to lagoon

Outward Appearance

Flushmount Diameter	____ inches	N/A [X]		
Approximate Stickup Height	3 feet	N/A [ ]		
Integrity of Protective Casing	Describe: Good			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [✓]	No [ ]		
Surface Seal/Apron Material	Cement [✓]	Bentonite [ ]	Not apparent [ ]	Other ____
Integrity of Surface Seal/Apron	Describe: Good			
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]		
Bollards Present?	Yes [ ]	No [X]	Describe: Remote Area NA	
Well ID. Visible?	Yes [✓]	No [ ]	Describe: ____	
Lock Present and Functional?	Yes [✓]	No [ ]	Describe: ____	
Photograph Taken? Photo #	Yes [X]	No [ ]	Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: Good			
Integrity of Cap Seal	Describe: Good			
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ____	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [✓]	Expansion Plug [ ]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: ____	

Downhole

Odor	Yes [ ]	No [✓]	Describe: ____	
PID Reading	0.0 ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [X]
Total Well Depth (to top of casing)	18.10 feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: ____			

Additional Comments:

EA Engineering, P.C. and Its Affiliate
EA Science and Technology

GROUNDWATER MONITORING WELL INSPECTION

SITE/PROJECT NAME: Three-Star PROJECT NUMBER: 31405B

DATE OF INSPECTION: 8/15/13 INSPECTOR: L. Casey

WELL DESIGNATION: MW-10

WELL LOCATION: Woods behind truck loading area

Outward Appearance

Flushmount Diameter	____ inches	N/A [✓]		
Approximate Stickup Height	2.5 feet	N/A [ ]		
Integrity of Protective Casing	Describe: Good			
Protective Casing Material	Steel [✓]	Stainless Steel [ ]	Other ____	
Protective Casing Width or Dia.	4 inches			
Weep Hole in Protective Casing	Yes [✓]	No [ ]		
Surface Seal/Apron Material	Cement [ ]	Bentonite [ ]	Not apparent [✓]	Other ____
Integrity of Surface Seal/Apron	Describe: Good			
Surface Drainage	Away from Wellhead [✓]	Toward Wellhead [ ]		
Bollards Present?	Yes [✓]	No [ ]	Describe: ____	
Well ID. Visible?	Yes [✓]	No [ ]	Describe: ____	
Lock Present and Functional?	Yes [✓]	No [ ]	Describe: ____	
Photograph Taken? Photo #	Yes [✓]	No [ ]	Describe: ____	

Inner Appearance

Integrity of Well Casing	Describe: Good			
Integrity of Cap Seal	Describe: Good			
Surface Water in Casing?	Yes [ ]	No [✓]	Describe: ____	
Well Casing Diameter	2 inches			
Well Casing Material	PVC [✓]	Steel [ ]	Stainless Steel [ ]	
Inner Cap	Threaded [ ]	Slip [✓]	Expansion Plug [ ]	None [ ]
Reference/Measuring Point	Groove [ ]	Indelible Mark [✓]	None [ ]	
Evidence of Double Casing?	Yes [ ]	No [✓]	Describe: ____	

Downhole

Odor	Yes [ ]	No [✓]	Describe: ____	
PID Reading	0.0 ppm			
Depth to Water (to top of casing)	____ feet (nearest 0.01)	Depth to LNAPL	____ feet (nearest 0.01)	N/A [✓]
Total Well Depth (to top of casing)	____ feet (nearest 0.1)			
Sediment (Hard/Soft Bottom)	Describe: ____			

Additional Comments:














Pine Environmental
Services, Inc.











Appendix I

Climate Vulnerability Assessment

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Climate Vulnerability Assessment
Three Star Anodizing Site
Wappingers Falls, New York
NYSDEC Site Number 314058

Prepared for

New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Prepared by

EA Engineering, P.C. and Its Affiliate
EA Science and Technology
269 W. Jefferson Street
Syracuse, New York 13202
315-431-4610

December 2023
Version: DRAFT
EA Project No. 1602523.08

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Attachment A. Site Location

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Attachment C. Projected Change in Climate Criteria and Climate Vulnerability Assessment Matrix

LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
EA	EA Engineering, P.C. and its affiliate EA Science and Technology
EPA	U.S. Environmental Protection Agency
No.	Number
NYSDEC	New York State Department of Environmental Conservation
RCP	Representative concentration pathway
SLR	Sea level rise
SSDS	Sub-slab depressurization system

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1. INTRODUCTION

EA Engineering, P.C. and its affiliate EA Science and Technology (EA) was tasked by the New York State Department of Environmental Conservation (NYSDEC) under State Superfund Standby Contract Work Assignment Number (No.) D009806-23 to prepare a Climate Vulnerability Assessment for the Three Star Anodizing Site (Site No. 314058). This Appendix provides a screening-level assessment conducted to evaluate potential climate change impacts at the site. These impacts were identified based on possible site vulnerabilities specific to each site. The appendix provides an overview of the data sources and methods used in this assessment as well as recommendations for further assessment at sites with identified vulnerabilities to climate change. Recommendations are also provided for developing an adaptation plan based on current climate projections, or in the future as climate change projections are refined.

Current climate impact projections were used in the assessment. Due to the ever-growing body of knowledge regarding climate change, the assessment of climate vulnerabilities at individual sites may need to be revisited as climate change projection data is refined overtime.

2. CLIMATE CHANGE IN THE CONTEXT OF POST-ACTION REMEDIAL SITES

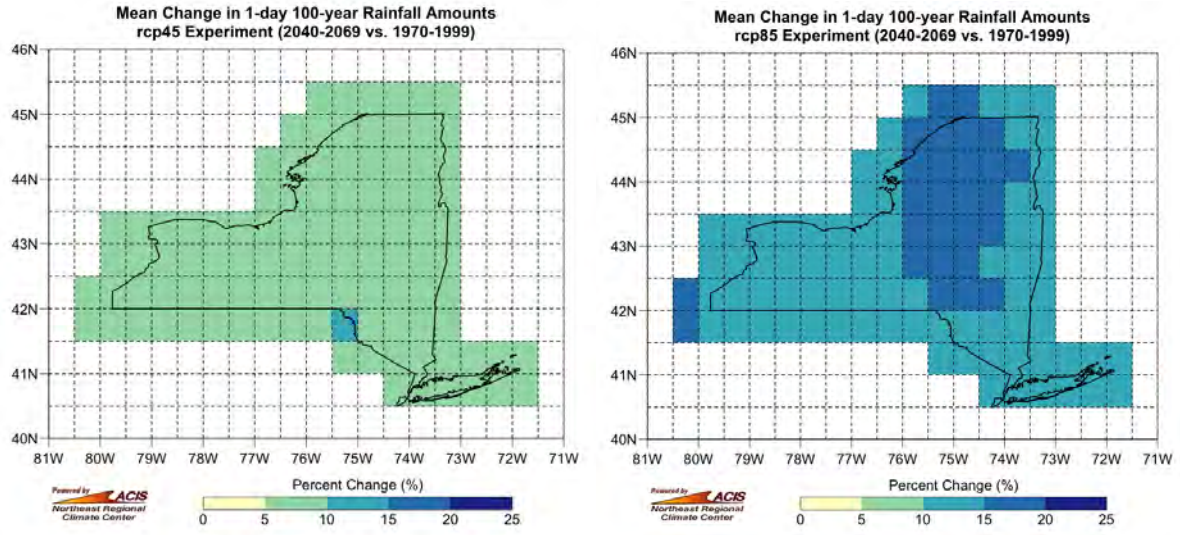
2.1 CLIMATE CHANGE PROJECTIONS

Climate change impacts have already been observed in the State of New York, including increases in temperature, precipitation, and sea level (Horton et al. 2014). The current rate of sea level rise in New York is almost twice the observed global rate, due in part to a high rate of land subsidence (Sweet et al. 2022). Climate change modeling predicts current climate change trends will continue.

Climate change projections are based on both global climate models and representative concentration pathways (RCPs). A global climate model is a mathematical representation of the Earth's climate, which uses atmospheric greenhouse gases and aerosols, as well as land use changes, to simulate physical exchanges between the ocean, atmosphere, land, and ice (Rosenzweig and Solecki 2019). RCPs are varying trends of greenhouse gases, aerosols, and land use changes included as inputs to global climate models. Two RCPs are commonly used to develop projections: (1) RCP 4.5, defined as an intermediate scenario reflecting no change in climate and fossil fuel policies; and (2) RCP 8.5, defined as a high-emissions or worst-case scenario.

Precipitation—Since 1900, average precipitation in New York State has increased each year. From 1958 to 2010, the amount of precipitation in the northeastern United States falling in heavy events (over 1 inch of precipitation in a day) increased by more than 70 percent. During this timeframe, winter precipitation increased while summer precipitation decreased. Modeling of future conditions predicts both precipitation quantities and variability will continue to increase.

The amount of rain falling during the current 100-year rainfall event is projected to increase by 5 to 20 percent, depending on location within the State of New York by 2040–2069, according to both the high and low projections (**Figure 1**) (Northeast Regional Climate Center 2015).



Source: Northeast Regional Climate Center 2015

(a) **(b)**

Figure 1. Mean Change in 1-Day 100-Year Rainfall Amounts, 1970–1999 versus 2040–2069, for the (a) Low Emission Scenario (RCP 4.5) and (b) High Emission Scenario (RCP 8.5).

Heavy rainfall events may be cause for greater concern, as short, intense events exceed infiltration capacities and result in increased flooding. Sites with steep slopes may be at greater risk from these events, as steep slopes will see higher runoff velocities while modest topographical relief typically mitigates runoff velocities. Decreases in precipitation during summer months may reduce annual recharge to groundwater.

Drought—Quantitative information for projected drought impacts is not currently available. Decreases in precipitation during summer months discussed above may lead to drought conditions.

Temperature—Since 1970, the average state temperature has risen 2.4 degrees Fahrenheit (°F) overall annually and 4.4°F for the winter months. Temperature has increased in all regions of New York, equating to about a 0.25°F increase each decade. Modeling shows that temperatures are anticipated to continue to increase. Summers are expected to intensify with extreme heat and heat waves, while winters are expected to become milder. A review of the information regarding projected climate impacts is provided below.

Storms—Increased temperatures and resulting changes to the water cycle may result in more frequent and severe weather events, such as the occurrence of the 1 percent annual chance (also known as 100-year) storm event. Severe storms similar to Hurricane Sandy in 2012 are likely to occur more often as warmer oceans may contribute to a northerly track of severe storms. Warmer ocean water will also lead to increased water vapor in the atmosphere, which can translate into more powerful hurricanes, and an extended hurricane season.

Wind—Quantitative information for projected wind impacts is not currently available. It is not known how the number of tropical cyclones will change in the North Atlantic Basin, but it is likely that intense hurricanes and associated extreme winds will increase (Horton et al. 2014).

Sea Level Rise—An increase in coastal impacts will primarily be driven by: (1) sea level rise (SLR) from climate change, and (2) storm surge from more significant coastal storm events. The greatest potential climate impact at coastal sites is likely to be an increase in sea level. Areas where the existing topography is overlapped by the predicted future sea level elevation are expected to be impacted. Some areas not permanently inundated by SLR could experience increased nuisance flooding during tidal cycles.

Since 1900, average coastal sea levels in New York have risen more than a foot, at a rate of 1.2 inches per decade (Horton et al. 2014). The rate of rise in New York is almost twice the global rate over the same period. This is due to several local factors, including post-glacial rebound causing the east coast to fall in elevation. Modeling predicts the median projection of SLR in Region 4 (New York City and Long Island) from baseline conditions to the year 2050 to be 1.3 feet. Increases in sea level from climate change are predicted to result in a "new normal;" and therefore, are anticipated to result in relatively permanent flooding, except for tides. According to the high-emissions projections, sea level could rise 2.5 feet above the current elevation by the year 2050 (Horton et al. 2014).

Flooding—The frequency and severity of flood events in the northeastern United States will likely be affected by both SLR and changes in precipitation patterns.

- ***Inland Flooding***—Flooding due to more frequent intense storm events has the potential to cause erosion of fill materials, especially on steep slopes and along streambanks, contribute to more frequent nuisance flooding due to the prevalence of supersaturated soils; increase the elevation of the water table; and reduce water quality by increasing the runoff of pollutants.

- ***Flooding from Coastal Storm Events***—Important considerations for design of resiliency measures include both the water elevation of storm surge and the velocity, which the surge will move inland. Storm surge moves onshore at the forward velocity of the storm. In the case of a hurricane, this can be highly variable but is often between 10–15 miles per hour.

2.2 TYPICAL CLIMATE CHANGE IMPACTS AT POST-REMEDIAL SITES

At sites with legacy contamination and ongoing remedial efforts, climate change and extreme weather events can potentially impact the effectiveness of site remediation design and can also impact contaminant toxicity, exposure, organism sensitivity, fate and transport, and long-term operations, management, and stewardship of remediation sites.

Based upon the review of the existing site information and the projected impacts from climate change across New York State, a list of site climate-related sensitivities and vulnerabilities typical to post-remediation action sites was developed based on information from Maco et al. (2018) and the U.S. Environmental Protection Agency (EPA) (2015) and is provided in Table B-1 in

Attachment B. This assessment includes a review of site components including but not limited to surface water, groundwater, and existing remedial infrastructure. This information was used to evaluate the sensitivity of individual sites to climate change impacts at a screening level.

3. METHODS

Climate change site risk factors (site risk factors) were assessed using available site documentation, publicly available data sets, and web-based tools curated by partnerships of governmental agencies and non-governmental organizations. A map of the site is provided in **Attachment A** and specific data sources utilized in the assessment are summarized in Table B-2 (provided in **Attachment B**). A matrix was used to assess the site risk factors for the site and is provided in **Attachment C**, Tables C-1 through C-4.

3.1 ASSESSMENT OF CLIMATE VULNERABILITY SITE RISK FACTORS

Site Characterization and Qualitative Site Risk Factors

Available site documentation was reviewed to identify site vulnerabilities to climate change. These vulnerabilities included characteristics of previous remedial actions, existing remedial infrastructure located on or adjacent to the site, or other current site conditions. Approximately half of the climate change site risk factors were assessed based on site documentation. Numerical data for these factors was not available, and these were therefore assessed for presence or absence of risk.

The site is currently in a site management phase of operations, meaning contamination remains onsite which requires ongoing monitoring and/or management through implementation of engineering and/or institutional controls. In the context of this document, the focus is on the vulnerability of implemented remedies and long-term management activities to predicted climate change.

Climate Change Projection Data for Quantitative Site Risk Factors

Climate change projection data is available statewide for precipitation, temperature, and SLR, and this data was incorporated into the assessment. Data from climate change projections makes up approximately half of the climate change site risk factors.

Projection data for a high emissions scenario in the 2090s obtained from the U.S. Climate Resilience Toolkit Climate Explorer (2023) (https://crt-climate-explorer.nemac.org/) was utilized for precipitation and temperature site risk factors. Climate Explorer Toolkit provides projections statewide data for precipitation and extreme temperatures, at the county level.

SLR risk was assessed using an undated "bathtub" model that provides an inundation map that changes as the water level increases compared to the current high tide line. The web tool used, the Coastal Risk Screening Tool (https://coastal.climatecentral.org/) developed by Climate Central (2021), provides this data in the form of a map with the option to depict SLR ranging from 0-30 feet. The Site location was viewed on this map at different water levels to determine the

approximate change in water level needed to begin inundating the site. Higher values for SLR depths indicate lower risk because they indicate the amount by which sea level would have to increase in order to impact the site. As this is a screening-level assessment, water level changes required to impact sites were assessed at 1-foot intervals for water level changes below 10 feet and at 10-foot intervals for water level changes above 10 feet.

4. RECOMMENDATIONS

This site is highlighted in the map in **Attachment A** and the Projected Change in climate factors and Climate Vulnerability Assessment Matrix in **Attachment C**.

The site was flagged for in-depth review due to its location within a floodplain as well as due to past weather-related damage and related factors, including existing erosion and significant vegetative overgrowth.

The highest risk that this site faces is the increase in precipitation, higher temperatures, wind, and flooding. Projected change in the above criteria is presented in Tables I-1 through I-4 which are provided within this attachment.

Though the Site is projected to have an increase in annual average temperature, average minimum winter temperatures, and number of days above 90°F. It is not anticipated that this increase will have an impact on any of the site's engineering or institutional controls.

There is not a history of wildfires in the area, which indicates that the Site has a low risk of wildfires occurring, but there is moderate amount of bush and vegetation at the site. Due to this fact, it is recommended that vegetation clearing and mowing continue as part of the site management activities to maintain a low risk of wildfires.

Though there is no projected data on increase in wind speeds, the Site has and is surrounded by wooded areas. Fallen trees caused by wind events may damage the soft cover cap at the source area of the site exposing contaminated media. Fallen trees also pose a risk of interrupting power supply to the sub-slab depressurization system (SSDS). Fencing around the disposal area at the site is also an engineering control that fallen trees may damage and render useless.

The site is located within a 100-year floodplain, which exhibits a risk of a 1% risk of flooding within a single year. This coupled with the projected increase in precipitation and previous reports of precipitation related erosion issues exhibits a risk to the site remedies. For this reason, along with the risk of falling trees, it is recommended that the site be inspected after significant storm events to ensure that the site remedies remain in place and compliant. Each site inspection should include:

- Visually inspection of the fence line to ensure that trees have not fallen on the fence.
- Visual inspection of the sites soft vegetated cap to ensure no fallen trees, flooding, or erosion from storm events has occurred.

- Visual inspection of the lagoon area to ensure no flooding or erosion has occurred.

- Observation on the amount of dry brush and vegetation to facilitate appropriate scheduling of brush and vegetation activities.

- Inspection of the SSDS to ensure power to the system has not been interrupted by storm events.

5. SUMMARY AND CONCLUSIONS

Impacts from climate change are anticipated to increase in the future and site management of the site may be altered by the changing climate. The analysis above provides a screening-level assessment to identify if the stie potentially faces greater risk due to climate change. Such an assessment can provide more detailed information about climate risks at a given site and possible mitigation actions to reduce climate impacts.

To mitigate these risks, it is recommended that the site vegetation be maintained and mowed regularly. It is also recommended that regular site inspections take place, especially post major storm events, to ensure the cover systems remain intact as well as ensuring no further erosion has occurred in the lagoon area of the site.

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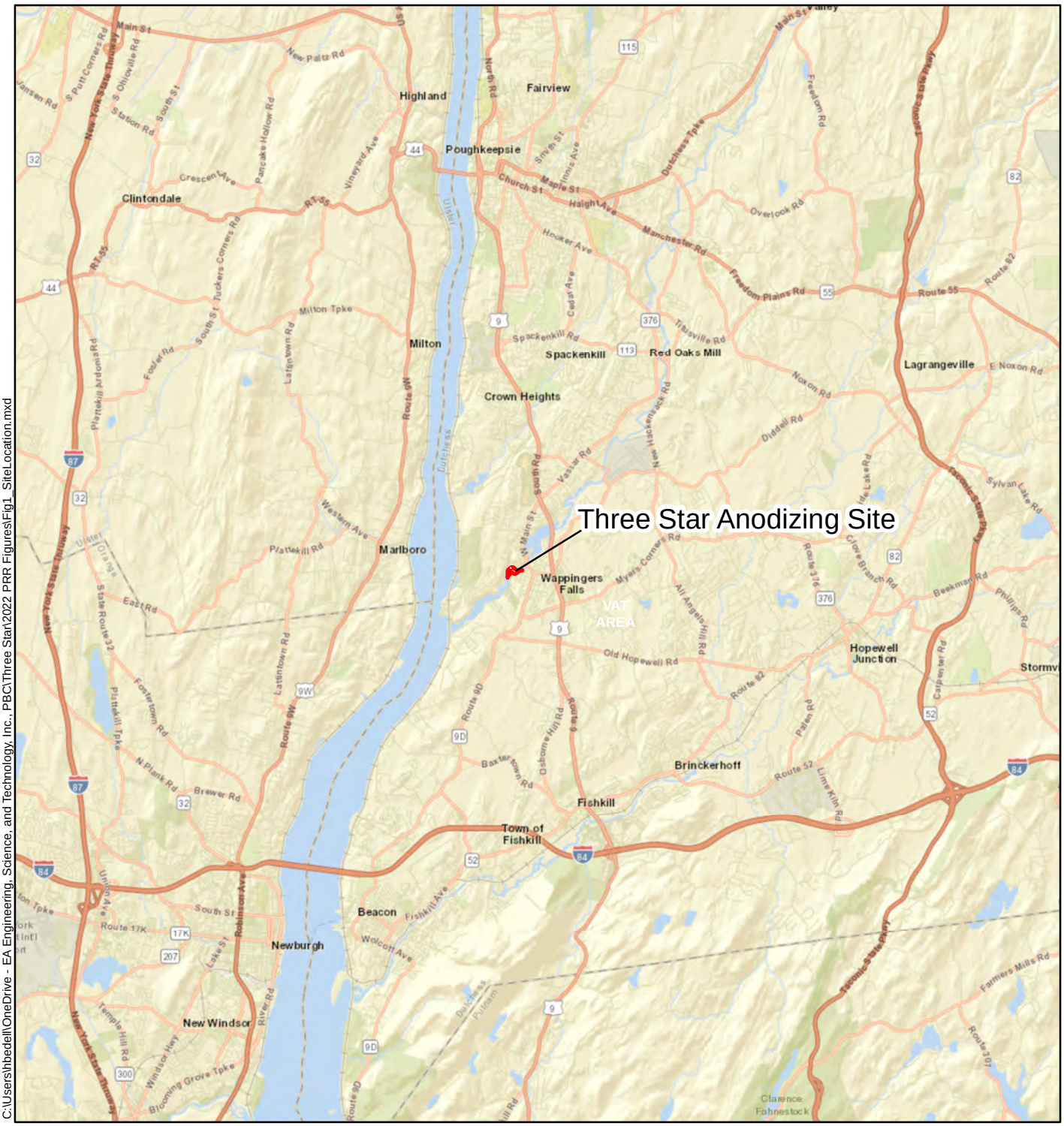
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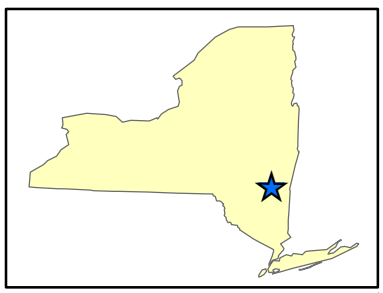
Attachment A

Site Location

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0 2 4
Miles

N

Legend

Approximate Site Boundary

Figure 1
Site Location
Three Star Anodizing Site (NYSDEC Site 314058)
Wappingers Falls, NY

Map Date: 1/5/2023
Projection: NAD83 State Plane New York East
FIPS 3104 Feet

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

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Attachment B

Tables

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Table B-1. Possible Climate Change Impacts on Remediation Activities

Climate Impact	Secondary Effect	Relevant Remediation Effect
Altered precipitation pattern	Wetter: Flooding, more intense storms, more runoff, erosion	• Mobilization of contaminants (e.g., from vadose zone to groundwater) → Higher contaminant concentration/export, overpowering significant degradation rate in groundwater zone could remove natural protective barriers or cause infill subsidence in low-lying areas
		• Dilution → Lower contaminant concentration/export
		• Increase in waste, debris, or urban or agricultural runoff entering containment/treatment zone
		• Increased turbidity of surface water in treatment zone
		• Damage to site integrity, cover systems
		• Reduced access to system components
		• Water damage to exposed machinery, equipment, vehicles, and vessels
	Drier: Drought	• Oxidation of soils
		• Increased volatility
		• Less dilution → Higher contaminant concentration/export
		• Reduced mobilization → Higher contaminant persistence (higher contaminant concentration/export)
		• Insufficient water for remediation; Overuse of groundwater
		• Possible enhanced natural attenuation, expedited contaminant removal
	Altered salinity	• Altered degradation rates (physical, microbial)
Sea level rise	Erosion	• Damage to site integrity
	Site inundation	• Increased mobilization of contaminants, possible dilution, or compromised site with mixing or loss of contaminated materials, increased bioavailability of contaminants
	Mobilization of sediment	• Clean sediments transported on top of contaminated sediments
	Surface water elevations increase	• Changing footprint of floodplains, river boundaries, and coastal shoreline encroachment → Impact on regulations (e.g., dredging, cleanup levels, negotiation of water levels, monitoring)
Extreme weather	Scour (wind/wave action; surface water flow velocity and/or turbulence)	• Damage to site integrity, cover systems • Increased turbidity of surface water in treatment zone
	High Wind	• Damage to machinery, equipment, tall structures • Damage to or toppling of trees → Damage to site integrity, cover systems • Increased turbidity of surface water in treatment zone • Power or fuel source interruption at site
	Flooding	• Possible dilution (lower contaminant concentration/export), or compromised site with mixing or loss of contaminated materials, damage to cover systems • See Altered Precipitation Pattern: Wetter, above
	Extreme heat	• Increased volatility → Mobilization of contaminants from site through soil and air
		• Changes in use of site by wildlife
		• Melting permafrost → Mobilization of contaminants from site through water, soil, and air
	Freezing conditions	• Damage to cover systems and in situ stabilization systems
Extreme weather: Fire	Increased use of fire retardants	• Spread of contaminants

Table B-1. Possible Climate Change Impacts on Remediation Activities

Climate Impact	Secondary Effect	Relevant Remediation Effect
	Damage to site infrastructure	• Loss of function of remediation systems
Decreasing pH of surface water, soil and sediment	Altered transformation or degradation	• Increased availability, mobilization, toxicity
		• Increased sensitivity of species due to pH stress
		• Altered transformation rates
Increasing temperature	Altered transformation or degradation	• Increased or decreased toxicity
	Decreased dissolved oxygen/anoxic conditions	• Altered transformation, decreased species resilience
	Increased species heat stress and associated conditions	• Increased sensitivity to contaminants
Human impact and responses	Vulnerable communities commonly comprised of low socioeconomic and minority populations	• Cardiopulmonary illness; Food, water, and vector-borne diseases • Loss of homes, drinking water, and livelihoods • Mental health consequences and stress

Source: Maco et al. 2018; EPA 2015

Table B-2. Screening-Level Climate Vulnerability Analysis Framework

Climate Impact	Climate Change Site Risk Factor	Explanation of Site Risk Factor	Data Source	Data Format
Precipitation	Baseline Total Annual Precipitation	Current total annual precipitation amounts provide context for projected changes in annual precipitation.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
	Projected Change in Total Annual Precipitation (High Emissions Scenario, 2030s, inches)	The amount by which total annual precipitation is expected to increase or decrease by the 2030s.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
	Projected Total Annual Precipitation (High Emissions Scenario, 2030s, inches)	The total annual precipitation amount in the 2030.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
	Baseline Number of Days with Precipitation >1 inch	The current number of days per year in which a location receives more than an inch of rain per day. This baseline value provides context for projected changes in the number of days with rainfall greater than one inch predicted for the 2030s. The number of days with more than one inch of rainfall can be used as an indicator of the frequency of extreme rainfall.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
	Projected Change in Number of Days with Precipitation >1 inch (High Emissions Scenario, 2030s)	The change in number of days with extreme rainfall over one inch that is expected to occur by the 2030s.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
	Projected Total Number of Days with Precipitation >1 inch (High Emissions Scenario, 2030s)	The total number of days expected to experience more than one inch of rainfall (i.e. extreme rainfall) by the 2030s.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
Drought	Is Vegetative Cover a Key Element of Site Remediation (e.g., vegetative cover on landfill cap)	Vegetative cover may be more difficult to maintain under more frequent drought conditions.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable

Table B-2. Screening-Level Climate Vulnerability Analysis Framework

Climate Impact	Climate Change Site Risk Factor	Explanation of Site Risk Factor	Data Source	Data Format
Temperature	Baseline Annual Number of Days above 90 degrees Fahrenheit (°F)	The current number of days per year in which the maximum temperature exceeds 90°F. This baseline value provides context for projected changes in the number of days above 90°F predicted for the 2030s. The number of days above 90°F can be used as an indicator of the frequency of days with extreme heat.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
	Projected Change in Annual Number of Days above 90°F (High Emissions Scenario, 2030s)	The change in number of days over 90°F that is expected to occur by the 2030s.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
	Projected Total Annual Number of Days above 90°F (High Emissions Scenario, 2030s)	The total number of days expected to exceed 90°F (i.e., extreme heat) by the 2030s.	County-level data from web map at https://www.nyclimatescience.org/map	Numerical entry
Wind	On-site Structures Susceptible to High Winds? (e.g. cranes, structures on buildings, stacks)	Tall structures are at greater risk due to more intense storms and higher wind speeds than short structures.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable
	Large Trees (greater than 4 inches in diameter) on Site?	Large trees are vulnerable to higher winds speeds and can compromise a landfill cap or other earthworks if uprooted from the surface.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable
General	Previous Weather/Climate Impacts at Site	Previous weather impacts may reveal ongoing site vulnerabilities where risk may increase with climate change.	Review of Site Documentation	Summary of known impacts to site from normal or extreme weather events or from climate change (e.g., compromised cap due to erosion; damage from hurricanes)

Table B-2. Screening-Level Climate Vulnerability Analysis Framework

Climate Impact	Climate Change Site Risk Factor	Explanation of Site Risk Factor	Data Source	Data Format
Storm Surge/Sea Level Rise (SLR)	Coastal Location	Sites in a coastal location are likely to face greater risks from climate change due to greater exposure to wave action, storm surge, SLR, coastal storms, and other marine factors.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable
	Sea Level Rise Elevation at which Flooding is Expected to Occur	The degree of SLR required to inundate a site can help indicate the level of associated risk to the site and the time available before SLR impacts occur (when compared to current and project rates of SLR). Sites that will be inundated at lesser degrees of SLR (e.g. 1-5 feet) are likely to face greater risks sooner than higher sites that would need to experience 10 feet or more of SLR before they flood.	Web map at https://coastal.climatecentral.org/	Drop-down list: • Less than 1 foot • 1 foot • 2 feet • 3 feet • 4 feet • 5 feet • 6 feet • 7 feet • 8 feet • 9 feet • 10 feet or more • 20 feet or more • 30 feet or more • NA

Table B-2. Screening-Level Climate Vulnerability Analysis Framework

Climate Impact	Climate Change Site Risk Factor	Explanation of Site Risk Factor	Data Source	Data Format
Flooding	Site Located in a Mapped Floodplain/Flood Hazard Area?	Indicates whether the site is located in a floodplain or flood hazard area recognized by FEMA.	Review of site location on web map at https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd or flood insurance rate maps.	Drop-down list: • Yes • No • No, but Site is Located in a River Corridor and/or in Proximity to a Mapped Flood Hazard Zone • Site Unmapped/Data unavailable
	Site Protected from Flooding by Levees, Floodwall, Heavily Channelized Stream/Canal, or Pumping?	Indicates whether the site is artificially protected from flooding by flood protection infrastructure and therefore dependent on maintenance of that infrastructure. Increased risk to flood protection infrastructure from climate change and/or lack of long-term maintenance may increase risk to the site.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable
	Site Adjacent to Navigable Waterways?	Failure of containment at the site may result in impacts to navigational waterways, impacting commercial, industrial, or safety operations.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable
	Shallow Groundwater at Site?	At sites where groundwater is already shallow, flooding impacts may increase the risk to remedial sites both above and below the ground surface.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable
	Site Subsurface Geology composed of Limestone or Similar?	Bedrock such as limestone may dissolve more quickly in areas impacted by more frequent flooding, causing sinkholes to develop and compromising the integrity of any remedial measures.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable
Erosion	Steep Grades on Site?	Steep slopes are more likely to experience erosion than shallow-gradient sites. If precipitation and/or flooding increase, caps and other earthworks at post-remedial action sites may be compromised by erosion.	Review of Site Documentation	Drop-down list: • Yes • No • Data unavailable

Attachment C

Projected Change in Climate Criteria
and
Climate Vulnerability Assessment Matrix

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Table C-1. Precipitation

	Site Information			Precipitation					
	Site Name	Site ID	Location	Baseline Total Annual Precipitation (High Emissions Scenario, 2090s, inches)	Projected Change in Total Annual Precipitation (High Emissions Scenario, 2090s, inches)	Projected Total Annual Precipitation (High Emissions Scenario, 2090s, inches)	Baseline Number of Days with Precipitation >1 inch (High Emissions Scenario, 2090s)	Projected Change in Number of Days with Precipitation >1 inch (High Emissions Scenario, 2090s)	Projected Total Number of Days with Precipitation >1 inch (High Emissions Scenario, 2090s)
1	Three Star Anodizing	314058	Market Industrial Park, Wappingers Falls, Dutchess County	42.09	6.89	48.98	5.3	1.7	7

References

U.S. Federal Government, 2023: U.S. Climate Resilience Toolkit Climate Explorer. [Online] https://crt-climate-explorer.nemac.org. October 26 2023.

Table C-2. Drought, Wind, Wildfire, and Summer Temperatures

	Site Information			Drought	Temperature			Wind		Wildfire
	Site Name	Site ID	Location	Is Vegetative Cover a Key Element of Site Remediation (e.g. vegetative cover on landfill cap)	Baseline Annual Number of Days above 90°F (High Emissions Scenario, 2090s)	Projected Change in Annual Number of Days above 90°F (High Emissions Scenario, 2090s)	Projected Total Annual Number of Days above 90°F (High Emissions Scenario, 2090s)	On-site Structures Susceptible to High Winds? (e.g. cranes, structures on buildings, stacks)	Large Trees (>4 inches diameter) on Site?	Site is located in a commerical/industrial area that lacks vegetation and fuel for any potential wildfires
1	Three Star Anodizing	314058	Market Industrial Park, Wappingers Falls, Dutchess County	Yes	7.0	67.2	74.2	No	Yes	No, slight amount of dry vegetation is located onsite.

References

U.S. Federal Government, 2023: U.S. Climate Resilience Toolkit Climate Explorer. [Online] https://crt-climate-explorer.nemac.org. October 26 2023.

Table C-3. Winter Temperatures

	Site Information			Change in day below 32°F			Minimum Temperature			Other Parameters		
	Site Name	Site ID	Location	Baseline Annual Number of Days below 32°F	Projected Change in Annual Number of Days below 32°F (High Emissions Scenario, 2090s)	Projected Total Annual Number of Days below 32°F (High Emissions Scenario, 2090s)	Baseline Minimum Winter Temperature, °F	Projected Change in Minimum Winter Temperature (°F High Emissions Scenario, 2090s)	Projected Minimum Winter Temperature(°F, High Emissions Scenario, 2090s)	Wind Resistance (Scroll Down for Image)	Frost Line (100 yr Return Period)	Air Freezing Days
1	Three Star Anodizing	314058	Market Industrial Park, Wappingers Falls, Dutchess County	32	-27.5	4.5	37.4	10.3	47.7	160	70 - 80	1160

References

U.S. Federal Government, 2023: U.S. Climate Resilience Toolkit Climate Explorer. [Online] https://crt-climate-explorer.nemac.org. October 26 2023.
https://www.fema.gov/sites/default/files/documents/fema_international-building-code_ 10152021.pdf
https://www.nrcc.cornell.edu/services/research/reports/RR_96-1.pdf

Table C-4. Sea Level Rise, Flooding, Previous Impacts, Erosion, and Flagged Sites

	Site Information			Previous Site Impacts	Sea Level Rise		Flooding					Erosion	Flagged Sites	
	Site Name	Site ID	Location	Previous Documented Site Impacts	Coastal Location?	SLR Elevation at Which Flooding is Expected to Occur	Site Located in Mapped Floodplain/Flood Hazard Area?	Site in Susceptible Location and Protected by Levees, Floodwall, Heavily Channelized Stream/Canal, or Pumping?	Site Adjacent to Navigable Waterways?	Shallow Groundwater at Site?	Site Subsurface Geology composed of Limestone or Similar?	Steep Grades on Site?	Count of Site Risk Factors Marked "Yes"	Flag for further Assessment?
1	Three Star Anodizing	314058	Market Industrial Park, Wappingers Falls, Dutchess County	No	No	3 feet	Yes	Yes	Yes	Yes	Yes	Yes	6	No

References
Climate Central. 2021. Coastal Risk Screening Tool. Accessed 28 February 2022. https://coastal.climatecentral.org/

FEMA'S National Flood Hazard Layer (NHFL) Viewer. 2022. FEMA's National Flood Hazard Layer (NHFL) Viewer. Accessed 28 February. https://hazardsfema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

Color Key

Text — Indicates higher risk to site because this site risk factor is marked "Yes"

Text — Indicates that this site risk factor triggers a recommendation for further climate vulnerbility assessment at the site

Text — Indicates

Text — Indicates site has been flagged for further climate vulnerability assessment due to factors highlighted in red

Table C-5. Remedy Vulnerability Assessment

Description of Remedy Component Concerns due to Climate Change	Climate Change Risk Factors					
	Temperature	**Precipitation/Flooding**	**Drought**	**Wind**	**Storm Surge/Sea Level Rise**	**Wildfires**
	Average annual minimum winter temp for Dutchess County: projected to increase 10.3 deg above baseline by 2090 (High Emissions Scenario) Air Freezing Index for NYC ranges 265 -1160 deg F days, depending on return period based on data from 1951-1980.	Annual Precipitation is 42.09" per year. Projected total annual precipitation for a high emissions scenario in 2090 is 48.98" per year; The site is directly adjacent to a tributary of the Hudson river. The site is located in the FEMA 2020 100-yr Floodplain	Region has no history of multi-year drought.	Located in an area subject to a design wind speed of 160 mph or more. The site is surrounded by wooded areas and has trees greater than 4 ft located onsite.	The site is located within FEMA 2020 100 - yr. floodplain; The site is directly adjacent to a tributary of the Hudson river.	Site has several Operational Units that contain vegetation and fuel for any potential wildfires ; Wildfires are not typical for this area
The Site's engineering controls include asphalt and soil covers and fence line encompassing the source area	Climate Exposure (X) / Remedy Sensitivity	Climate Exposure (X) / Remedy Sensitivity	Climate Exposure (X) / Remedy Sensitivity	Climate Exposure (X) / Remedy Sensitivity	Climate Exposure (X) / Remedy Sensitivity	Climate Exposure (X) / Remedy Sensitivity

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