REMEDIAL INVESTIGATION WORK PLAN

for

615 BROADWAY
Kingston, New York
BCP Site No. C356066

Prepared for:

615 Broadway LLC
11 Garden Street, Suite 101
Poughkeepsie, New York 12601

Prepared by:

Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
368 Ninth Avenue, 8th Floor
New York, New York 10001

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Project No. 170803001

LANGAN

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CERTIFICATION

I, Brian Gochenaur, certify that I am currently a Qualified Environmental Professional as defined in Title 6 of the New York Codes, Rules, and Regulations (NYCRR) Part 375 and that this Remedial Investigation Work Plan (RIWP) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) and DER Green Remediation (DER-31).



Brian Gochenaur, QEP

1.0 INTRODUCTION

This Remedial Investigation Work Plan (RIWP) was prepared on behalf of 615 Broadway LLC (the Volunteer) for the property located at 615 Broadway in Kingston, New York (the site). The Volunteer entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) on February 26, 2025 to investigate and remediate the site under the Brownfield Cleanup Program (BCP) and will implement this RIWP as Site No. C356066.

The objective of the scope of work defined in this RIWP is to investigate and characterize the nature and extent of environmental impacts at the site and to provide sufficient information to evaluate remedial alternatives and inform the Qualitative Human Health Exposure Assessment (QHHEA). This RIWP was developed in accordance with the process and requirements identified in the NYSDEC Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) (May 2010), the New York State Department of Health (NYSDOH) "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (October 2006, with updates May 2017 and February 2024), and the NYSDEC "Guidelines for Sampling and Analysis of Per- and Polyfluoroalkyl Substances (PFAS)" (April 2023).

2.0 SITE BACKGROUND

2.1 Site Description

The about 33,700-square-foot (0.77-acre) site is located at 615 Broadway in the city of Kingston, New York and is identified on the Ulster County Tax Map as Section 56.109, Tax Block 3, Lot 16. Block 3 is bordered by Henry Street to the north, Broadway to the east, Cedar Street to the south, and Sterling Street to the west. A site location map is provided as Figure 1.

The site is irregularly shaped and includes an about 10-foot-wide by 200-foot-long accessway formerly known as Martin's Lane that extends to the southeast towards Cedar Street. The site is vacant and improved with an asphalt-paved parking lot and a landscaped area in the eastern part of the site fronting Broadway. A site plan is provided as Figure 2.

According to the City of Kingston's Form Based Zoning Code adopted on August 2, 2023, the site is located within a T5MS: Main Street Mixed Use zoning area. The T5MS: Main Street Mixed Use zoning district is generally characterized as a pedestrian-friendly, urban area of medium to high-density buildings with mixed commercial and residential uses. In addition to T5MS: Main Street Mixed Use, properties adjacent to the site are zoned for T4N: Neighborhood Limited Use, T4N-O: Neighborhood-Open Mixed Use, and T5N: Neighborhood Mixed Use.

2.2 Surrounding Property Land Use

The site is located in an urban setting that is characterized by residential, institutional and commercial buildings. The following table summarizes surrounding property usage:

Direction	Adjoining Properties	Surrounding Properties
North	A gas station (625 Broadway) and three 2-story multi-family residential buildings (16, 20 and 24 Henry Street) followed by Henry Street	Commercial buildings, multi-family residential and apartment buildings, and parking lots
East	A 3-story mixed-use commercial and residential building (608 Broadway), a 2-story office building (Taconic Developmental Disabilities Services) and parking lot (609 Broadway), and Broadway followed by a single-story commercial building, multiple 2- to 3-story mixed-use commercial and residential buildings, and a parking lot	Mixed-use commercial and residential buildings
South	Salvation Army church and food distribution center (35 Cedar Street) and Cedar Street followed by a 1- to 3-story mixed-use commercial and residential building	Multi-family residential buildings, mixed-use commercial, institutional and residential buildings
West	A 2-story multi-family residential building (28 Henry Street) and a 2-story apartment building (55 Cedar Street)	Multi-family residential and apartment buildings

Public infrastructure (storm drains, sewers, and underground utility lines) exists within the streets surrounding the site. A land use map showing the adjacent and surrounding properties is provided as Figure 3.

Land use within a half-mile radius of the site includes residential, commercial, institutional uses, and parks. The nearest ecological receptor is the Esopus Creek, located about 0.8 miles northwest of the site. Sensitive receptors, as defined in DER-10, located within a half-mile of the site include those listed below:

Name (Approximate distance from site)	Address
One Love Learning Daycare (approximately 0.22 miles northeast of the site)	12 Ardsley Street, Kingston, NY 12401
Lil Sluggers Daycare (approximately 0.22 miles north of the site)	20 Belvedere Street Kingston, NY 12401
Mi Casita Daycare (approximately 0.46 miles southeast of the site)	78 W O'Reilly Street Kingston, NY 12401
YWCA Ulster County – Day Care Center (approximately 0.5 miles to the northwest of the site)	209 Clinton Avenue Kingston, NY 12401
George Washington Elementary School (approximately 0.50 miles southwest of the site)	67 Wall Street Kingston, NY 12401
Kingston High School (approximately 0.50 miles southeast of the site)	403 Broadway Kingston, NY 12401

2.3 Site Physical Conditions

2.3.1 Topography

According to the United States Geological Survey (USGS) Kingston West and East Quadrangle 7.5-minute Series Topographic Map, the site elevation is about 180 feet above mean sea level (amsl). The site is generally flat with the surrounding area sloping gently towards the north.

2.3.2 Geology

According to the September 2024 Supplemental Subsurface Investigation (SSI) prepared by Langan, the site is underlain by fill, predominantly consisting of brown to tannish-brown fine-grained sand with varying amounts of fine gravel, silt, brick, glass, and slag which extends to between about 1 to 3 feet below grade surface (bgs), followed by tannish-brown to dark-brown fine sand with varying amounts of fine gravel and silt. The July 2020 Phase II Environmental Site Assessment (ESA) conducted by Weston & Sampson PE. LS, LA, PC (Weston & Sampson) identified fill from about 1 to 5 feet bgs across the site. The Phase II ESA also identified fine- to coarse- and fine- to medium-grained sands with varying amounts of gravel to about 20 feet bgs across the site, with tan clay lenses observed between 22 and 25 feet in the northern part of the site and between 16 and 19 feet bgs in the southern part of the site.

Bedrock was not encountered during the Phase II ESA or SSI. Based on review of the "Preliminary Geologic Map and Cross Section of the Ellenville and Kerhonkson Quadrangles (In Part) and the Napanoch Quadrangle, Ulster and Orange Counties, New York (Epstein, Jack B., Lyttle, Peter T., dated 1990)", the site is underlain by bedrock of the Onondaga limestone formation, consisting of medium-gray, cherty fossiliferous limestone.

2.3.3 Hydrogeology

Groundwater flow is typically topographically influenced, as shallow groundwater tends to originate in areas of topographic highs and flows toward areas of topographic lows, such as rivers, stream valleys, ponds, and wetlands. A broader, interconnected hydrogeologic network often governs groundwater flow at depth or in the bedrock aquifer. Groundwater depth and flow direction are also subject to hydrogeologic and anthropogenic variables such as precipitation, evaporation, extent of vegetation cover, coverage by impervious surfaces, and subsurface structures. Other factors influencing groundwater include depth to bedrock, the presence of anthropogenic fill, and variability in local geology and groundwater sources or sinks.

Groundwater was encountered at about 20 feet bgs during the Phase II ESA, and was observed at about 19 feet bgs in soil borings advanced throughout the site during the SSI. Based on investigation findings from the Phase II ESA, groundwater is inferred to flow south-southwest. Groundwater elevations and flow direction will be evaluated during the Remedial Investigation (RI).

2.3.4 Wetlands

Wetlands were evaluated by reviewing the National Wetlands Inventory and NYSDEC regulated wetlands map. There are no wetlands located on the site. The closest wetland is a freshwater pond located about 0.38 miles northwest of the site.

2.4 Summary of Previous Site Use

Review of historical records and previous environmental reports indicate that the site has been located in a densely-developed urban area characterized by commercial, residential, and industrial uses since the 1890s. The site was historically used for residential and commercial purposes. The site was improved as early as 1887 with a two-story dwelling fronting Broadway and a two-story dwelling in the central part of the site at the end of Martin's Lane. By 1899, the site was also developed with a one-story store along Broadway. Between 1950 and 1957, the eastern part of the site operated as a produce warehouse (A.H. Guildersleeve & Son) with ancillary buildings for miscellaneous storage, heating supplies, cooling, shipping and receiving, and the western part of the site was developed with multi-story apartments. By 1972, the buildings were demolished and the site was developed with two buildings operated as a motel (Imperial Motel), which remained unchanged through 2006. Records also noted an occupant called "Osgold International (USA)" in 1995; the specific operations of this company are unknown. By 2009, the motel buildings were no longer present. The site contained one building of unknown use in the eastern part of the site alongside a landscaped area between 2013 and 2017, and the remainder of the site consisted of an asphalt-paved parking lot.

2.5 Previous Environmental Reports

Previous environmental reports were reviewed as part of this RIWP. These reports are summarized below and are included in Appendix A.

- *Phase I ESA Report, dated March 2019, prepared by Weston & Sampson*
- *Phase II ESA Report, dated July 2020, prepared by Weston & Sampson*
- *SSI Report, dated September 30, 2024, prepared by Langan*

Phase I ESA Report, dated March 2019, prepared by Weston & Sampson

Weston & Sampson prepared a Phase I ESA in accordance with American Society for Testing and Materials (ASTM) E-1527-13 standards for the current site owner (City of Kingston). The report identified current and historical uses of surrounding properties as a recognized environmental condition (REC) for the site. The report stated that nearby properties have operated as gasoline service stations, a scrap metal yard, manufacturing, dry cleaning, and a bowling alley, and that inadvertent releases of petroleum and/or hazardous substances associated with these operations may have adversely impacted soil, groundwater or soil vapor at the site.

The Phase I ESA also noted that, due to nearby fuel oil releases and known chlorinated solvent contamination in groundwater at adjoining and surrounding properties, a vapor encroachment condition (VEC) likely exists at the site.

Phase II ESA Report, dated July 2020, prepared by Weston & Sampson

A Phase II ESA was completed by Weston & Sampson in June 2019 to investigate potential on-site contamination. Supplemental groundwater sampling was also conducted in November 2019 at the site. Findings from the Phase II ESA are summarized below:

Subsurface Observations

The site is underlain by fill consisting of dark brown fine- to medium-grained sand with varying amounts of gravel, concrete, clinkers, brick and slag to between about 1 to 5 feet bgs followed by tan fine- to coarse and fine- to medium-grained sands with varying amounts of gravel to about 20 feet bgs. Tan clay lenses were observed between 22 and 25 feet bgs in the northern part of the site and between 16 and 19 feet bgs in the southern part of the site. Odors and staining were not observed in soil during the Phase II ESA. A maximum photoionization detector (PID) reading of 19.5 parts per million (ppm) was observed in one soil boring (SB-2) between 0 and 1 feet bgs in the northern part of site. Bedrock was not encountered.

Groundwater was encountered at about 20 feet bgs in monitoring wells installed across the site. Based on the investigation findings, groundwater was observed to flow to the south-southwest.

Analytical Results

- Soil: Semivolatile organic compounds (SVOC), particularly polycyclic aromatic hydrocarbons (PAH), (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene), and metals (lead) were detected in the fill layer at concentrations exceeding the Title 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 Unrestricted Use (UU), Protection of Groundwater (PGW), and/or Restricted Use Restricted-Residential (RURR) soil cleanup objectives (SCO).
- Groundwater: Chlorinate volatile organic compounds (CVOC) (tetrachloroethene [PCE] and trichloroethene [TCE]), and total metals (selenium) were detected in groundwater at concentrations above the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS) and Guidance Values for Drinking Water (class GA) (collectively referred to as the "SGVs"). Based on the analytical results of CVOCs in groundwater, a spill was reported to the NYSDEC on July 15, 2019 and Spill No. 1903819 was assigned to the site.
- Soil Vapor: Soil vapor samples were not collected as part of the Phase II ESA.

Spill No. 1903819 was administratively closed by the NYSDEC in 2020 because CVOC impacts were previously discovered in groundwater in the vicinity of the site; however, an interview

between Langan and Weston & Sampson on November 30, 2023 confirmed that no remediation had occurred at the site.

SSI Report, dated September 2024, prepared by Langan

Langan completed an SSI on August 12, 2024 to further identify soil contamination attributed to historical site operations and confirm that a VEC exists at the site due to known chlorinated solvent contamination in groundwater. Findings from the SSI are summarized below:

Geophysical Survey

The survey identified sewer, electric, and unspecified utilities, as well as sewer mains and an electric box within the site. In addition, a geophysical anomaly was identified in the northwestern part of the site which may indicate the presence of an underground storage tank (UST).

Subsurface Observations

The site is underlain by fill, predominantly consisting of brown to tannish-brown fine-grained sand with varying amounts of fine gravel, silt, brick, glass, and slag which extends to between about 1 to 3 feet bgs. Tannish-brown to dark-brown fine sand with varying amounts of fine gravel and silt was observed below the fill layer. A maximum PID reading of 1.9 ppm was observed in soil boring SB07 at about 1.75 feet bgs. Odors and staining were not observed. Groundwater was observed at about 19 feet bgs in soil borings advanced to 20 feet bgs across the site (SB01, SB07, and SB09).

Analytical Results

- Soil: SVOCs, specifically PAHs, and metals were detected in soil samples across the site at concentrations exceeding the RURR SCOs. SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene were detected above RURR SCOs in soil borings SB07 and SB10. One additional SVOC, dibenz(a,h)anthracene, was also identified above the RURR SCO in soil boring SB10. Lead was detected above the RURR SCO in soil borings SB07 and SB09. Mercury was also detected above the RURR SCO in soil boring SB07.
- Groundwater: Groundwater samples were not collected as part of the SSI.
- Soil Vapor: Total volatile organic compound (VOC) concentrations detected in soil vapor samples ranged from 1,185.678 micrograms per cubic meter (µg/m^3) in SV03 to 1,596.302 µg/m^3 in SV01. Maximum TCE and PCE concentrations of 176 µg/m^3 and 228 µg/m^3 were detected in SV03 and SV01, respectively. Total benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations ranged from 219.32 µg/m^3 in SV01 to 275.19 µg/m^3 in SV02.

A summary of historical soil, groundwater, and soil vapor sample results are provided on Figures 4, 5, and 6, respectively.

2.6 Areas of Concern

The following areas of concern (AOC) were identified based on a review of previous environmental reports and site observations and will be further investigated during the RI. AOCs are shown on Figure 7.

AOC 1: Suspected Historic Non-Native Backfilling

Non-native fill material, predominantly consisting of brown to tannish-brown fine-grained sand with varying amounts of fine gravel, silt, brick, glass, and slag extends from about 1 to 5 feet bgs across the site. The fill was likely placed at the site as part of grading prior to historic construction and may contain the remnants of former building materials. Contaminants associated with non-native fill were identified in shallow soil samples (0 to 2 feet bgs) during the Phase II ESA and SSI, including concentrations of five SVOCs and two metals, exceeding the UU, PGW, and/or RURR SCOs.

AOC 2: CVOC Impacts in Groundwater and Soil Vapor

The Phase II ESA and SSI identified the presence of TCE and PCE in groundwater and soil vapor across the site. During the Phase II ESI, concentrations of TCE and/or PCE exceeded the SGVs in three groundwater monitoring wells across the site. Maximum TCE and PCE concentrations of 176 µg/m^3 and 228 µg/m^3 were detected during the SSI in soil vapor samples SV03 and SV01, respectively, which confirm a VEC exists at the site.

AOC 3: Suspect UST in the Northwestern Part of the Site

During the SSI, a geophysical anomaly was identified in the northwestern part of the site which may indicate the presence of a UST. Additional borings will be advanced in the vicinity of the UST to further investigate the potential for petroleum-related impacts to the subsurface.

AOC 4: Lead Hotspot in the Northwestern Part of the Site

During the Phase II ESA, lead was detected at a concentration of 3,000 milligram per kilogram (mg/kg) in the northwestern part of the site from a surficial soil sample (0 to 2 feet bgs). The extent of elevated lead concentrations has not been horizontally nor vertically delineated in this area.

AOC 5: Lead Hotspot in the Western Part of the Site

During the SSI, lead was detected at a concentration of 1,040 mg/kg from 1 to 2 feet bgs in the western part of the site. The extent of elevated lead concentrations has not been horizontally nor vertically delineated in this area.

3.0 SCOPE OF INVESTIGATION

The objective of the scope of work defined in this RIWP is to further investigate and characterize the nature and extent of the environmental impacts at the site, and to provide sufficient information to evaluate remedial alternatives and inform the QHHEA. The rationale for each sampling location in relation to the AOCs and analytical parameters for each proposed sample are provided in Table 1. The field tasks are discussed in more detail in the following sections:

Geophysical Survey

- Perform a supplemental geophysical survey to clear sample locations of underground utilities and scan the site for anomalies consistent with USTs. Proposed RI sample locations may be relocated as necessary based on the findings of the geophysical survey.

Soil Borings and Sampling

- Advance 23 soil borings to about 10 feet bgs or approximately 5 feet into native soil, whichever is deeper. If impacts are identified during advancement, borings will be extended to a depth at which impacts are no longer observed. Soil borings to be converted to groundwater monitoring wells will be advanced to at least 5 feet below the observed groundwater interface.
- Advance 3 soil borings in the vicinity of the suspect UST to identify the extent of petroleum-related impacts to soil. Borings will be advanced to about 2 feet below the depth of the suspected UST bottom, which is assumed to be about 8 feet bgs.
- Advance 14 delineation soil borings in the vicinity where elevated lead concentrations were identified, assumed to be between 0 and 2 feet bgs, to vertically and horizontally delineate lead impacts to soil.
- Collect up to three soil samples from each boring location (plus quality assurance/quality control [QA/QC] samples) for laboratory analysis.

Monitoring Well Installation and Sampling

- Convert 9 soil borings into permanent groundwater monitoring wells.
- Collect one groundwater sample from each newly installed monitoring well (plus QA/QC samples) for laboratory analysis.
- Survey and gauge newly installed monitoring wells to evaluate groundwater elevation and establish flow direction.
- Develop a groundwater contour map.

Soil Vapor and Ambient Air Sampling

- Install 10 soil vapor sampling points to 5 feet bgs.
- Collect one soil vapor sample from each soil vapor point and one ambient air sample for laboratory analysis.

Modifications to this scope of work may be required: 1) due to site operations, equipment, or other access restrictions; 2) if unexpected contamination is detected and additional analytical data is needed; and 3) to adequately characterize and delineate subsurface impacts in compliance with the Brownfield Law, regulations, and applicable investigation guidance documents (e.g., DER-10). NYSDEC and the NYSDOH will be contacted to obtain approval for these modifications and all modifications will be reflected in the Remedial Investigation Report (RIR).

The field investigation will be completed in accordance with the procedures specified in Langan's Health and Safety Plan (HASP) and Quality Assurance Project Plan (QAPP) provided in Appendices B and C, respectively. A Community Air Monitoring Plan (CAMP) will be implemented during this investigation (see Section 3.7.2 and Appendix D).

Names, contact information, and roles of the principal personnel who will participate in the investigation, project managers, and subcontractors are listed below. The HASP contains emergency contact information (HASP Table 5) and a map with a route to the nearest hospital (HASP Figure 2). Résumés for Langan employees involved in the project are provided in the QAPP (Appendix C).

Personnel	Investigation Role	Contact Information
Brian Gochenaur, QEP Langan	Qualified Environmental Professional	Phone – 212-479-5479 Email – bgochenaur@langan.com
Gerald Nicholls, PE Langan	Project Engineer	Phone – 212-479-5559 Email – gnicholls@langan.com
Michael Burke, PG, CHMM Langan	Quality Assurance Officer	Phone – 215-479-5413 Email – mburke@langan.com
Tony Moffa, CHMM Langan	Langan Health & Safety Officer	Phone – 215-491-6500 Email – tmoffa@langan.com
Bill Bohrer, PG Langan	Field Safety Officer	Phone – 410-984-3068 Email – wbohrer@langan.com
Lamees Esmail Langan	Project Manager	Phone – 919-694-3345 Email – lesmail@langan.com
Lexi Haley Langan	Field Team Leader	Phone – 332-208-2127 Email – lhaley@langan.com
Joe Conboy Langan	Data Validator/Program Quality Assurance Monitor	Phone – 609-282-8055 Email – jconboy@langan.com
Benjamin Rao Pace Analytical	Laboratory	Phone – 201-812-2633 Email –Benjamin.Rao@pacelabs.com

3.1 Geophysical Survey

NOVA Geophysical Services (NOVA) conducted a geophysical survey under the supervision of Langan field personnel to identify USTs and other subsurface structures beneath the site and adjacent sidewalks on August 12, 2024 as a part of the SSI. The geophysical survey was completed using a collection of geophysical instruments, including ground penetrating radar (GPR) and electromagnetic (EM) detectors. The survey identified sewer, electric, and unspecified utilities, as well as sewer mains and an electric box within the site. In addition, a geophysical anomaly was identified in the northwestern part of the site which may indicate the presence of a UST. A supplemental geophysical survey will be performed prior to the RI, and the proposed RI borings will be relocated as necessary to avoid subsurface utilities, infrastructure, or other impediments identified during the survey.

3.2 Soil Investigation

3.2.1 Drilling and Logging

An environmental drilling subcontractor will advance 26 soil borings (RISB01 through RISB26) and 14 delineation soil borings as part of the RI to further investigate the AOCs identified in Section 2.6. A plan showing the proposed boring locations is included as Figure 7. A Langan engineer, geologist or scientist will document the work, screen the soil samples for environmental impacts, and collect environmental samples for laboratory analyses under the direct supervision of a Qualified Environmental Professional.

Soil borings will generally be advanced to between 4 and 25 feet bgs using direct-push drilling technology. Soil will be screened continuously to the boring termination depth with a PID equipped with a 10.6 electron volt (eV) bulb and for visual and olfactory indications of environmental impacts (e.g., staining and odors). Soil descriptions will be recorded in a field log. Boring logs will be presented in the Remedial Investigation Report (RIR).

Non-disposable, down-hole drilling equipment and sampling apparatus will be decontaminated between locations with Alconox (or similar) and water.

3.2.2 Soil Sampling and Analysis

Up to three grab soil samples will be collected from each soil boring for laboratory analysis. One sample will be collected from the 0 to 2-foot bgs interval. A second sample will be collected from the interval exhibiting the greatest degree of impacts (based on the presence of staining, odor, and/or PID readings above background). A third sample will be collected from the first underlying depth interval without evidence of impacts or fill (i.e., native soil). If borings are advanced to the termination depth and no evidence of impacts is identified, samples will be collected from the bottom of the fill layer and the underlying native soil interval.

Up to two soil samples will be collected from soil borings RISB24, RISB25, and RISB26 to identify the extent of petroleum-related impacts in the vicinity of the suspect UST, if observed. Samples will be collected from the interval exhibiting the greatest degree of impacts (based on the

presence of staining, odor, and/or PID readings above background) and from the first underlying depth interval without evidence of impacts. If borings are advanced to the termination depth of 10 feet bgs and no evidence of impacts is identified, one sample will be collected from the interval beneath the suspected UST bottom (i.e., about 8 to 10 feet bgs). Soil samples will be analyzed for petroleum-related contaminants of concern (i.e., Part 375 List and Target Compound List [TCL] VOCs and SVOCs).

Two soil samples will be collected from five- and ten-foot step-out borings in up to four directions around the locations of RISB18 and RISB21 to horizontally and vertically delineate lead impacts. Due to the proximity of RISB18 to the site boundary and the potential UST, five- and ten-foot step-out borings will be placed to the northeast, southeast, and southwest of RISB18. Samples will be collected from the impacted depth interval (0 to 2 feet bgs) at RISB18, RISB21, and in each step-out boring outlined above. Grab samples will also be collected from the two-foot interval below the known impacts. Samples collected from 0 to 2 feet bgs at RISB18, RISB21, and in the 5-foot step-out borings will be analyzed for toxicity characteristic leaching procedure (TCLP) lead and/or total lead; the remaining samples will be placed on hold pending the initial results. TCLP lead will be analyzed via USEPA method 1311.

Soil samples will be collected into laboratory-supplied containers and will be sealed, labeled, and placed in a cooler containing ice (to maintain a temperature of approximately 4° Celsius) for delivery to Pace Analytical (Pace), a NYSDOH Environmental Laboratory Approval Program (ELAP)-certified analytical laboratory. To further investigate AOC 1, soil samples will be analyzed using the latest USEPA methods as follows:

- Part 375 List and Target Compound List (TCL) VOCs via USEPA Methods 8260/5035
- Part 375 List and TCL SVOCs via USEPA Method 8270D
- Part 375 List pesticides and herbicides via USEPA Method 8081B and 8151A, respectively
- Part 375 List polychlorinated biphenyls (PCB) via USEPA Method 8082A
- Part 375 List and Target Analyte List (TAL) metals (including cyanide and hexavalent and trivalent chromium) via USEPA Methods 6010C/7471B/9010C/7196A
- Part 375 List PFAS via USEPA Method 1633
- 1,4-dioxane via USEPA Method 8270D

QA/QC procedures to be followed are described in the QAPP provided as Appendix C.

3.3 Groundwater Investigation

3.3.1 Monitoring Well Installation

Nine soil borings will be further advanced to about five feet below the groundwater table (bottom of screen depth estimated between about 23 and 25 feet bgs) and converted to groundwater monitoring wells. These wells will be used to further investigate the AOCs identified in Section

2.6. Proposed monitoring well locations are shown on Figure 7. During well installation, soil conditions will be screened, logged, and sampled as described in Section 3.2. The monitoring wells will be constructed to straddle the observed water table.

Monitoring wells will be constructed with 2-inch-diameter, threaded, flush-joint, polyvinyl chloride (PVC) casing and 0.01-inch slotted pre-packed well screens (about 10 feet in length). Clean sand (e.g., Morie No. 2) will be used to backfill the annulus around the riser to a minimum of 2 feet above the top of the pre-packed well screen. A 2-foot-thick bentonite seal will be installed above the sand, and the remaining borehole annulus will be backfilled with drill cuttings exhibiting no evidence of petroleum impacts (i.e., staining, odors, or PID readings above background) to within 12 inches of the surface and/or grouted to the surface. The wells will be finished with locking well caps and flush-mounted steel manhole covers. Following installation, the wells will be developed using a surge block across the well screen to agitate and remove fine particles. The surge block will be surged across the submerged well screen in 2- to 3-foot increments for approximately 2 minutes per increment. After surging, the well will be purged via pumping until the water becomes clear. Monitoring wells will then be allowed to sit for a minimum of one week before sampling.

3.3.2 Groundwater Sampling and Analysis

One groundwater sample will be collected from each newly-installed monitoring well as summarized in Table 1. Prior to sampling, the monitoring wells will be purged. Purging will consist of pumping, at a minimum, the stabilized drawdown volume plus the pump's tubing volume, and waiting until the physical and chemical parameters (e.g., temperature, dissolved oxygen, oxidation-reduction potential, pH, turbidity) stabilize within the ranges specified in the USEPA Low Stress Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, dated July 30, 1996 and revised September 19, 2017. If stabilization is not achieved after one hour, samples will be collected. The groundwater samples will be collected in accordance with the PFAS sampling protocols stated in the NYSDEC's April 2023 Sampling, Analysis, and Assessment of PFAS guidance document. Samples will be collected with a low-flow peristaltic pump or equivalent and dedicated polyethylene tubing. Development and purge water will be containerized for off-site disposal.

Groundwater samples will be collected into laboratory-supplied containers and will be sealed, labeled, and placed in a cooler containing ice (to maintain a temperature of approximately 4 degrees Celsius) for delivery to Pace, an NYSDOH ELAP-certified analytical laboratory. Groundwater samples will be analyzed using the latest USEPA methods as follows:

- Part 375 List and TCL VOCs via USEPA Method 8260C
- Part 375 List and TCL SVOCs via USEPA Method 8270D
- Part 375 List pesticides and herbicides via USEPA Method 8081B and 8151A, respectively
- Part 375 List PCBs via USEPA Method 8082A

- Part 375 List and TAL Metals (filtered and unfiltered) by USEPA Method 6010D/6020B/7470A
- Hexavalent and trivalent chromium via USEPA Method 7196A
- Total cyanide via Method SM 4500
- NYSDEC List PFAS via UEPA Method 1633
- 1,4-dioxane via USEPA Method 8270D

QA/QC procedures are described in the QAPP provided as Appendix C.

3.3.3 Monitoring Well Survey and Synoptic Gauging

The location and elevation of the groundwater monitoring wells (top of casing elevations) will be surveyed. This data will be used with the groundwater well gauging data to prepare a groundwater contour map depicting the elevation of the water table across the site. Vertical control will be established by surveying performed relative to the North American Vertical Datum of 1988 (NAVD88) by a New York State-licensed land surveyor. Elevations to the top of monitoring well casings and protective well casings will be surveyed to the nearest 0.01 foot. A synoptic gauging event will be performed to document static water levels. All monitoring wells will be gauged during this event.

3.4 Soil Vapor Investigation

3.4.1 Soil Vapor Point Installation

A total of ten temporary soil vapor points will be installed in accordance with the NYSDOH "Guidance for Evaluating Soil Vapor Intrusion in the State of New York" (October 2006, updates May 2017 and February 2024), herein referred to as the NYSDOH Guidance. These vapor points will be used to further investigate the AOCs identified in Section 2.6. The proposed soil vapor sample locations are shown on Figure 7.

Soil vapor points will be installed using direct-push technology by advancing a vapor probe to about 5 feet bgs. The soil vapor points will consist of an implant threaded into dedicated inert sample tubing (i.e., polyethylene) that will extend to surface grade, and the annulus (i.e., the sampling zone) around the installed tubing will be filled with clean, coarse sand pack followed by a hydrated bentonite seal to surface grade.

3.4.2 Soil Vapor Sampling and Analysis

Samples will be collected in general accordance with the NYSDOH Guidance. The proposed vapor samples are summarized in Table 1. Before collecting soil vapor samples, a minimum of three vapor probe volumes (i.e., the volume of the sample implant and tubing) will be purged from each sample point at a flow rate of less than 0.2 liters per minute using a RAE Systems MultiRAE® meter. Purged soil vapor will be monitored for VOCs with the MultiRAE® during this process.

A helium traced gas will be used in accordance with the NYSDOH Guidance to serve as a QA/QC technique to document the integrity of each soil vapor sampling point seal before and after sampling. Helium will be measured from the sampling tube and inside the container. If the sample tubing contains more than 10% of the tracer gas concentration that was introduced into the container, then the seal is considered compromised and should be enhanced or reconstructed to reduce outside air infiltration.

After the integrity of each seal is confirmed, soil vapor samples will be collected into laboratory-supplied batch-certified clean 2.7- or 6-liter Summa® canisters equipped with 2-hour sample interval flow controllers. Soil vapor samples will be analyzed for VOCs by USEPA Method TO-15.

A construction and sampling log for each soil vapor sample will be completed to record sample identification, date and time of sample collection, sampling depth, name of the field personnel responsible for sampling, sampling methods and equipment, vapor purge volumes, volume of vapor extracted, flow rate, and vacuum of canisters before and after sample collection.

QA/QC procedures to be followed are described in the QAPP in Appendix C.

3.4.3 Sub-Slab and Indoor Air Sampling

Sub-slab and indoor air sampling are not proposed as part of this RIWP because there are currently no permanent structures at the site.

3.4.4 Ambient Air Sampling

One ambient air sample will be collected from the breathing zone (about 3 to 5 feet above grade) to provide information regarding background air conditions and evaluate potential outdoor air interferences with the sampling apparatus. The air sample will be collected concurrently with the soil vapor samples over a 2-hour sampling period and analyzed for VOCs by USEPA TO-15.

QA/QC procedures to be followed are described in the QAPP in Appendix C.

3.5 Data Management and Validation

Laboratory analyses of soil, groundwater, vapor, and air samples will be conducted by a NYSDOH ELAP-approved laboratory in accordance with United States Environmental Protection Agency (USEPA) SW-846 methods and NYSDEC Analytical Services Protocol (ASP) Category B deliverable format. Environmental data will be reported electronically using the database software application EQuIS as part of NYSDEC's Environmental Information Management System (EIMS).

Table 1 summarizes the proposed samples and laboratory analyses. QA/QC procedures required by the NYSDEC ASP and SW-846 methods, including initial and continuing instrument calibrations, standard compound spikes, surrogate compound spikes, and analysis of other samples (blanks, laboratory control samples, and matrix spikes/matrix spike duplicates), will be followed. The laboratory will provide sample bottles, which will be pre-cleaned and preserved in

accordance with the SW-846 methods. Where there are differences in the SW-846 and NYSDEC ASP requirements, the NYSDEC ASP shall take precedence.

Data validation will be performed for all data collected during the RIWP in accordance with the USEPA validation guidelines for organic and inorganic data review. Validation will include the following:

- Verification of QC sample results (both qualitative and quantitative).
- Verification of sample results (both positive hits and non-detects).
- Recalculation of 10 percent of all investigative sample results.
- Preparation of Data Usability Summary Reports (DUSR).

The DUSRs will be prepared and reviewed by the Program Quality Assurance Monitor (PQAM). The DUSRs will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody (COC) procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method. A detailed assessment of each sample delivery group (SDG) will follow. Additional details on the DUSRs are provided in the QAPP in Appendix C.

3.6 Management of Investigation-Derived Waste

Soil cuttings will be returned to the borehole unless:

- Free product or grossly-contaminated soil is present in the cuttings;
- Backfilling the borehole with cuttings will create a significant path for vertical movement of contaminants. Soil additives (bentonite) may be added to the cuttings to reduce permeability; or
- The soil cannot fit into the borehole.

Boreholes requiring disposal of drill cuttings will be filled with hydrated bentonite chips or clean sand and capped with asphalt or concrete. Excess investigation-derived waste (IDW), including soil cuttings, purged groundwater, and decontamination fluids, will be containerized in United Nations/Department of Transportation (UN/DOT)-approved 55-gallon drums and temporarily staged for future disposal at an off-site facility. IDW will be removed from the site within one month of completing the investigation. All drums will be properly labeled, sealed, and characterized as necessary.

3.7 Air Monitoring

Air monitoring will be conducted for site personnel and the community pursuant to the CAMP provided in Appendix D. Fugitive particulate (dust) generation that could affect site personnel or the public is not expected because intrusive work is limited to boring, monitoring well, and soil vapor point installation, which does not disturb large volumes of soil.

Dust emissions will be monitored using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM10). Organic odors will be monitored with PIDs equipped with 10.6 eV bulbs. Dust and odor suppression measures (e.g., water misting, odor suppressant) will be implemented as required.

3.7.1 Personnel Air Monitoring

Langan will conduct air monitoring of the breathing zone periodically during drilling and sampling activities to evaluate health and safety protection for the field personnel. Initially, ambient air monitoring will be performed within the work area. Langan will monitor VOCs with a PID (MultiRAE 3000 or similar) in accordance with the HASP (Appendix A). If air monitoring during intrusive operations identifies the presence of VOCs, on-site personnel will follow the guidelines outlined in the HASP regarding action levels, permissible exposure, engineering controls, and personal protective equipment. If the VOC action level is exceeded, work will cease, and the work location will be evacuated. Monitoring will be continued until the levels drop to permissible limits, at which point, work will resume with continued monitoring. If high levels persist, field activities will be halted, and the work relocated to another area. If dust emissions are observed, work will stop, and dust suppression measures will be used.

3.7.2 Community Air Monitoring Plan

In addition to air monitoring in the worker breathing zone, Langan will conduct community air monitoring in compliance with the NYSDOH Generic CAMP. CAMP deployment will comply with NYSDEC DER-10 Appendix 1A and Appendix 1B. The CAMP is included in Appendix C and summarized below.

Langan will conduct monitoring for VOCs during ground-intrusive work (i.e., soil boring advancement and monitoring well installation) at both upwind and downwind CAMP stations. Two units will be deployed in the upwind and downwind directions. Langan will measure upwind concentrations at the start of each workday to establish background concentrations. Langan will continuously monitor VOCs at the downwind perimeter of the work zone, which will be established at a point on the site where the general public or site employees may be present. Monitoring for VOCs will be conducted with a PID equipped with a 10.6 eV lamp. Dust emissions will be monitored using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM10) and capable of averaging a period of 15 minutes (or less) for comparison to the airborne particulate action level (e.g., DustTrak). If dust emissions are observed, work will stop, and dust suppression measures will be used. The results will be presented in the daily reports (see DER-10 for details).

3.8 Green Remediation Standards

Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. DER-31 requires

the following green remediation/sustainability concepts be considered and/or implemented, to the extent feasible, during investigations:

- Increase energy efficiency/minimize total energy use and direct and indirect CO2/greenhouse gas (GHG) emissions to the atmosphere
- Reduce emissions of air pollutants
- Minimize habitat disturbance and create or enhance habitat or usable land
- Conserve natural resources such as soil and water; promote the sequestration of carbon through reforestation or afforestation
- Minimize fresh water consumption and maximize water reuse during daily operations and treatment processes
- Prevent long-term erosion, surface runoff, and off-site water quality impacts
- Prevent unintended soil compaction
- Minimize waste or implement beneficial use of materials that would otherwise be considered a waste
- Minimize equipment and truck idling and use sustainably produced biofuels to reduce discharges of pollutants and GHGs to the atmosphere
- Utilize clean diesel (new or retrofitted) equipment to reduce emissions to the atmosphere
- Minimize truck travel for disposal to save energy, reduce emissions, reduce localized noise, vibration, and wear and tear on roads
- Minimize use of heavy equipment to save energy and reduce emissions

During implementation of this RIWP, the following elements will be implemented, to the extent feasible, to reduce greenhouse gas and other emissions:

- Use of Ultra Low Sulfur Diesel in vehicles and machinery by drilling contractor
- Use of diesel exhaust purifier scrubbers on machinery (drill rigs) by drilling contractor
- Minimization of idling of all vehicles (including construction equipment) in accordance with 6 NYCRR Part 217 Motor Vehicle Emissions, Subpart 217-3 Idling Prohibition for Heavy Duty Vehicles
- Reduction of materials consumption and off-site transport by reuse of non-impacted drilling spoils as backfill within the boring of origin and containerization of drilling spoils exhibiting visual, olfactory, and instrumental signs of contamination.

3.9 Qualitative Human Health Exposure Assessment

A QHHEA will be conducted in accordance with Appendix 3B of the NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation. The assessment will be submitted as part of the RIR.

4.0 REPORTING

4.1 Remedial Investigation Report

Following completion of the RI and receipt of analytical data, an RIR will be prepared. The report will:

- Describe site history and previous investigations
- Describe on- and off-site environmental conditions
- Describe sampling methodology and field observations
- Evaluate analytical results and describe findings
- Provide conclusions and recommendations for any further assessment (if warranted), and remedial action objectives

The report will summarize the nature and extent of contamination at each AOC and identify unacceptable exposure pathways (as determined through a QHHEA).

The report will include soil boring and well/vapor point construction logs, sampling logs, tabulated analytical results, figures, and laboratory data packages. The tabulated analytical results include sample location, media sampled, sample depth, field/laboratory identification numbers, analytical results and the applicable Standards, Criteria, and Guidance (SCG) pertaining to the site and contaminants of concern for comparison. The report will include scaled figures showing the locations of soil borings, monitoring wells, and soil vapor points, sample concentrations above SCGs for each media, groundwater elevation contours and flow direction, and if appropriate, groundwater contaminant concentration contours.

4.2 Daily Reports

Daily reports will be prepared and submitted to the NYSDEC and NYSDOH project managers the following week after the reporting period and will include:

- An update of progress made during the reporting day
- Photographic documentation of the activities completed during the reporting day
- Identification of samples collected during the reporting day
- Locations and references to a site map for completed activities
- A summary of any and all complaints with relevant details, including contact information
- A summary of CAMP findings, including any exceedances
- An explanation of notable site conditions
- A list of anticipated work for the following reporting day

Daily reports are not intended to notify the NYSDEC of emergencies (e.g., accident, spill), request changes to the RIWP, or communicate other sensitive or time-critical information. However, such conditions will also be included in the daily reports. Emergency conditions and changes to the RIWP will be communicated directly to the NYSDEC Project Manager.

The NYSDEC-assigned project number will appear on all reports.

4.3 Monthly Reports

Monthly reports will be submitted to NYSDEC and NYSDOH Project Managers by the 10th of each month and will include:

- Activities relative to the site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (e.g., tons of material exported and imported)
- Description of approved activity modifications, including changes of work scope and/or schedule
- Sampling results received following internal data review and validation, as applicable
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays

4.4 Other Reporting

Photographs will be taken of all remedial activities and submitted to NYSDEC in digital format. Photos will illustrate all remedial program elements and will be of acceptable quality. Representative photos will be provided of each contaminant source, source area and site structures before, during, and after remediation. Photos will be included in the daily reports as needed, and a comprehensive collection of photos will be included in the RIR.

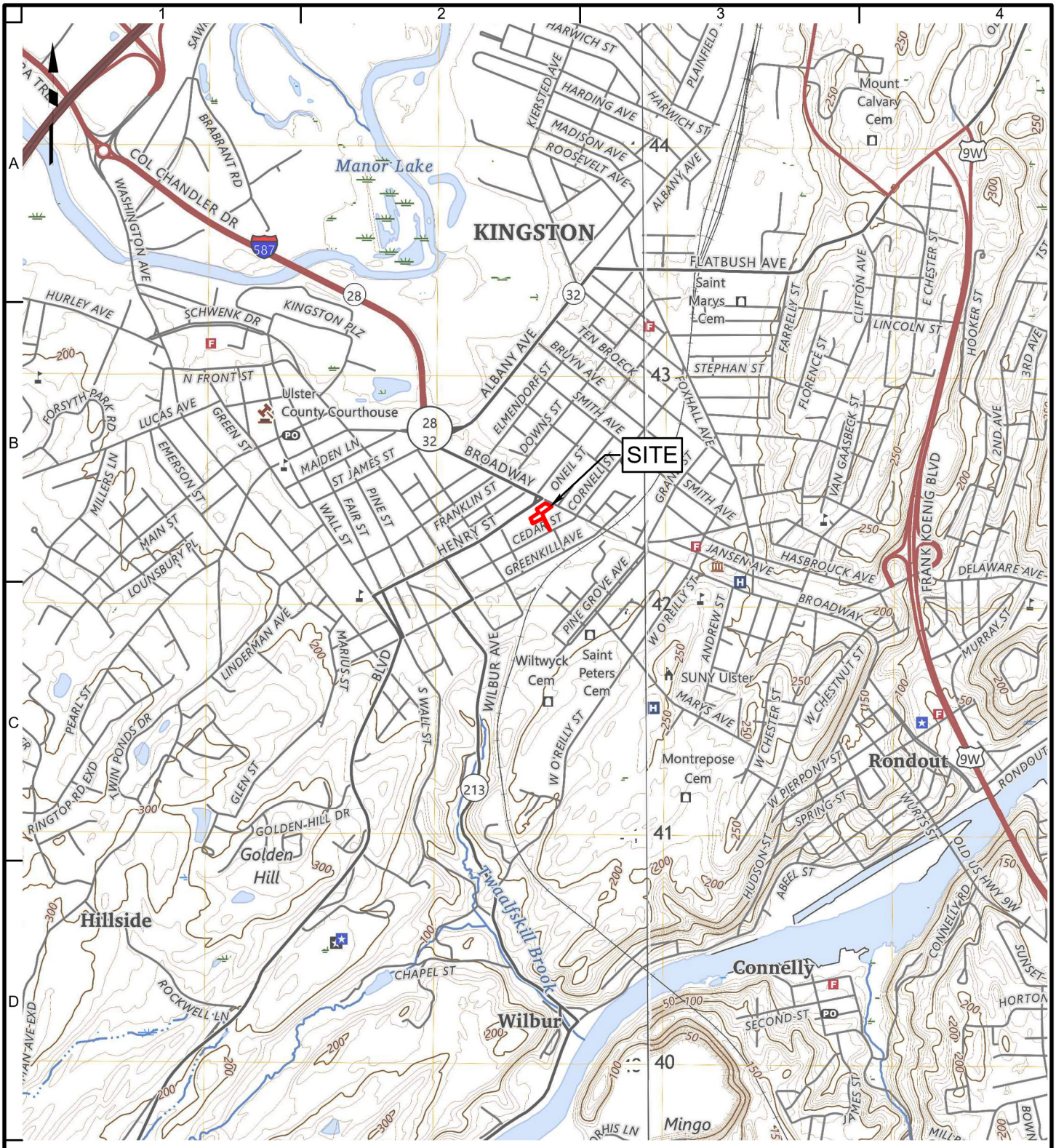
Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

5.0 SCHEDULE

The table below presents an anticipated schedule for the proposed RI and reporting following the approval of the RIWP. If the schedules changes, it will be updated and re-submitted to the NYSDEC.

Milestone	Weeks from NYSDEC Approval of RIWP	Established Duration
RI Mobilization	2	2
RI Field Investigation	4	3
Laboratory Analysis	7	2
RIR Preparation and Submission to the NYSDEC	9	4

FIGURES



Legend

Approximate Site Boundary

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Notes:

1. Basemap adapted from United States Geological Survey (USGS) 7.5-Minute Series Topographical Maps, Kingston East and Kingston West, New York, Quadrangle, 2023.

LANGAN

368 Ninth Avenue, 8th Floor
New York, NY 10001-2727
T: 212.479.5400 F: 212.479.5444 www.langan.com

Langan Engineering & Environmental Services, Inc.
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
Langan International LLC

Collectively known as Langan

Project	615 BROADWAY BLOCK No. 3, LOT No. 16 KINGSTON ULSTER COUNTY NEW YORK
Figure Title	SITE LOCATION MAP
Project No.	170803001
Date	3/4/2025
Scale	1"=2,000'
Drawn By	GS
Submission Date	
Figure No.	1

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Legend

- Approximate Site Boundary
- Tax Parcel

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 9/10/2024.
2. Parcel data provided by Ulster County GIS.

WARNING: It is a violation of the NYS Education Law Article 145 for any person, unless acting under the direction of a licensed professional engineer, land surveyor or geologist, to alter this item in any way.

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SCALE IN FEET

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
368 Ninth Avenue, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
615 BROADWAY
BLOCK No. 3, LOT No. 16
KINGSTON
ULSTER COUNTY NEW YORK

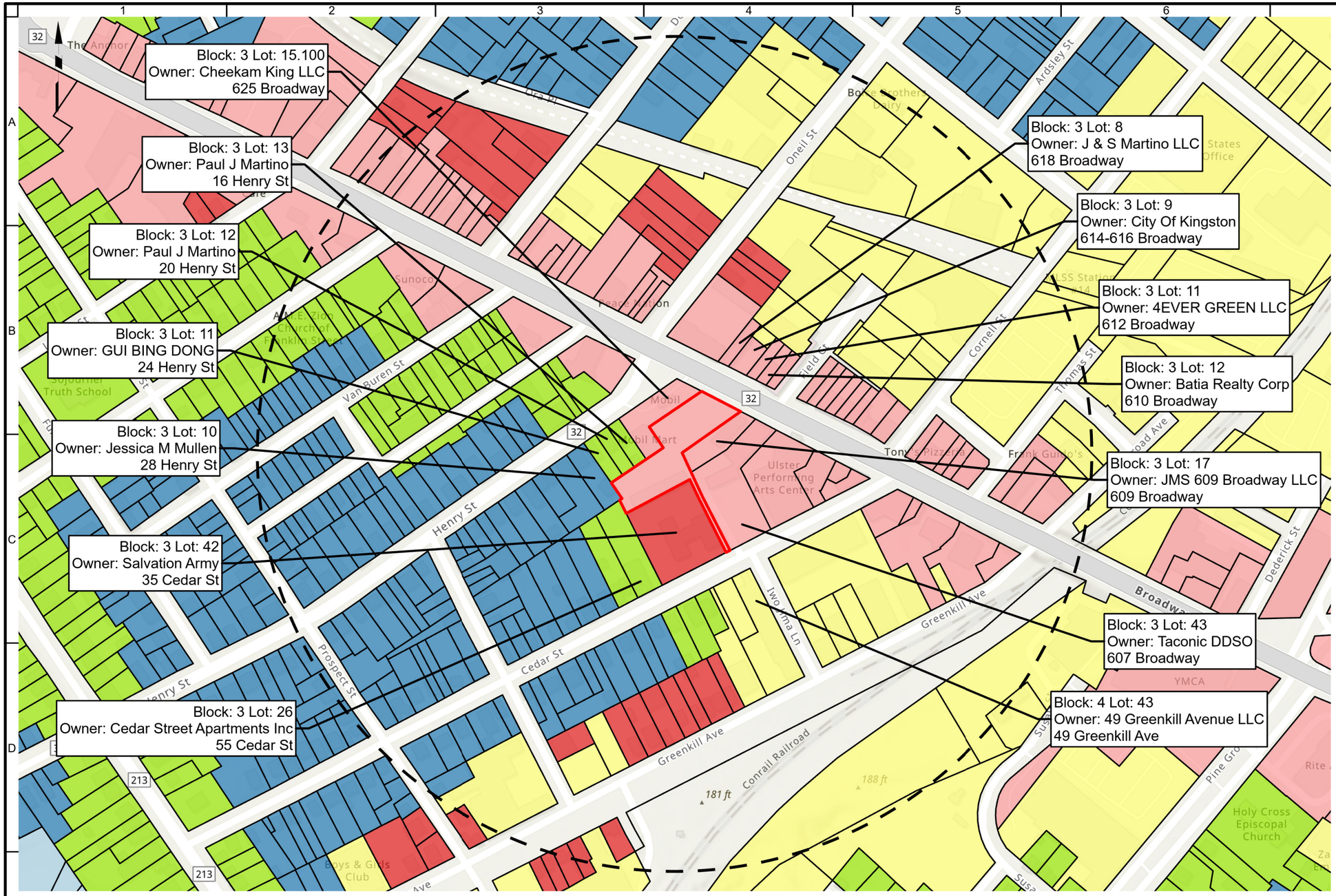
Figure Title
SITE PLAN

Project No. 170803001
Date 3/4/2025
Scale 1"=60'
Drawn By GS

Figure No. 2

© 2025 Langan

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Legend

- Approximate Site Boundary
- Tax Parcel
- 1,000-ft Radius
- T3N - Neighborhood Limited Use
- T4N - Neighborhood Limited Use
- T4N-O - Neighborhood-Open Mixed Use
- T5F - Flexible Mixed Use
- T5MS - Main Street Mixed Use
- T5N - Neighborhood Mixed Use

Notes:
1. Topographic basemap is provided through Langan's Esri and ArcGIS software licensing and ArcGIS online.
2. Parcel data provided by Ulster County GIS.
3. Zoning data provided by Ulster County GIS.

WARNING: It is a violation of the NYS Education Law Article 145 for any person, unless acting under the direction of a licensed professional engineer, land surveyor or geologist, to alter this item in any way.

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Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
368 Ninth Avenue, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
615 BROADWAY
BLOCK No. 3, LOT No. 16
KINGSTON
ULSTER COUNTY NEW YORK

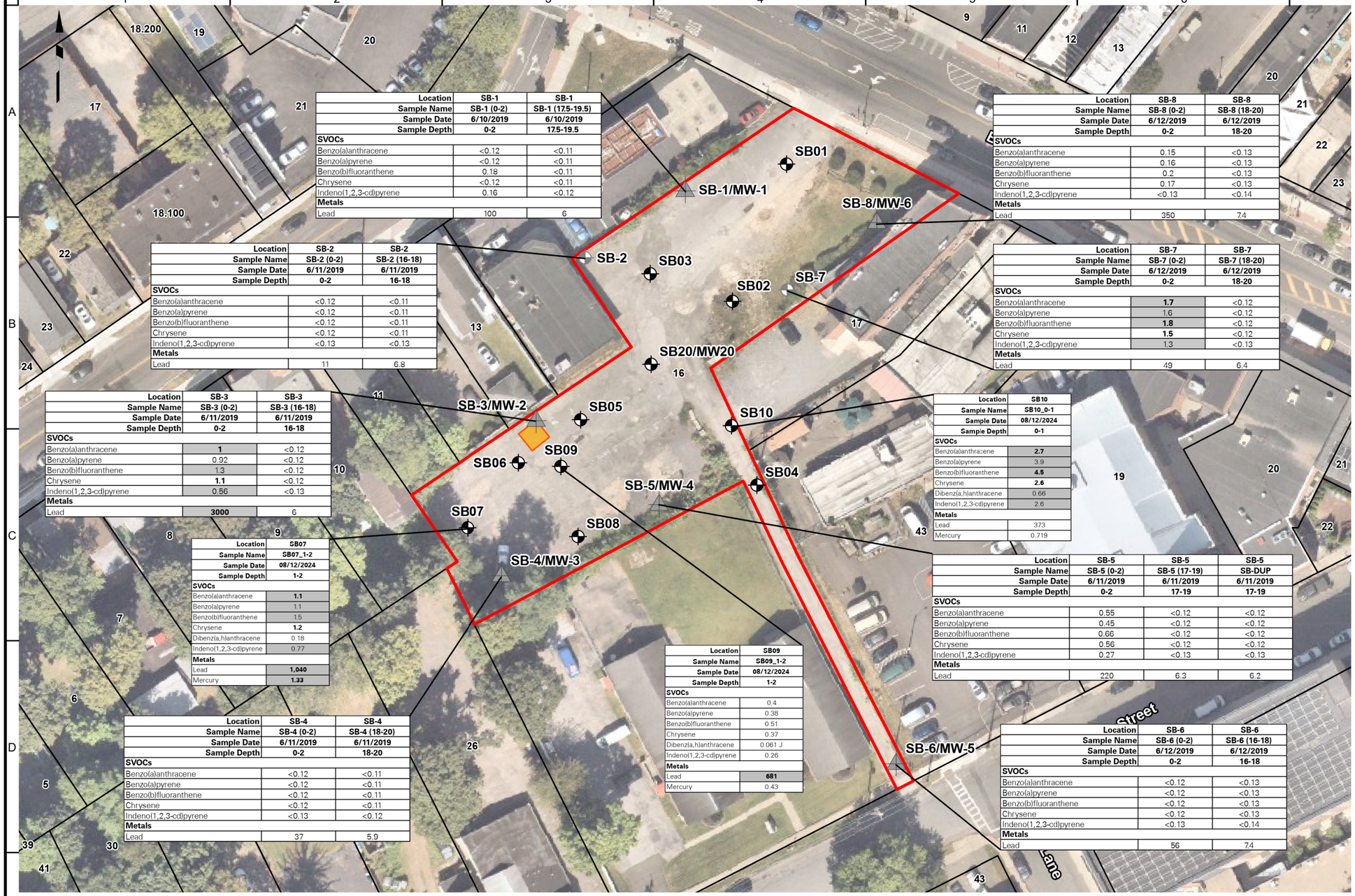
Figure Title
ADJACENT PROPERTY LAND USE MAP

Project No.	170803001
Date	3/4/2025
Scale	1"=250'
Drawn By	GS

Figure No. 3

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Path: \\langan.com\data\NYC\data0\170803001\Project Data\ArcGIS\APRX\170803001\170803001.aprx Date: 3/4/2025 User: Gsajbel Time: 10:07 AM



Location	SB-1	SB-1
Sample Name	SB-1 (0-2)	SB-1 (17.5-19.5)
Sample Date	6/10/2019	6/10/2019
Sample Depth	0-2	17.5-19.5
SVOCs		
Benzo(a)anthracene	<0.12	<0.11
Benzo(a)pyrene	<0.12	<0.11
Benzo(b)fluoranthene	0.18	<0.11
Chrysene	<0.12	<0.11
Indeno(1,2,3-cd)pyrene	0.16	<0.12
Metals		
Lead	100	6

Location	SB-2	SB-2
Sample Name	SB-2 (0-2)	SB-2 (16-18)
Sample Date	6/11/2019	6/11/2019
Sample Depth	0-2	16-18
SVOCs		
Benzo(a)anthracene	<0.12	<0.11
Benzo(a)pyrene	<0.12	<0.11
Benzo(b)fluoranthene	<0.12	<0.11
Chrysene	<0.12	<0.11
Indeno(1,2,3-cd)pyrene	<0.13	<0.13
Metals		
Lead	11	6.8

Location	SB-3	SB-3
Sample Name	SB-3 (0-2)	SB-3 (16-18)
Sample Date	6/11/2019	6/11/2019
Sample Depth	0-2	16-18
SVOCs		
Benzo(a)anthracene	**1**	<0.12
Benzo(a)pyrene	0.92	<0.12
Benzo(b)fluoranthene	1.3	<0.12
Chrysene	**1.1**	<0.12
Indeno(1,2,3-cd)pyrene	0.56	<0.13
Metals		
Lead	**3000**	6

Location	SB07
Sample Name	SB07_1-2
Sample Date	08/12/2024
Sample Depth	1-2
SVOCs	
Benzo(a)anthracene	**1.1**
Benzo(a)pyrene	1.1
Benzo(b)fluoranthene	1.5
Chrysene	**1.2**
Dibenz(a,h)anthracene	0.18
Indeno(1,2,3-cd)pyrene	0.77
Metals	
Lead	**1,040**
Mercury	**1.33**

Location	SB09
Sample Name	SB09_1-2
Sample Date	08/12/2024
Sample Depth	1-2
SVOCs	
Benzo(a)anthracene	0.4
Benzo(a)pyrene	0.38
Benzo(b)fluoranthene	0.51
Chrysene	0.37
Dibenz(a,h)anthracene	0.061 J
Indeno(1,2,3-cd)pyrene	0.26
Metals	
Lead	**681**
Mercury	0.43

Location	SB-4	SB-4
Sample Name	SB-4 (0-2)	SB-4 (18-20)
Sample Date	6/11/2019	6/11/2019
Sample Depth	0-2	18-20
SVOCs		
Benzo(a)anthracene	<0.12	<0.11
Benzo(a)pyrene	<0.12	<0.11
Benzo(b)fluoranthene	<0.12	<0.11
Chrysene	<0.12	<0.11
Indeno(1,2,3-cd)pyrene	<0.13	<0.12
Metals		
Lead	37	5.9

Location	SB-8	SB-8
Sample Name	SB-8 (0-2)	SB-8 (18-20)
Sample Date	6/12/2019	6/12/2019
Sample Depth	0-2	18-20
SVOCs		
Benzo(a)anthracene	0.15	<0.13
Benzo(a)pyrene	0.16	<0.13
Benzo(b)fluoranthene	0.2	<0.13
Chrysene	0.17	<0.13
Indeno(1,2,3-cd)pyrene	<0.13	<0.14
Metals		
Lead	350	7.4

Location	SB-7	SB-7
Sample Name	SB-7 (0-2)	SB-7 (18-20)
Sample Date	6/12/2019	6/12/2019
Sample Depth	0-2	18-20
SVOCs		
Benzo(a)anthracene	**1.7**	<0.12
Benzo(a)pyrene	1.6	<0.12
Benzo(b)fluoranthene	**1.8**	<0.12
Chrysene	**1.5**	<0.12
Indeno(1,2,3-cd)pyrene	1.3	<0.13
Metals		
Lead	49	6.4

Location	SB10
Sample Name	SB10_0-1
Sample Date	08/12/2024
Sample Depth	0-1
SVOCs	
Benzo(a)anthracene	**2.7**
Benzo(a)pyrene	3.9
Benzo(b)fluoranthene	**4.5**
Chrysene	**2.6**
Dibenz(a,h)anthracene	0.66
Indeno(1,2,3-cd)pyrene	2.6
Metals	
Lead	373
Mercury	0.719

Location	SB-5	SB-5	SB-5
Sample Name	SB-5 (0-2)	SB-5 (17-19)	SB-DUP
Sample Date	6/11/2019	6/11/2019	6/11/2019
Sample Depth	0-2	17-19	17-19
SVOCs			
Benzo(a)anthracene	0.55	<0.12	<0.12
Benzo(a)pyrene	0.45	<0.12	<0.12
Benzo(b)fluoranthene	0.66	<0.12	<0.12
Chrysene	0.56	<0.12	<0.12
Indeno(1,2,3-cd)pyrene	0.27	<0.13	<0.13
Metals			
Lead	220	6.3	6.2

Location	SB-6	SB-6
Sample Name	SB-6 (0-2)	SB-6 (16-18)
Sample Date	6/12/2019	6/12/2019
Sample Depth	0-2	16-18
SVOCs		
Benzo(a)anthracene	<0.12	<0.13
Benzo(a)pyrene	<0.12	<0.13
Benzo(b)fluoranthene	<0.12	<0.13
Chrysene	<0.12	<0.13
Indeno(1,2,3-cd)pyrene	<0.13	<0.14
Metals		
Lead	56	7.4

Legend

- Approximate Site Boundary
- Tax Parcel
- Potential UST Location
- Soil Boring Location (September 2024 SSI)
- Soil Boring Location (July 2020 Phase II ESA)
- Soil Boring/Monitoring Well Location (July 2020 Phase II ESA)

Analyte	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	NYSDEC Part 375 Protection of Groundwater SCOs
SVOCs		
Benzo(a)anthracene	1	1
Benzo(a)pyrene	1	22
Benzo(b)fluoranthene	1	1.7
Chrysene	3.9	1
Dibenz(a,h)anthracene	0.33	1,000
Indeno(1,2,3-cd)pyrene	0.5	8.2
Metals		
Lead	400	450
Mercury	0.81	0.73

Exceedance Summary:

10 - Result exceeds Protection of Groundwater SCOs

10 - Result exceeds Restricted Use Restricted-Residential SCOs

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 9/10/2024.
2. Parcel data provided by Ulster County GIS.
3. All locations are approximate.
4. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCO).
5. Soil sample results from June 2019 were taken from the Phase II Environmental Site Assessment (ESA) prepared by Weston & Sampson, dated July 2020.
6. Soil sample results from August 2024 were taken from the Supplemental Subsurface Investigation Report prepared by Langan, dated September 30, 2024.
7. Results are shown in mg/kg (milligrams per kilogram)
8. UST - Underground Storage Tank

Qualifiers:
J - The analyte was detected above the method detection limit (MDL), but below the reporting limit (RL); therefore, the result is an estimated concentration.

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New York, NY 10001
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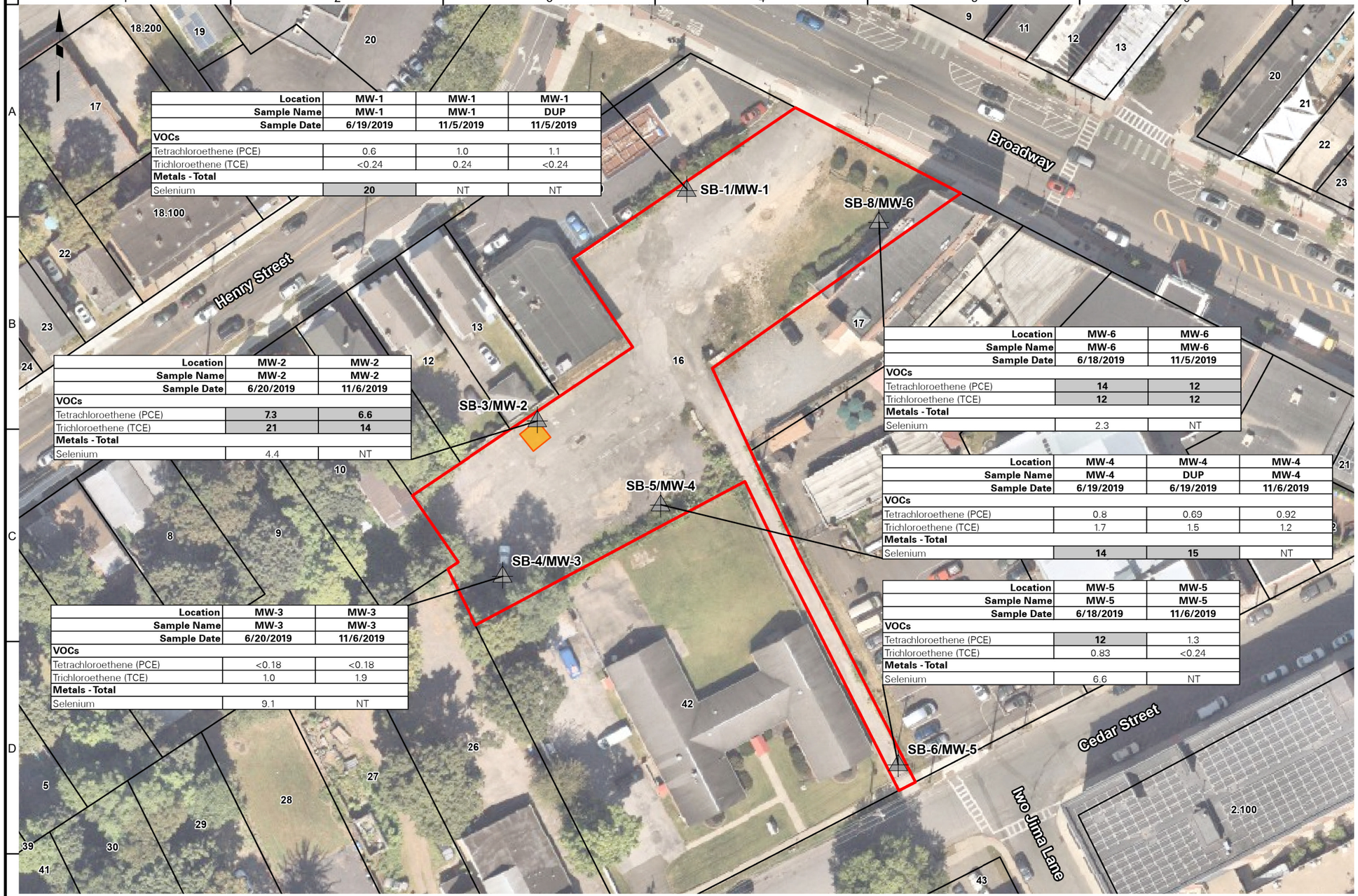
Figure Title
HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS MAP

Project No. 170803001
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Figure No. 4

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Location	MW-1	MW-1	MW-1
Sample Name	MW-1	MW-1	DUP
Sample Date	6/19/2019	11/5/2019	11/5/2019
VOCs			
Tetrachloroethene (PCE)	0.6	1.0	1.1
Trichloroethene (TCE)	<0.24	0.24	<0.24
Metals - Total			
Selenium	**20**	NT	NT

Location	MW-2	MW-2
Sample Name	MW-2	MW-2
Sample Date	6/20/2019	11/6/2019
VOCs		
Tetrachloroethene (PCE)	**7.3**	**6.6**
Trichloroethene (TCE)	**21**	**14**
Metals - Total		
Selenium	4.4	NT

Location	MW-3	MW-3
Sample Name	MW-3	MW-3
Sample Date	6/20/2019	11/6/2019
VOCs		
Tetrachloroethene (PCE)	<0.18	<0.18
Trichloroethene (TCE)	1.0	1.9
Metals - Total		
Selenium	9.1	NT

Location	MW-6	MW-6
Sample Name	MW-6	MW-6
Sample Date	6/18/2019	11/5/2019
VOCs		
Tetrachloroethene (PCE)	**14**	**12**
Trichloroethene (TCE)	**12**	**12**
Metals - Total		
Selenium	2.3	NT

Location	MW-4	MW-4	MW-4
Sample Name	MW-4	DUP	MW-4
Sample Date	6/19/2019	6/19/2019	11/6/2019
VOCs			
Tetrachloroethene (PCE)	0.8	0.69	0.92
Trichloroethene (TCE)	1.7	1.5	1.2
Metals - Total			
Selenium	**14**	**15**	NT

Location	MW-5	MW-5
Sample Name	MW-5	MW-5
Sample Date	6/18/2019	11/6/2019
VOCs		
Tetrachloroethene (PCE)	**12**	1.3
Trichloroethene (TCE)	0.83	<0.24
Metals - Total		
Selenium	6.6	NT

Legend

- Approximate Site Boundary
- Tax Parcel
- Potential UST Location
- Soil Boring/Monitoring Well Location (July 2020 Phase II ESA)

Analyte	NYSDEC SGVs
VOCs	
Tetrachloroethene (PCE)	5
Trichloroethene (TCE)	5
Metals - Dissolved	
Selenium	10

Exceedance Summary:

10 - Result exceeds NYSDEC SGVs

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 9/10/2024.
2. Parcel data provided by Ulster County GIS.
3. All locations are approximate.
4. UST - Underground Storage Tank
5. Groundwater sample results were taken from the Phase II Environmental Site Assessment Report prepared by Weston & Sampson, dated July 2020.
6. Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water (collectively referred to as "NYSDEC SGVs").
7. Only compounds detected above the NYSDEC SGVs are shown.
8. Results are shown in µg/L (micrograms per liter).
9. VOC - Volatile Organic Compound
10. NT - Not Tested

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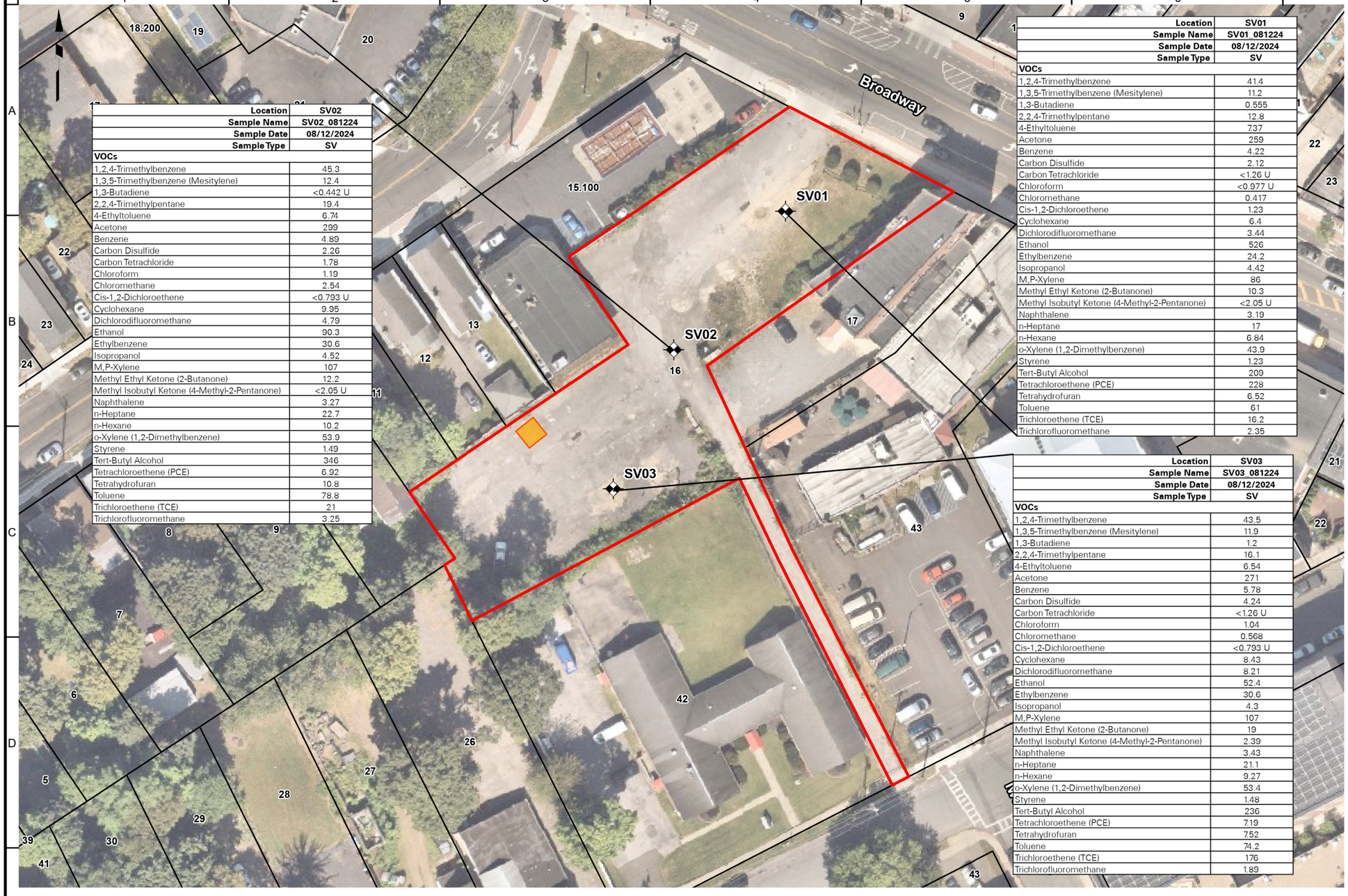
Figure Title
HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS MAP

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	Location	SV02
	Sample Name	SV02_081224
	Sample Date	08/12/2024
	Sample Type	SV
VOCs		
1,2,4-Trimethylbenzene		45.3
1,3,5-Trimethylbenzene (Mesitylene)		12.4
1,3-Butadiene		<0.442 U
2,2,4-Trimethylpentane		19.4
4-Ethyltoluene		6.74
Acetone		299
Benzene		4.89
Carbon Disulfide		2.26
Carbon Tetrachloride		1.78
Chloroform		1.19
Chloromethane		2.54
Cis-1,2-Dichloroethene		<0.793 U
Cyclohexane		9.95
Dichlorodifluoromethane		4.79
Ethanol		90.3
Ethylbenzene		30.6
Isopropanol		4.52
M,P-Xylene		107
Methyl Ethyl Ketone (2-Butanone)		12.2
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		<2.05 U
Naphthalene		3.27
n-Heptane		22.7
n-Hexane		10.2
o-Xylene (1,2-Dimethylbenzene)		53.9
Styrene		1.49
Tert-Butyl Alcohol		346
Tetrachloroethene (PCE)		6.92
Tetrahydrofuran		10.8
Toluene		78.8
Trichloroethene (TCE)		21
Trichlorofluoromethane		3.25

	Location	SV01
	Sample Name	SV01_081224
	Sample Date	08/12/2024
	Sample Type	SV
VOCs		
1,2,4-Trimethylbenzene		41.4
1,3,5-Trimethylbenzene (Mesitylene)		11.2
1,3-Butadiene		0.555
2,2,4-Trimethylpentane		12.8
4-Ethyltoluene		7.37
Acetone		259
Benzene		4.22
Carbon Disulfide		2.12
Carbon Tetrachloride		<1.26 U
Chloroform		<0.977 U
Chloromethane		0.417
Cis-1,2-Dichloroethene		1.23
Cyclohexane		6.4
Dichlorodifluoromethane		3.44
Ethanol		526
Ethylbenzene		24.2
Isopropanol		4.42
M,P-Xylene		86
Methyl Ethyl Ketone (2-Butanone)		10.3
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		<2.05 U
Naphthalene		3.19
n-Heptane		17
n-Hexane		6.84
o-Xylene (1,2-Dimethylbenzene)		43.9
Styrene		1.23
Tert-Butyl Alcohol		209
Tetrachloroethene (PCE)		228
Tetrahydrofuran		6.52
Toluene		61
Trichloroethene (TCE)		16.2
Trichlorofluoromethane		2.35

	Location	SV03
	Sample Name	SV03_081224
	Sample Date	08/12/2024
	Sample Type	SV
VOCs		
1,2,4-Trimethylbenzene		43.5
1,3,5-Trimethylbenzene (Mesitylene)		11.9
1,3-Butadiene		1.2
2,2,4-Trimethylpentane		16.1
4-Ethyltoluene		6.54
Acetone		271
Benzene		5.78
Carbon Disulfide		4.24
Carbon Tetrachloride		<1.26 U
Chloroform		1.04
Chloromethane		0.568
Cis-1,2-Dichloroethene		<0.793 U
Cyclohexane		8.43
Dichlorodifluoromethane		8.21
Ethanol		52.4
Ethylbenzene		30.6
Isopropanol		4.3
M,P-Xylene		107
Methyl Ethyl Ketone (2-Butanone)		19
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)		2.39
Naphthalene		3.43
n-Heptane		21.1
n-Hexane		9.27
o-Xylene (1,2-Dimethylbenzene)		53.4
Styrene		1.48
Tert-Butyl Alcohol		236
Tetrachloroethene (PCE)		7.19
Tetrahydrofuran		7.52
Toluene		74.2
Trichloroethene (TCE)		176
Trichlorofluoromethane		1.89

Legend

- Approximate Site Boundary
- Tax Parcel
- Potential UST Location
- Soil Vapor Point Location (September 2024 SSI)

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 9/10/2024.
2. Parcel data provided by Ulster County GIS.
3. All locations are approximate.
4. Soil vapor sample results from August 2024 were taken from the Supplemental Subsurface Investigation Report prepared by Langan, dated September 30, 2024.
5. UST - Underground Storage Tank
6. Results are shown in micrograms per cubic meter ($\mu g/m^3$)

Qualifiers:
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the reporting limit (RL); the value shown in the table is the RL.

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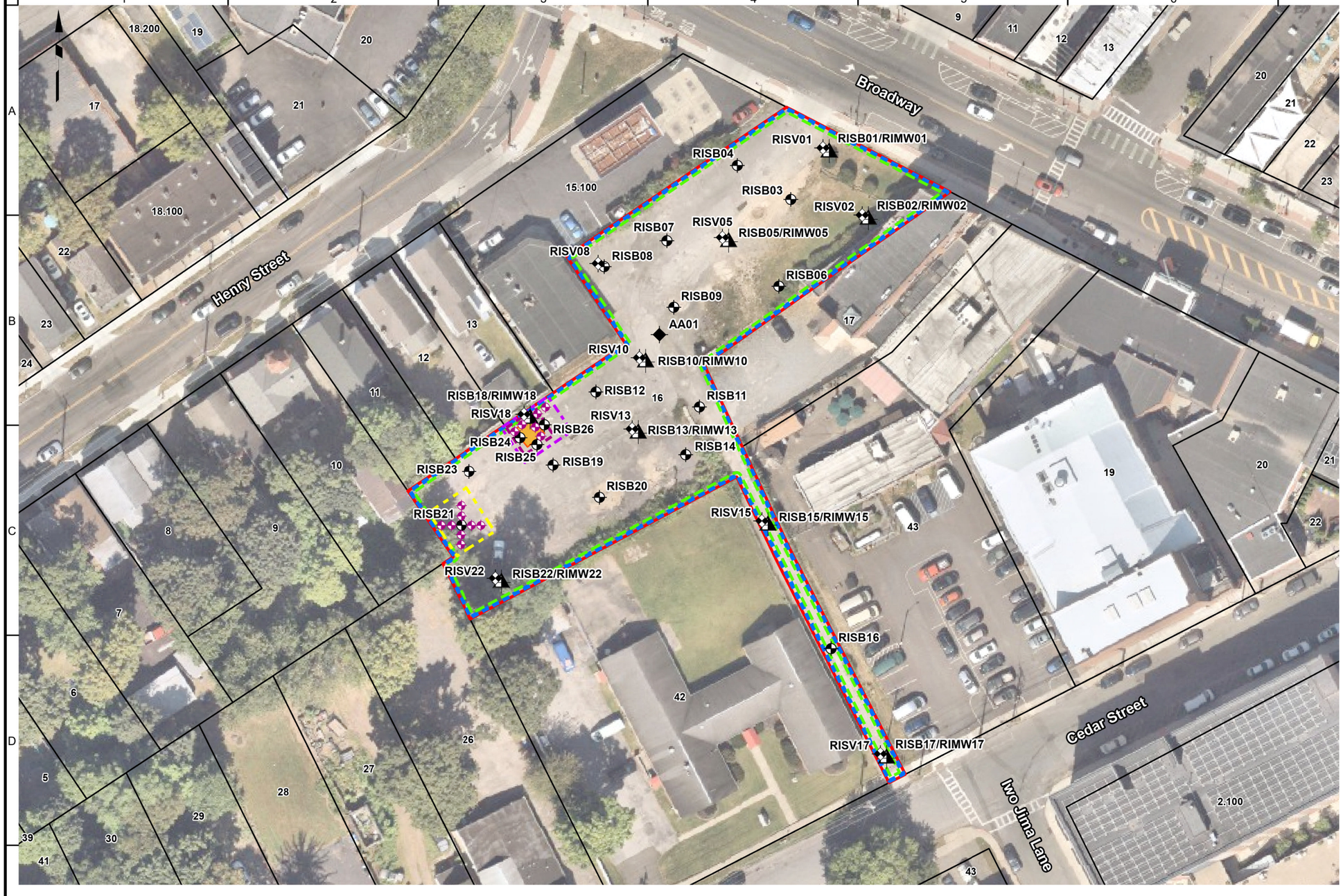
Figure Title
HISTORICAL SOIL VAPOR SAMPLE ANALYTICAL RESULTS MAP

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Legend

- Approximate Site Boundary
- Tax Parcel
- Potential UST Location
- AOC 1: Suspected Historic Non-Native Backfilling
- AOC 2: CVOC Impacts in Groundwater and Soil Vapor
- AOC 3: Suspect UST in the Northwestern Part of the Site
- AOC 4: Lead Hotspot in the Northwestern Part of the Site
- AOC 5: Lead Hotspot in the Western Part of the Site
- Proposed Soil Boring Location
- Proposed Soil Boring/Monitoring Well Location
- Proposed Soil Vapor Point Location
- Proposed Ambient Air Sample Location
- Proposed Delineation Soil Boring Location

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 9/10/2024.
2. Parcel data provided by Ulster County GIS.
3. UST - Underground Storage Tank
4. AOC - Area of Concern
5. CVOC - Chlorinated Volatile Organic Compound

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Figure Title
AREAS OF CONCERN AND PROPOSED SAMPLE LOCATION PLAN

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TABLES

Table 1
Proposed Sample Summary
Remedial Investigation Work Plan

615 Broadway
Kingston, New York
NYSDEC BCP Site No. C356066
Langan Project No. 170803001

No.	Sample Name	Type	Boring	Depth Interval	Rationale	Depth[1]	Analyses
SOIL							
1	RISB01_0-2	Grab	RISB01	0-2	Investigate AOC 1	Upper 2 feet of fill	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
2	RISB01_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
3	RISB01_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
4	RISB02_0-2	Grab	RISB02	0-2		Upper 2 feet of fill	
5	RISB02_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
6	RISB02_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
7	RISB03_0-2	Grab	RISB03	0-2		Upper 2 feet of fill	
8	RISB03_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
9	RISB03_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
10	RISB04_0-2	Grab	RISB04	0-2		Upper 2 feet of fill	
11	RISB04_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
12	RISB04_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
13	RISB05_0-2	Grab	RISB05	0-2		Upper 2 feet of fill	
14	RISB05_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
15	RISB05_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
16	RISB06_0-2	Grab	RISB06	0-2		Upper 2 feet of fill	
17	RISB06_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
18	RISB06_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
19	RISB07_0-2	Grab	RISB07	0-2		Upper 2 feet of fill	
20	RISB07_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
21	RISB07_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
22	RISB08_0-2	Grab	RISB08	0-2		Upper 2 feet of fill	
23	RISB08_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
24	RISB08_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
25	RISB09_0-2	Grab	RISB09	0-2		Upper 2 feet of fill	
26	RISB09_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
27	RISB09_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
28	RISB10_0-2	Grab	RISB10	0-2		Upper 2 feet of fill	
29	RISB10_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
30	RISB10_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
31	RISB11_0-2	Grab	RISB11	0-2		Upper 2 feet of fill	
32	RISB11_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
33	RISB11_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
34	RISB12_0-2	Grab	RISB12	0-2		Upper 2 feet of fill	
35	RISB12_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
36	RISB12_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
37	RISB13_0-2	Grab	RISB13	0-2		Upper 2 feet of fill	
38	RISB13_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
39	RISB13_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
40	RISB14_0-2	Grab	RISB14	0-2		Upper 2 feet of fill	
41	RISB14_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
42	RISB14_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
43	RISB15_0-2	Grab	RISB15	0-2		Upper 2 feet of fill	
44	RISB15_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
45	RISB15_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
46	RISB16_0-2	Grab	RISB16	0-2		Upper 2 feet of fill	
47	RISB16_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
48	RISB16_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
49	RISB17_0-2	Grab	RISB17	0-2		Upper 2 feet of fill	
50	RISB17_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
51	RISB17_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
52	RISB18_0-2	Grab	RISB18	0-2	Investigate AOCs 1 and 4	Upper 2 feet of fill and Vertical Delineation of Lead Impacts	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS, TCLP Lead (ON HOLD)
53	RISB18_2-4			2-4	Investigate AOC 4	Vertical Delineation of Lead Impacts	Total Lead and TCLP Lead (ON HOLD)
54	RISB18_X-X			X-X	Investigae AOC 1	Greatest degree of impacts or bottom of the non-native fill layer	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
55	RISB18_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
56	RISB18_NE1_0-2	Grab	RISB18_NE1	0-2	Investigate AOC 4	Vertical Delineation of Lead Impacts	Total Lead, TCLP Lead (ON HOLD)
57	RISB18_NE1_2-4			2-4			Total Lead and TCLP Lead (ON HOLD)
58	RISB18_SE1_0-2	Grab	RISB18_SE1	0-2			Total Lead, TCLP Lead (ON HOLD)
59	RISB18_SE1_2-4			2-4			Total Lead and TCLP Lead (ON HOLD)
60	RISB18_SW1_0-2	Grab	RISB18_SW1	0-2			Total Lead, TCLP Lead (ON HOLD)
61	RISB18_SW1_2-4			2-4			Total Lead and TCLP Lead (ON HOLD)
62	RISB18_NE2_0-2	Grab	RISB18_NE2	0-2			Total Lead and TCLP Lead (ON HOLD)
63	RISB18_NE2_2-4			2-4			
64	RISB18_SE2_0-2	Grab	RISB18_SE2	0-2			
65	RISB18_SE2_2-4			2-4			
66	RISB18_SW2_0-2	Grab	RISB18_SW2	0-2			
67	RISB18_SW2_2-4			2-4			
68	RISB19_0-2	Grab	RISB19	0-2	Investigate AOC 1	Upper 2 feet of fill	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
69	RISB19_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
70	RISB19_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
71	RISB20_0-2	Grab	RISB20	0-2		Upper 2 feet of fill	
72	RISB20_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
73	RISB20_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
74	RISB21_0-2	Grab	RISB21	0-2	Investigate AOCs 1 and 5	Upper 2 feet of fill and Vertical Delineation of Lead Impacts	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS, TCLP Lead (ON HOLD)
75	RISB21_2-4			2-4	Investigate AOC 5	Vertical Delineation of Lead Impacts	Total Lead and TCLP Lead (ON HOLD)
76	RISB18_X-X			X-X	Investigate AOC 1	Greatest degree of impacts or bottom of the non-native fill layer	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
77	RISB18_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
78	RISB21_N1_0-2	Grab	RISB21_N1	0-2	Investigate AOC 5	Vertical Delineation of Lead Impacts	Total Lead, TCLP Lead (ON HOLD)
79	RISB21_N1_2-4			2-4			Total Lead and TCLP Lead (ON HOLD)
80	RISB21_E1_0-2	Grab	RISB21_E1	0-2			Total Lead, TCLP Lead (ON HOLD)
81	RISB21_E1_2-4			2-4			Total Lead and TCLP Lead (ON HOLD)
82	RISB21_S1_0-2	Grab	RISB21_S1	0-2			Total Lead, TCLP Lead (ON HOLD)
83	RISB21_S1_2-4			2-4			Total Lead and TCLP Lead (ON HOLD)
84	RISB21_W1_0-2	Grab	RISB21_W1	0-2			Total Lead, TCLP Lead (ON HOLD)
85	RISB21_W1_2-4			2-4			Total Lead and TCLP Lead (ON HOLD)
86	RISB21_N2_0-2	Grab	RISB21_N2	0-2	Investigate AOC 5	Vertical Delineation of Lead Impacts	Total Lead and TCLP Lead (ON HOLD)
87	RISB21_N2_2-4			2-4			
88	RISB21_E2_0-2	Grab	RISB21_E2	0-2			
89	RISB21_E2_2-4			2-4			
90	RISB21_S2_0-2	Grab	RISB21_S2	0-2			
91	RISB21_S2_2-4			2-4			
92	RISB21_W2_0-2	Grab	RISB21_W2	0-2			
93	RISB21_W2_2-4			2-4			
94	RISB22_0-2	Grab	RISB22	0-2	Investigate AOC 1	Upper 2 feet of fill	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
95	RISB22_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
96	RISB22_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
97	RISB23_0-2	Grab	RISB23	0-2		Upper 2 feet of fill	
98	RISB23_X-X			X-X		Greatest degree of impacts or bottom of the non-native fill layer	
99	RISB23_X-X			X-X		Clean interval below impacts or native interval below non-native fill layer	
100	RISB24_X-X	Grab	RISB24	X-X	Investigate AOC 3	Greatest degree of impacts	Part 375/TCL VOCs and SVOCs
101	RISB24_X-X			X-X		Clean interval below impacts	
102	RISB25_X-X	Grab	RISB25	X-X		Greatest degree of impacts	
103	RISB25_X-X			X-X		Clean interval below impacts	
104	RISB26_X-X	Grab	RISB26	X-X		Greatest degree of impacts	
105	RISB26_X-X			X-X		Clean interval below impacts	

Table 1
Proposed Sample Summary
Remedial Investigation Work Plan

615 Broadway
Kingston, New York
NYSDEC BCP Site No. C356066
Langan Project No. 170803001

No.	Sample Name	Type	Boring	Depth Interval	Rationale	Depth[1]	Analyses
SOIL QA/QC							
106	SODUP01_date	Duplicate	TBD	TBD	QA/QC	Duplicate	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
107	SODUP02_date		TBD	TBD			
108	SODUP03_date		TBD	TBD			
109	SODUP04_date		TBD	TBD			
110	SODUP05_date		TBD	TBD			Part 375/TCL VOCs and SVOCs
111	SODUP06_date		TBD	TBD			Total Lead, TCLP Lead (ON HOLD)
112	SODUP07_date		TBD	TBD			Total Lead and TCLP Lead (ON HOLD)
113	RISBXX_X-X	MS/MSD	RISBXX	X-X		Matrix Spike/Matrix Spike Duplicate	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
114	RISBXX_X-X		RISBXX	X-X			
115	RISBXX_X-X		RISBXX	X-X			
116	RISBXX_X-X		RISBXX	X-X			
117	RISBXX_X-X		RISBXX	X-X			Part 375/TCL VOCs and SVOCs
118	RISBXX_X-X		RISBXX	X-X			Total Lead, TCLP Lead (ON HOLD)
119	RISBXX_X-X		RISBXX	X-X			Total Lead and TCLP Lead (ON HOLD)
120	SOFB01_date	Field Blank	NA	NA		Field Blank	Part 375/TCL VOCs, SVOCs, PCBs, pesticides, herbicides, Part 375/TAL metals including hexavalent and trivalent chromium, total cyanide, 1,4-dioxane, and PFAS
121	SOFB02_date						
122	SOFB03_date						
123	SOFB04_date						
124	SOFB05_date						Part 375/TCL VOCs and SVOCs
125	SOFB06_date						Total Lead
126	SOFB07_date						Total Lead (ON HOLD)
127	SOTB01_date	Trip Blank	NA	NA		Trip Blank	Part 375/TCL VOCs
128	SOTB02_date						
129	SOTB03_date						
130	SOTB04_date						
131	SOTB05_date						
GROUNDWATER							
1	RIMW01_date	Grab	RIMW01	NA	Investigate AOCs 1 and 2	Midpoint of screened interval	Part 375/TCL VOCs, SVOCs, PCBs, herbicides, pesticides, TAL metals (total and dissolved), trivalent and hexavalent chromium, total cyanide, 1,4-dioxane, and PFAS
2	RIMW02_date		RIMW02				
3	RIMW05_date		RIMW05				
4	RIMW10_date		RIMW10				
5	RIMW13_date		RIMW13				
6	RIMW15_date		RIMW15				
7	RIMW17_date		RIMW17				
8	RIMW18_date		RIMW18				
9	RIMW22_date		RIMW22				
GROUNDWATER QA/QC							
10	GWDUP01_date	Duplicate	RIMWXX	NA	QA/QC	NA	Part 375/TCL VOCs, SVOCs, PCBs, herbicides, pesticides, TAL metals (total and dissolved), trivalent and hexavalent chromium, total cyanide, 1,4-dioxane, and PFAS
11	RIMWXX_date	MS/MSD					
12	GWFB01_date	Field Blank	NA				Part 375/TCL VOCs, SVOCs, PCBs, herbicides, pesticides, TAL metals, trivalent and hexavalent chromium, total cyanide, 1,4-dioxane, and PFAS
13	GWFB01_PFAS_date	PFAS Equipment Blank					PFAS
14	GWFB02_PFAS_date						
15	GWFB03_PFAS_date						
16	GWTB01_date	Trip Blank					Part 375/TCL VOCs
17	GWTB02_date						
18	GWTB03_date						
SOIL VAPOR							
1	RISV01_date	Grab	RISV01	NA	Investigate AOCs 1 and 2	5 feet bgs	TO-15 VOCs
2	RISV02_date		RISV02				
3	RISV05_date		RISV05				
2	RISV08_date		RISV08				
5	RISV10_date		RISV10				
6	RISV13_date		RISV13				
7	RISV15_date		RISV15				
8	RISV17_date		RISV17				
9	RISV18_date		RISV18				
10	RISV22_date		RISV22				

Areas of Concern (AOC):
AOC 1: Suspected Historic Non-Native Backfilling
AOC 2: CVOC Impacts in Groundwater and Soil Vapor
AOC 3: Suspect UST in the Northwestern Part of the Site
AOC 4: Lead Hotspot in the Northwestern Part of the Site
AOC 5: Lead Hotspot in the Western Part of the Site

Notes and Abbreviations:
1. Soil sample depth intervals will be determined in the field.
2. Soil and groundwater samples to be analyzed for New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (6 NYCRR) Part 375-list compounds where noted.
3. Soil vapor samples to be analyzed for United States Environmental Protection Agency (USEPA) Method TO-15.
4. TBD = to be determined (in the field)
5. VOC = volatile organic compound
6. SVOC = semivolatile organic compound
7. PCB = polychlorinated biphenyl
8. TCL = Target Compound List
9. TAL = Target Analyte List
10. QA/QC = quality assurance/quality control
11. NA = not applicable
12. PFAS = per- and polyfluoroalkyl substances as limited to the list of compounds designated by NYSDEC
13. TCLP = Toxicity Characteristic Leaching Procedure
14. bgs = below grade surface
15. Total number of QA/QC samples are subject to change and are dependent on number of days sampled and/or number of samples collected.

APPENDIX A
Previous Reports

Weston & Sampson

westonandsampson.com

Weston & Sampson PE, LS, LA, PC
1 Winners Circle, Suite 130
Albany, NY 12205
tel: 518.463.4400

REPORT

March 2019

City of Kingston
420 Broadway
Kingston, New York 12401
N2180061

Phase I Environmental Site Assessment Report 615 Broadway Kingston, New York 12401



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EXECUTIVE SUMMARY

Weston & Sampson, on behalf of the City of Kingston, has prepared this Phase I Environmental Site Assessment (ESA) for a 0.917-acre commercial property located at 615 Broadway in Kingston, New York (the Site). The Site contains no buildings and is developed as a paved parking lot. The Site is currently owned by the City of Kingston, who acquired the property through tax delinquency. Adjoining properties to the north and east are commercial, while those to the south and west are a mix of commercial and residential.

Findings of the Phase I ESA are as follows:

- The earliest identified development of the Site was for residential uses, sometime prior to 1887. By 1950 the Site was developed with several produce warehouses and storage buildings for A.H.Guildersleeve & Sons along with several single-family residential buildings and an apartment building. By 1972 these buildings had been removed and the Site was developed with the Imperial Motel, later known as the Knights Inn. This motel was removed sometime between 2011 and 2013. Aerial photographs from 2013 show an approximately 2,000-square foot structure of unknown use. The Site is currently developed as a paved parking lot with no permanent structures. No identified former Site uses are considered high-risk uses.
- The surrounding area was developed for (agricultural, residential, commercial, industrial) uses sometime prior to 1887, with industrial and commercial uses developed by 1950. Several high-risk nearby property uses were identified, including the following:
    - Gasoline service station developed adjacent to the north of the Site from sometime before 1950 to the present.
    - Scrap metal yard developed adjacent to the south of the Site in the 1950s.
    - Manufacturing (dress factory) adjacent to the north of the Site in the 1970s and 1980s.
    - Dry cleaning upgradient of the Site in the 1970s and 1980s.
    - Bowling alley upgradient of the Site from the 1950s to the 1980s. Bowling alleys historically used chlorinated solvents to clean equipment and pins.
    - Releases may have occurred due to these high-risk uses and may have migrated onto the Site. Contamination from off-Site releases is considered a recognized environmental condition (REC) for the Site.
- Pertinent findings from the environmental database review include the following:
    - The Site was not listed in the databases reviewed.
    - Three nearby properties (571-577 Broadway, 625 Broadway, and 3 Cedar Street) are listed for current and/or prior uses as gasoline service stations. One (625 Broadway) is adjacent to the north of the Site and is currently developed as a gasoline service station. Contaminated soil was identified at this location in 1990 and several known spills have been reported. The remaining two locations are both within 500 feet upgradient of the Site. Based on the high-risk use(s) of these properties, known spills and contaminated soil, and their close proximity to the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could be impacted by releases from these properties. This is considered a REC for the Site.
    - Two properties (20 Cedar Street and 55 Cedar Street) are listed for releases of unknown quantities of #2 fuel oil, both upgradient within 250 feet of the Site. Based on the unknown size of the releases and close proximity to the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could be impacted by these releases. This is considered a REC for the Site.
    - One property (25 Field Court) is listed for chlorinated solvents in groundwater from an unknown source, first reported in 2009. This property is located approximately 350 feet cross gradient of the Site. Based on the contaminant-type and unknown source, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could also be impacted by chlorinated solvents in groundwater. This is considered a REC for the Site.
- No evidence of hazardous materials, or petroleum products or of current or former uses of the Site that pose a risk of adverse environmental impacts were observed during the Site reconnaissance.
- Interviews and local file reviews did not reveal any evidence of additional RECs for the Site.
- Based on the results of the Vapor Encroachment Screening, it is Weston & Sampson's opinion that a vapor encroachment condition (VEC) does exist at the Site due to two nearby gasoline service

stations, several nearby fuel oil releases, and known chlorinated solvent contamination in groundwater from an unknown source identified at a nearby, cross-gradient property. This VEC is considered a REC for the Site.

This assessment has revealed no evidence of recognized environmental conditions in connection with the Site, except for the following:

- Several high-risk nearby property uses were identified adjacent or upgradient of the Site, including gasoline service stations, a scrap metal yard, manufacturing, dry cleaning, and a bowling alley. Releases which could impact the Site may have occurred due to these high-risk uses.
- Releases have occurred at several nearby or upgradient properties, including known spills and contaminated soil at the adjacent gasoline service station, two releases of #2 fuel oil upgradient of the Site, and known chlorinated solvent contamination identified in groundwater approximately 350 feet cross-gradient of the Site from an unknown source. Contamination from these off-Site releases may have impacted the Site.
- A VEC exists for the Site due to two nearby gasoline service stations, several nearby fuel oil releases, and known chlorinated solvent contamination in groundwater identified at a nearby, cross-gradient property. This VEC is considered a REC for the Site.

Based on the findings, opinions, and conclusions discussed herein, Weston & Sampson recommends the performance of a Phase II Environmental Site Assessment to determine if adverse environmental conditions exist associated with the RECs identified above and to characterize the Site for redevelopment and/or reuse.

1.0 INTRODUCTION

Weston & Sampson PE, LS, LA, PC (Weston & Sampson), on behalf of the City of Kingston, has prepared this Phase I Environmental Site Assessment (ESA) for a 0.917-acre commercial property located at 615 Broadway in Kingston, New York (the Site). The Site contains no buildings and is developed as a paved parking lot. **Figure 1** shows the general location of the Site in Kingston and **Figure 2** is a Site Map showing pertinent details of the Site and surrounding area. **Appendix A** is a photograph log of pictures taken during the December 20, 2018 Site reconnaissance. This ESA was funded by a Cooperative Agreement between the City and the EPA through a Brownfields Assessment Grant (BF96274600).

This ESA was performed in accordance with ASTM Standard E1527-13, which is compliant with the EPA All Appropriate Inquiry (AAI) Rule. The Phase I ESA was performed to assess the Site with respect to the range of potential contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601) and petroleum products. This practice is intended to help the City of Kingston meet any obligations detailed in **Section 2.8.**

1.1 Purpose

Weston & Sampson was retained by the City of Kingston to complete an ASTM Phase I ESA of the Site, which was acquired by the City due to tax delinquency. The completion of a Phase I ESA is intended to help facilitate the potential redevelopment of the Site.

The purpose of the Phase I ESA is to identify Recognized Environmental Conditions (RECs) in connection with the Site at the time of the Site evaluation. The term Recognized Environmental Condition refers to the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The ASTM definition of REC does not include de minimis conditions, which generally do not present a threat to human health or the environment and would not be the subject of an enforcement action if brought to the attention of the appropriate governmental agencies.

The identification of RECs in connection with the Site may impose an environmental liability on owners or operators of the Site, reduce the value of the Site, or restrict the use or marketability of the Site; therefore, further investigation may be warranted to evaluate the scope and extent of potential environmental liabilities.

Any significant scope-of-work additions, deletions or deviations to ASTM Practice E 1527-13 are noted below or in pertinent sections of this report.

1.2 Scope of Work

This ESA was conducted using a standard of good commercial and customary practice that is consistent with ASTM Standard Practice E 1527-13. The Phase I ESA included the following:

- Review of previous environmental site assessments (if available)
- Regulatory records review
- Interviews with regulatory officials and personnel associated with the Site and adjoining properties
- A Site visit
- Evaluation of information and preparation of the report

Any significant scope-of-work additions, deletions, or deviations to ASTM E 1527-13 are noted below or in the corresponding sections of this report. The scope of services between Weston & Sampson and the City, specifying the work to be performed for this Phase I ESA and user responsibilities of the report, was provided directly to the City**.** Typically, a Phase I ESA does not include sampling or testing of air, soil, groundwater, surface water, or building materials which would be carried out in a Phase II ESA, if required.

1.3 Significant Assumptions

There is a possibility that even with the proper application of these methodologies there may exist at the Site conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Weston & Sampson believes that the information obtained from the record review and the interviews is reliable; however, Weston & Sampson cannot, and does not, warrant or guarantee that the information provided by third party sources is accurate or complete. The methodologies of this assessment are not intended to produce all-inclusive or comprehensive results, but to provide the City of Kingston with information relating to the presence or likely presence of RECs in connection with the Site.

1.4 Limitations and Exceptions

Findings, opinions, and conclusions provided by Weston & Sampson are based solely on the information provided in this document. Future investigations and/or information that were not available to Weston & Sampson at the time of the investigation may result in a modification of the findings. Should additional information become available concerning this Site, or neighboring properties that could directly impact the Site, that information should be made available to Weston & Sampson for review so that, if necessary, conclusions presented in this report may be modified. The conclusions of this report are based on conditions observed at the Site by Weston & Sampson personnel at the time of the investigation, information provided by the City of Kingston, information provided by Environmental Data Resources, Inc. (EDR), and information provided by federal, state, and local agencies. This report has been prepared in accordance with ASTM Standard Practice E 1527-13 and generally accepted engineering and geological practices. No other warranty, express or implied, is made. This assessment did not include a review or audit of operational environmental compliance issues, or of any environmental management systems (EMS) that may exist at the Site. Some of the information presented in this report was provided through existing documents and interviews.

1.5 Deviations

Except for the limitations and exceptions discussed in Section 1.4, this Phase I ESA complies with the ASTM Standard Practice E 1527-13. Weston & Sampson did not deviate from the scope of ASTM Standard E 1527-13 outlined in **Section 1.2.**

1.6 Special Terms and Conditions

Authorization to perform this assessment was given by the City of Kingston on December 4, 2018. Instructions as to the location of the property, access, and an explanation of the property and facilities to be assessed were provided by the City of Kingston.

1.7 Reliance

This report may be distributed and relied upon only by the City of Kingston. Reliance on the information and conclusions in this report by any other person or entity is not authorized without the written consent of Weston & Sampson and the City of Kingston.

2.0 USER PROVIDED INFORMATION

The information requested in the User Questionnaire is intended to assist the User in meeting their obligations under ASTM E1527-13 and to assist the Environmental Professional in gathering evidence to identify RECs at the Site. The City of Kingston was identified as the User. Brenna Robinson, who is the Director of Economic & Community Development for the City of Kingston, provided the User responses. A copy of the User Questionnaire is provided as **Appendix B**. The following subsections summarize responses from the completed User Questionnaire.

2.1 Owner, Property Manager, and Occupant Information

The City of Kingston, with offices at 420 Broadway in Kingston, New York, owns and operates the Site. This property is developed as a parking lot with no permanent structures and no occupants. No written or verbal communication with the property owner revealed any information which suggested that there are currently or historically any RECs associated with the Site.

2.2 Environmental Liens

The City of Kingston reported no environmental cleanup liens filed against the Site.

2.3 Activity and Use Limitations

The City of Kingston reported no Activity and Use Limitations (AULs) in place at the Site.

2.4 Specialized Knowledge

The City of Kingston reported no specialized knowledge as it relates to the current and/or former use of the Site.

2.5 Commonly Known or Reasonably Ascertainable Information

The City of Kingston reported that nearby cleanups have occurred near the property.

2.6 Valuation Reduction for Environmental Issues

The City of Kingston reported no reduction in the value of the Site due to real or perceived environmental issues. The Site was acquired due to tax foreclosure.

2.7 Degree of Obviousness of Contamination

The City of Kingston reported that a gas station is adjacent to the Site and that the presence of the gas station may be indicative of the presence or likely presence of contamination at the Site.

2.8 Reason For Performing Phase I ESA

The City of Kingston reported that the Phase I ESA is being performed to facilitate the sale and redevelopment of the Site and assist the potential purchaser in satisfying one of the requirements to qualify for CERCLA landowner liability protections.

2.9 User Provided Documents

No environmental documents were provided by the City of Kingston as a part of this Phase I ESA.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The Site is located at 615 Broadway in Kingston, New York. The parcel identification number is 51080056109316. The center of the Site is located at the following latitude/longitude:

- Latitude: 41.929318 North
- Longitude: -74.005485 West

3.2 Site and Vicinity Description

The Site is 0.917 acres and is developed as a paved parking lot. The ground surface at the Site slopes gradually to the northeast. The Site can be accessed from Broadway Street.

The Site is zoned commercial. The area surrounding the Site is primarily commercial.

3.3 Current Use of Property

The Site is developed as a paved parking lot and contains no structures.

3.4 Description of Structures and Other Improvements

There are currently no buildings or structures present on the Site.

3.5 Adjoining Property Information

Weston & Sampson identified following adjoining property uses:

- North - Commercial
- South - Commercial and Residential
- East - Commercial
- West - Commercial and Residential

4.0 RECORDS REVIEW

Performance of a Phase I ESA in accordance with ASTM E1527-13 requires the review of practically reviewable, publicly available records to establish the regulatory history, physical setting, and use history of the Site, adjoining properties, and pertinent surrounding properties. The regulatory review is performed to understand the nature of releases that have occurred within approximate minimum search distances of the Site and have the potential to impact environmental media (i.e. soil, groundwater, and vadose zone) at the Site. Physical setting information is reviewed to evaluate the general nature of the soil conditions and presence and movement of groundwater through the Site. Historical information sources are evaluated to develop the historical use of the Site, to the extent feasible, back to the first development of the Site or 1940, whichever is earlier. These reviews help identify the likelihood that past releases and/or uses have led to RECs in connection with the Site.

Data sources reviewed by Weston & Sampson include those required by this standard practice. Weston & Sampson used a third party data provider, Environmental Data Resources (EDR) of Shelton, Connecticut, to develop this information and meet the requirements of ASTM E1527-13. All data sources are defined in the following sections of this report and are specifically referenced in **Appendices C, D, E, F, and G.**

Weston & Sampson may have reviewed other records to fulfill the requirements of this standard practice. Any additional records are cited in the appropriate section of the report and in **Section 12.0**.

4.1 Standard Environmental Records Review

A review of standard regulatory databases maintained by federal, state, and tribal offices was completed through EDR. The databases were searched for properties with reported environmental conditions located within approximate minimum search distances as specified by ASTM Standard E1527-13. As a part of this regulatory review other non-ASTM standard databases listings reported by EDR may have also been evaluated. In these cases, this section includes supplemental discussion of any findings and our opinion as it relates to the identification of RECs in connection with the Site. The detailed EDR report including mapping of results and limitations of the search criteria is contained in **Appendix C**.

The databases use geocoded information to identify the coordinates of the properties or to check the street addresses of practically reviewable non-geocoded orphan properties located within the same zip code. The EDR report defines acronyms that are not explicitly defined in this discussion, lists the names of all of the databases that were searched, the date information was last updated by EDR, and the date information was last updated by the original source.

Plotted locations of all database listings are not always accurate. For listings that are suspected to be inaccurate, Weston & Sampson uses the best available data when evaluating listing locations.

The table below summarizes the number of properties identified for each pertinent database. Except any that are excluded, available records for each of the listings identified in the databases were reviewed to assess the potential to impact the Site. In general, releases with sources that are proximate to and hydraulically upgradient have the greatest potential to impact the Site. Weston & Sampson reviewed the location of each pertinent database listing to determine if it meets these criteria. If one or more of the following conditions were met, then the database listing was excluded from further consideration:

- Hydrogeologically isolated from the Site (e.g., opposite bank of a river);
- At such distance from the Site that migration of contaminants to the Site is unlikely (i.e. greater than 0.25 mile upgradient for hazardous substance sites and greater than 500 feet for petroleum sites); or
- Groundwater flow from the listed property is away from the Site.

Those listings that were not excluded from consideration were evaluated in more detail to assess if they pose a threat to the Site. For these listing, summary tables are provided that include Weston & Sampson's opinion as to whether environmental Site conditions are likely to be impacted. References to

any New York Department of Environmental Conservation (NYDEC) reports that were reviewed are included in **Section 12.0**.

The Site was not identified in any databases searched by EDR. Thirteen database listings, corresponding to seven individual properties, were identified which required further review. Three orphan listings were identified; however, orphan listings likely to pose a risk to environmental media at the Site were not identified.

Map Findings Summary

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NPL		1	0	0	0	0	NR	0
Proposed NPL		1	0	0	0	0	NR	0
NPL LIENS		1	0	0	0	0	NR	0
Delisted NPL		1	0	0	0	0	NR	0
CORRACTS		1	0	0	1	0	NR	1
RCRA-TSDF		0.5	0	0	0	NR	NR	0
RCRA-LQG		0.25	0	0	NR	NR	NR	0
RCRA-SQG		0.25	0	0	NR	NR	NR	0
RCRA-CESQG		0.25	1	0	NR	NR	NR	1
US ENG CONTROLS		0.5	0	0	0	NR	NR	0
US INST CONTROL		0.5	0	0	0	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
LUCIS		0.5	0	0	0	NR	NR	0
SCRD DRYCLEANERS		0.5	0	0	0	NR	NR	0
EDR Hist Auto		0.125	5	NR	NR	NR	NR	5
SEMS		0.5	0	0	0	NR	NR	0
EDR Hist Cleaner		0.125	0	NR	NR	NR	NR	0
SEMS-ARCHIVE		0.5	0	0	0	NR	NR	0
FEDERAL FACILITY		0.5	0	0	0	NR	NR	0
EDR Hist Cleaner		0.125	2	NR	NR	NR	NR	2
EDR Hist Auto		0.125	0	NR	NR	NR	NR	0
FEMA UST		0.25	0	0	NR	NR	NR	0
NY SPILLS 80		0.125	0	NR	NR	NR	NR	0
NY DRYCLEANERS		0.25	0	1	NR	NR	NR	1
NY TANKS NASSAU		0.25	0	0	NR	NR	NR	0
NY MOSF		0.5	0	0	0	NR	NR	0
NY CBS AST		0.25	0	0	NR	NR	NR	0
NY HIST SPILLS		0.125	0	NR	NR	NR	NR	0
NY LTANKS		0.5	6	9	31	NR	NR	46
NY SPILLS		0.125	16	NR	NR	NR	NR	16
NY VAPOR REOPENED		0.5	0	0	0	NR	NR	0
NY ENV RES DECL		0.125	0	NR	NR	NR	NR	0
NY RES DECL		0.125	0	NR	NR	NR	NR	0
NY CBS UST		0.25	0	0	NR	NR	NR	0
NY HIST LTANKS		0.5	0	0	0	NR	NR	0
NY TANKS		0.25	0	0	NR	NR	NR	0
NY VCP		0.5	0	0	1	NR	NR	1
NY SWF/LF		0.5	0	0	1	NR	NR	1
NY UST		0.25	4	11	NR	NR	NR	15
NY ERP		0.5	0	0	0	NR	NR	0
NY AST		0.25	1	1	NR	NR	NR	2
NY BROWNFIELDS		0.5	0	0	1	NR	NR	1
NY SHWS		1	1	0	0	0	NR	1
NY CBS		0.25	0	0	NR	NR	NR	0
NY MOSF AST		0.5	0	0	0	NR	NR	0

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY INST CONTROL		0.5	0	0	0	NR	NR	0
NY SPILLS 90		0.125	0	NR	NR	NR	NR	0
NY ENG CONTROLS		0.5	0	0	0	NR	NR	0
NY MOSF UST		0.5	0	0	0	NR	NR	0
INDIAN LUST		0.5	0	0	0	NR	NR	0
INDIAN UST		0.25	0	0	NR	NR	NR	0
INDIAN VCP		0.5	0	0	0	NR	NR	0

Detail Summary

Site Name:	AMERADA HESS CORP, BOB PERRYS SERVICE STATION, CHEEKAM MART, INC., THOMPSON HARVEY L, AMERICAN CLEANERS & DYERS CO
Databases:	NY MANIFEST, ICIS, RCRA NonGen / NLR, FINDS, ECHO, UST, EDR Hist Auto, SPILLS, LTANKS, EDR Hist Cleaner
Address:	625 BROADWAY
Distance:	16
Direction:	West
Elevation:	Higher
Comments:	This property, located adjacent to the north of the Site is listed for its prior and current use as a gasoline service station. This property is also listed as the location of a drycleaning facility in the 1970s and 1980s, though this may actually have been located at 624 Broadway, where the same business name (Americal Cleaners and Dyers) is listed in 1969 and 1970. Contaminated soil was identified in 1990 around some unknown USTs while excavating known gasoline USTs. Several spills have also occurred at the Site. Based on the high-risk use(s) of the property (service station and possibly dry cleaning), known spills and contaminated soil, and the location of the property adjacent to the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could be impacted by releases from this property. This is considered a REC for the Site.

Site Name:	ST MARTINS
Databases:	LTANKS
Address:	40 CEDAR VALLEY RD
Distance:	60
Direction:	South
Elevation:	Higher
Comments:	This property, located adjacent to the Site is listed for the release of #2 fuel oil in 1987. Based on the age and contaminant type, it is Weston & Sampson's opinion that there is a low risk that environmental media at the Site could be impacted by this release.

Site Name:	OBRIEN RESIDENCE
Databases:	SPILLS
Address:	55 CEDAR ST
Distance:	0
Direction:	SSW
Elevation:	Higher
Comments:	This listing, located adjacent to the southwest of the Site, is for a #2 fuel oil spill found in 2005 after the removal of a UST that had been abandoned four years earlier by filling with sand. Soil beneath the UST was contaminated, but the homeowner did not give the approval to do cleanup. Based on the unknown size and duration of the release and distance from the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could be impacted by this release. This is considered a REC for the Site.

Site Name:	RUPCO, INC; COMMERCIAL RUPCO
Databases:	UST, AST, SPILLS
Address:	20 CEDAR STREET
Distance:	219
Direction:	Southeast
Elevation:	Higher
Comments:	This property, located approximately 220 feet upgradient of the Site, is listed for a #2 fuel oil release of unknown size or duration from a 6,000 gallon UST. The release was discovered during tank removal in 2018. Some contaminated soil was removed based on PID readings. The database listing notes that it was not known at the time if groundwater was affected. Based on the unknown size of the spill and distance from the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site would be impacted by this release. This is considered a REC for the Site.

Site Name:	ECKERT WALTER
Databases:	EDR Hist Auto
Address:	3 CEDAR
Distance:	326
Direction:	ESE
Elevation:	Higher
Comments:	This property, located approximately 325 feet upgradient of the Site, is listed for its prior use as a gasoline service station. No spills have been reported for this property. However, based on the high-risk use less than 500 feet upgradient of the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site would be impacted by a potential release from this property. This is considered a REC for the Site.

Site Name:	NEAR O'NEIL ST CENTER OF KINGSTON, 25 FIELD COURT
Databases:	SPILLS, SHWS
Address:	25 FIELD COURT
Distance:	347
Direction:	Northeast
Elevation:	Higher
Comments:	This property, located approximately 350 feet cross gradient of the Site, is listed for PCE and TCE in groundwater from an unknown source, first reported in 2009. Based on the contaminant -type and unknown source, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site would be impacted by PCE and TCE in groundwater. This is considered a REC for the Site.

Site Name:	STEFANOWITZ GARAGE, GUARANTEE AUTO RADIATOR WORKS
Databases:	SPILLS, EDR Hist Auto
Address:	571-577 BROADWAY
Distance:	489
Direction:	ESE
Elevation:	Higher
Comments:	This property, located approximately 490 feet upgradient of the Site, is listed for its prior and current use as a gasoline service station. Based on the high-risk use less than 500 feet upgradient of the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could be impacted by a potential release from this property. This is considered a REC for the Site.

4.2 Other Environmental Records Review

Weston & Sampson may consult other environmental records, if necessary, to develop the regulatory history and property use of the Site and surrounding area. In some cases, other records are reviewed to understand the specific nature of certain database listings. Weston & Sampson submitted Freedom of Information Law (FOIL) requests to the NYDEC on February 5, 2019 for the following records:

- Spill Records for 625 Broadway, Kingston (adjacent to the Site)

This property is listed for a tank failure, discovered in 1990. A release of #2 fuel oil was discovered around USTs during excavation. The quantity of fuel released was not reported. No remedial activities were reported. Based on the proximity to the Site and the unknown quantity or duration of the release, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site would be impacted by this release. This release is considered a REC for the Site.

- Spill Records for 10 Field Court, Kingston (across Broadway from the Site)

This property is listed for a tank failure, reported in 2006. A release of #2 fuel oil was discovered around a UST during removal. The quantity of fuel released was not reported. No remedial activities were reported. Based on the proximity to the Site and the unknown quantity or duration of the release, it is Weston & Sampson's opinion is that there is a risk that environmental media at the Site would be impacted by this release. This release is considered a REC for the Site.

4.3 Physical Setting

Physical setting sources were reviewed to understand the nature of the topography, geology (soil and bedrock), and hydrogeology of Site. In addition, observations made during Site reconnaissance and information provided by EDR were consulted. In general, Weston & Sampson reviews available USGS topographic maps showing the Site, available soil maps, and a bedrock geologic map.

4.3.1 Topography

The Site is situated approximately 180 feet above mean sea level and topography at the Site is generally level.

4.3.2 Geology

Surficial soil and bedrock geology information sources include observation during the Site reconnaissance, the United States Department of Agriculture (USDA) Soil Conservation Service (SCS) information provided by EDR, and the 1:250,000-scale Bedrock Geology of New York State map, provided online by the New York State Museum, the New York State Geological Survey, and the New York State Museum Technology Center.

4.3.2.1 Soil

Surficial soils at the Site are classified as the Riverhead fine sandy loam (RvA), a well-drained soil with 0 to 3% slopes.

4.3.2.2 Bedrock

Bedrock geology is mapped as Onondaga limestone, a dark grey limestone and chert. Weston & Sampson personnel did not observe bedrock outcrops during the Site reconnaissance.

4.3.3 Hydrogeology

The direction of local groundwater flow was inferred from a review of local surface topography. Topographic maps were reviewed to identify the nearest surface water bodies to the Site.

4.3.3.1 Groundwater

It is anticipated that groundwater flow is to the north-northeast toward the Esopus Creek and low-lying wetland areas. However, due to the developed nature of the surrounding area, local groundwater flow may be counter to expected flow directions.

4.3.3.2 Surface Water

The nearest major surface water is the Esopus Creek, located approximately 3,700 feet north of the Site. Two small ponds, possibly storm water detention ponds, are located approximately 2,800 feet north of the Site, between the Site and the Esopus Creek.

4.4 Historical Site and Area Use

For this Phase I ESA, EDR provided the following historical sources: Sanborn fire insurance maps, aerial photographs, topographic maps, and city directories. Copies of all historical documents reviewed are included as **Appendix D, E, F, and G.**

4.4.1 Historical Use Summary

Based on information gathered from the review of historical data sources the first identified development of the Site was in 1887, for several residential properties. By 1950 the Site was developed with several produce warehouses and storage buildings for A.H. Guildersleeve & Sons along with several single-family residential buildings and an apartment building. By 1972 these buildings had been removed and the Site was developed with the Imperial Motel, later known as the Knight's Inn. This motel was removed sometime between 2011 and 2013. Aerial photographs from 2013 show an approximately 2,000-square foot structure of unknown use.

The Site is located in an area of Kingston developed for residential uses prior to 1900, with industrial and commercial uses developed by 1950. Several high-risk nearby property uses were identified, including the following:

- Gasoline service station developed adjacent to the north of the Site from sometime before 1950 to the present.
- Scrap metal yard developed adjacent to the south of the Site in the 1950s.
- Manufacturing (dress factory) adjacent to the north of the Site in the 1970s and 1980s.
- Dry cleaning upgradient of the Site in the 1970s and 1980s.
- Bowling alley upgradient of the Site from the 1950s to the 1980s.

4.4.2 Sanborn Fire Insurance Maps

The following Sanborn fire insurance maps were reviewed, summarized in the table below. Fire insurance maps are included in **Appendix D.**

Summary

Date(s)	Property Comments	Surrounding Area Comments
1887	One dwelling fronts Broadway. Site also contains Martin's Lane and two dwellings fronting Martin's Lane.	West and south of the site is primarily residential. North of the site is commercial, including a sash and blind factory and several stores. East of the site there are a few stores and a saloon.
1899	Two dwellings front Broadway, with a third dwelling and a stable to the rear of the site.	West and south of the site is primarily residential. North of the site is commercial, including a sash and blind factory and several stores. East of the site there are a few stores and a saloon.

Date(s)	Property Comments	Surrounding Area Comments
1950	Site contains many commercial-use structures including apartments, heating supply warehouse, and produce wholesale.	West and south of the site is primarily residential, with the exception of a scrap metal yard adjacent to the south. A gasoline filling station is located adjacent to the north of the Site.
1957	Site contains many commercial-use structures including apartments, heating supply warehouse, and produce wholesale.	West and south of the site is primarily residential, with the exception of a scrap metal yard adjacent to the south and a bowling alley located to the southeast. A gasoline filling station is located adjacent to the north of the Site.
1972	Site is labeled as Imperial Motel, containing three structures, two of which are attached.	West and south of the site is primarily residential. A bowling alley located to the southeast. A gasoline filling station is located adjacent to the north of the Site, along with a dress factory.
1984	Site is labeled as Imperial Motel, containing three structures, two of which are attached.	West and south of the site is primarily residential. A gasoline filling station is located adjacent to the north of the Site, along with a dress factory. A bowling alley located to the southeast. A dry cleaning facility is located southeast of the Site at 603 Broadway.
1987	Site is labeled as Imperial Motel, containing three structures, two of which are attached.	West of the site is primarily residential, and south of the site has some residential, some commercial, and a few vacant lots. A bowling alley located to the southeast. North and east of the Site is primarily commercial.

4.4.3 Topographic Maps

The following topographic maps were reviewed and are summarized in the table below. Topographic maps are included in **Appendix E.**

Summary

Date(s)	Quad	Property Comments	Surrounding Area Comments
1898	Rhinebeck,Rosendale	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
1903	Rosendale	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
1917	Rosendale	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
1924	Rosendale	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
1942	Kingston West	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
1943	Kingston West	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.

1963	Kingston East,Kingston West	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
1980	Kingston East,Kingston West,Kingston West	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
1997	Kingston West	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.
2013	Kingston East,Kingston West	Site is in a developed are of Kingston. Use appears to be commercial.	Surrounding area is in a developed area of Kingston. Use appears to be residential/commercial.

4.4.4 Aerial Photos

The following aerial photographs were reviewed, summarized in the table below. Aerial photographs are included in **Appendix F.**

Summary

Date(s)	Property Comments	Surrounding Area Comments
1963	Image quality does not allow for analysis of the Site use.	Image quality does not allow for analysis of use.
1978	Image quality does not allow for analysis of the Site use.	Image quality does not allow for analysis of use.
1984	Image quality does not allow for analysis of the Site use.	Image quality does not allow for analysis of use.
1986	Site appears to be commercial.	Surrounding area appears residential and commercial.
1995	Image quality does not allow for analysis of the Site use.	Surrounding area appears residential and commercial.
2006	Site appears to be commercial.	Surrounding area appears residential and commercial.
2009	Site appears to be commercial.	Surrounding area appears residential and commercial.
2013	Previous buildings are no longer visible. a square building is visible in the center of the Site.	Surrounding area appears residential and commercial.
2017	Site appears vacant of permanent structures.	Surrounding area appears residential and commercial.

4.4.5 City Directories

The following city directories were reviewed, summarized in the table below. City directories are included in **Appendix G.**

Summary

Date(s)	Property Comments	Surrounding Area Comments
1955	A.H. Gildensleeve & Sons Inc. - fruit	Henry Street - north of Site - Residential 625 Broadway- adjacent to north of Site - HL Thompson gasoline 605 Broadway - southeast of Site - Capitol Cleaners

Date(s)	Property Comments	Surrounding Area Comments
1964	Residential	Henry Street - north of Site - Residential 625 Broadway- adjacent to north of Site - HL Thompson gasoline 605 Broadway - southeast of Site - Capitol Cleaners
1968	Imperial Motel	14 Henry Street - north of Site - Clothing Manufacturing Company 625 Broadway- adjacent to north of Site - HL Thompson gasoline
1973	Kings Inn Motel / Imperial Motel	14 Henry Street - north of Site - Shish-Ka-Bob Fashions; Grand Manufacturing Corporation, Dress Manufacturing 625 Broadway- adjacent to north of Site - Gasland
1979	The Kings Inn Motel	14 Henry Street - north of Site - Shish-Ka-Bob Fashions; Grand Manufacturing Corporation, Dress Manufacturing 625 Broadway- adjacent to north of Site - Gasland
1985	Kings Inn	14 Henry Street - north of Site - World of Video 625 Broadway- adjacent to north of Site - not listed
1992	Tom Chen	14 Henry Street - north of Site - Fantasy Video 625 Broadway- adjacent to north of Site - not listed
1995	Osgold International (USA)	14 Henry Street - north of Site - Fantasy Video 625 Broadway- adjacent to north of Site - not listed
2000	Kings Inn	14 Henry Street - north of Site - not listed 625 Broadway- adjacent to north of Site - not listed
2005	Kings Inn	14 Henry Street - north of Site - not listed 625 Broadway- adjacent to north of Site - not listed
2010	Not Listed	14 Henry Street - north of Site - not listed 625 Broadway- adjacent to north of Site - Cheekam Mart Inc., Mobil Snack Shop
2014	Not Listed	14 Henry Street - north of Site - not listed 625 Broadway- adjacent to north of Site - Cheekam Mart Inc., Mobil Snack Shop

4.4.6 Title Records

The following title records were reviewed at the City Assessor and County Clerk offices, summarized in the table below.

Summary

Information Source	Date(s)	Book/Page	Listed Owner
Deed	06/25/2010	4950/253	City of Kingston
Deed	04/29/2005	4074/320	SN Management of New York Inc
Deed	07/27/2000	3084/111	Huang Xiao & Zhang Hong
Deed	03/17/1989	1095/245	
Deed	07/15/1980	1428/874	C. Liu ,Inc
Deed	01/23/1980	1423/820	Chu-Shinang Chao Lio
Deed	03/25/1964	1164/899	Henry Roundout Properties Inc.
Deed	11/13/1964	1159/1039	John L Larkin
Deed	11/18/1964	1160/083	John L Larkin
Deed	01/09/1925	508/203	Ferdinand Gildersleeve
Deed	07/17/1914	448/336	Lousia Bailey
Deed	6/27/1896	331/333	Patrick Fitzgerald

4.4.7 Other Land Use Records

Weston & Sampson did not review any other land use records as a part of this Phase I ESA because adequate historical information was obtained from other sources.

4.4.8 Other Environmental Reports

Weston & Sampson did not review any other environmental reports as a part of this Phase I ESA because adequate historical information was obtained from other sources.

4.5 Vapor Encroachment Evaluation

In 2015, ASTM International issued its revised Standard E2600-15 entitled Standard Guide for Vapor Encroachment (VE) Screening on Property Involved in Real Estate Transactions. The purpose of the VE standard is to define good commercial and customary practice for real estate transactions in the United States for conducting a screening assessment directed solely at the likelihood for migrating vapors to encroach upon a Site creating a vapor encroachment condition (VEC). Whether or not encroaching vapors result in a vapor intrusion problem requires further investigation that is beyond the scope of the standard.

A VEC is defined as the presence or likely presence of chemicals of concern (COC) vapors in the subsurface of the Site caused by the release of vapors from contaminated soil or groundwater on or near the Site. An area of concern (AOC), as defined in ASTM E 2600-15, is measured 0.333-miles from the Site for known or suspect contaminated sites with volatile organic compounds (VOCs) or semi-VOCs; 0.1-mile from the Site for known or suspect petroleum hydrocarbon releases. The identification of AOCs may be reduced if the groundwater flow direction is known relative to the Site. Critical distances are taken into account for contaminated groundwater plumes in any direction for COCs including petroleum light non-aqueous phase liquid (LNAPL) accumulating above the water table at a distance of 100 feet from the edge of the plume to the Site and 30 feet for dissolved volatile petroleum hydrocarbons (VPH).

Weston & Sampson has performed a Vapor Encroachment Screening (Tier 1) in general accordance with the scope of work and limitations of ASTM Standard Practice E 2600-15.The Vapor Encroachment Screening report is provided in **Appendix E**.

Based on the results of this screening, it is Weston & Sampson's opinion that a VEC does exist at the Site due to two nearby gas service stations, several nearby fuel oil releases, and known PCE and TCE contamination in groundwater from an unknown source identified at a nearby, cross-gradient property. This VEC is considered a REC for the Site.

5.0 SITE RECONNAISSANCE

The Site reconnaissance was conducted on December 20, 2018, by Weston & Sampson personnel Steven Shaw, Rachelle McKnight, and Emily Garbenis. Steven Shaw is an Environmental Professional.

5.1 Methodology and Limiting Conditions

The Site reconnaissance consisted of observing the boundaries of the property and traversing the Site to provide an overlapping field of view, wherever possible. Photographs of pertinent Site features are included in **Appendix A**.

No limiting conditions were encountered during the Site reconnaissance.

5.2 General Site Setting

The Site consists of approximately 0.917 acres and is undeveloped. The ground surface at the Site slopes gently downward towards Broadway to the north. Ground cover consists primarily of landscaped green areas, asphalt, and gravel. The Site is accessed from the east and south via entrances from Broadway and Cedar Street.

5.3 Site Visit Findings

5.3.1 Hazardous Substances

Weston & Sampson observed no evidence of hazardous substances at the Site.

5.3.2 Petroleum Products

Weston & Sampson observed no evidence of petroleum products at the Site.

5.3.3 USTs

Weston & Sampson observed no readily apparent evidence of underground storage tanks (USTs) at the Site.

5.3.4 ASTs

Weston & Sampson observed no readily apparent evidence of aboveground storage tanks (ASTs) at the Site.

5.3.5 Drums

Weston & Sampson observed no readily apparent evidence of drum storage at the Site.

5.3.6 Other Suspect Containers

Weston & Sampson observed no unidentified substance containers at the Site.

5.3.7 Odors

Weston & Sampson noted no noxious odors possibly indicative of the presence of hazardous substances and/or petroleum products at the Site.

5.3.8 Equipment Likely to Contain PCBs

Weston & Sampson observed no evidence of equipment with the potential to contain PCBs (installed or in use prior to 1979) within the Site footprint.

5.3.9 Interior Staining/Corrosion

The Site is vacant. There are no structures or buildings on the Site.

5.3.10 Heating/Cooling Equipment

The Site is vacant. There are no structures or buildings on the Site.

5.3.11 Drains and Sumps

Weston & Sampson observed drains and/or sumps at the Site in the following areas:

- Storm drain located in the center of the paved area to the west.

5.3.12 Pits, Ponds, and Lagoons

Weston & Sampson observed no pits, ponds, or lagoons at the Site.

5.3.13 Pools of Liquid

Weston & Sampson observed no pools of liquid at the Site.

5.3.14 Solid Waste Dumping/Landfills

Weston & Sampson observed no evidence of solid waste dumping areas or areas of filled land at the Site.

5.3.15 Stained Soil/Stressed Vegetation

Weston & Sampson observed no stressed vegetation at the Site.

5.3.16 Wells

Weston & Sampson observed no private water wells or groundwater monitoring wells at the Site.

5.3.17 Wastewater and Septic Systems

Weston & Sampson observed no wastewater or septic systems in use at the Site.

6.0 INTERVIEWS AND LOCAL FILE REVIEWS

To the extent practicable, Weston & Sampson interviewed individuals knowledge with current and past operations at the Site and reviewed local municipal files to identify evidence of storage or releases of hazardous substances and/or petroleum to environmental media at the Site.

6.1 Interviews

Interviews were conducted with the current owner (the City of Kingston). Interviews were performed either in person or via written questionnaire. Questions were focused on the identification of past releases of hazardous substances and/or petroleum at the Site.

6.1.1 Current Owner

Brenna Robinson, of the City of Kingston, was interviewed regarding the current and former use of the Site. Ms. Robinson reported no known uses of the Site likely to cause releases of hazardous substances or petroleum products to the environment. However, she noted that cleanup activities have occurred near the Site and that the adjacent property to the north is developed as a gas station.

6.1.2 Key Site Manager

Brenna Robinson of the City of Kingston was also identified as the Key Site Manager. Interview responses are summarized in **Section 6.1.1**.

6.1.3 Occupants

The Site is vacant with no occupants.

6.1.4 Past Owners

Past owners were not interviewed during this Phase I ESA.

6.1.5 Operators

The Site is owned and operated by the City of Kingston. Interviews were performed with the City and are reported in **Section 6.1.1.**

6.1.6 Local Government Officials

No other local government officials were interviewed during this Phase I ESA.

6.2 Local File Reviews

Attempts to review local files were made with the local fire department, the tax assessors office, the health department, and the building services department.

6.2.1 Fire Department

Weston & Sampson contacted the Kingston Fire Department Fire Prevision Division. No pertinent information regarding storage or releases of hazardous substances or petroleum products to the environment was identified.

6.2.2 Tax Assessor

Weston & Sampson conducted a file review at the City of Kingston Assessor's Office. No pertinent information regarding storage or releases of hazardous substances or petroleum products to the environment was identified.

6.2.3 Health Services Department

Weston & Sampson submitted a Freedom of Information Law (FOIL) request to the Ulster County Health Department on January 11, 2018, for information regarding storage or releases of hazardous substances or petroleum products to the environment. No pertinent information regarding storage or releases of hazardous substances or petroleum products to the environment was identified..

6.2.4 Inspectional Services Department

Weston & Sampson conducted a file review at the City of Kingston Building Services Department. No pertinent information regarding storage or releases of hazardous substances or petroleum products to the environment was identified.

6.2.5 Electric Utility

No electrical transformers are located within the Site footprint. Weston & Sampson did not contact the utility company regarding releases from electrical transformers.

7.0 OTHER ENVIRONMENTAL CONSIDERATIONS

This section is reserved for a discussion of hazardous building materials, such as asbestos-containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyls (PCBs). The Site is vacant with no permanent structures; therefore, hazardous building materials are not anticipated on-Site.

8.0 DATA GAPS

A data gap is a lack of, or inability to obtain, required information despite good faith efforts by the environmental professional. Significant data gaps are data gaps that affect the ability of the environmental professional to identify recognized environmental conditions. A data gap is only significant if other information and/or professional experience raises reasonable concerns involving the data gap. The following data gaps were identified during this Phase I ESA:

- Data failure was encountered during historical use source review related to the 5-year interval requirement.
- The historical use review did not identify Site use back to the date of the original development of the Site.
- Past owners and occupants were not interviewed during this Phase I ESA.

It is Weston & Sampson's opinion that these data gaps do not represent significant data gaps and do not raise reasonable concerns regarding the ability of the Environmental Professional to identify RECs at the Site.

9.0 FINDINGS AND OPINIONS

A summary of relevant environmental findings from the regulatory review, historical research, Site reconnaissance, and local file reviews along with Weston & Sampson's professional opinions are provided below:

- The earliest identified development of the Site was for residential uses, sometime prior to 1887. By 1950 the Site was developed with several produce warehouses and storage buildings for A.H.Guildersleeve & Sons along with several single-family residential buildings and an apartment building. By 1972 these buildings had been removed and the Site was developed with the Imperial Motel, later known as the Knights Inn. This motel was removed sometime between 2011 and 2013. Aerial photographs from 2013 show an approximately 2,000-square foot structure of unknown use. The Site is currently developed as a paved parking lot with no permanent structures. No identified former Site uses are considered high-risk uses.

- The surrounding area was developed for (agricultural, residential, commercial, industrial) uses sometime prior to 1887, with industrial and commercial uses developed by 1950. Several high-risk nearby property uses were identified, including the following:
    - Gasoline service station developed adjacent to the north of the Site from sometime before 1950 to the present.
    - Scrap metal yard developed adjacent to the south of the Site in the 1950s.
    - Manufacturing (dress factory) adjacent to the north of the Site in the 1970s and 1980s.
    - Dry cleaning upgradient of the Site in the 1970s and 1980s.
    - Bowling alley upgradient of the Site from the 1950s to the 1980s.
    - Releases may have occurred due to these high-risk uses and may have migrated onto the Site. Contamination from off-Site releases is considered a recognized environmental condition (REC) for the Site.

- Pertinent findings from the database review include the following:
    - The Site was not listed in the databases reviewed.
    - Three nearby properties (571-577 Broadway, 625 Broadway, and 3 Cedar Street) are listed for current and/or prior uses as gasoline service stations. One (625 Broadway) is adjacent to the north of the Site and is currently developed as a gasoline service station. Contaminated soil was identified at this location in 1990 and several known spills have been reported. The remaining two locations are both within 500 feet upgradient of the Site. Based on the high-risk use(s) of these properties, known spills and contaminated soil, and their close proximity to the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could be impacted by releases from these properties. This is considered a REC for the Site
    - Two properties (20 Cedar Street and 55 Cedar Street) are listed for releases of unknown quantities of #2 fuel oil, both upgradient within 250 feet of the Site. Based on the unknown size of the releases and close proximity to the Site, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could be impacted by these releases. This is considered a REC for the Site.
    - One property (25 Field Court) is listed for chlorinated solvents in groundwater from an unknown source, first reported in 2009. This property is located approximately 350feetcross gradient of the Site. Based on the contaminant-type and unknown source, it is Weston & Sampson's opinion that there is a risk that environmental media at the Site could also be impacted by chlorinated solvents in groundwater. This is considered a REC for the Site.

- No evidence of hazardous materials, or petroleum products or of current or former uses of the Site that pose a risk of adverse environmental impacts were observed during the Site reconnaissance.

- Interviews and local file reviews did not reveal any evidence of additional RECs for the Site.

- Based on the results of the Vapor Encroachment Screening, it is Weston & Sampson's opinion that a vapor encroachment condition (VEC) does exist at the Site due to two nearby gasoline service

stations, several nearby fuel oil releases, and known chlorinated solvent contamination in groundwater from an unknown source identified at a nearby, cross-gradient property. This VEC is considered a REC for the Site.

10.0 CONCLUSIONS

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of 615 Broadway located at 615 Broadway, Kingston, New York. Any exceptions to, deletions from, this practice are described in Sections 1.0 of this report. The assessment has revealed no evidence of recognized environmental conditions in connection with the Site, except for the following:

- Several high-risk nearby property uses were identified adjacent or upgradient of the Site, including gasoline service stations, a scrap metal yard, manufacturing, dry cleaning, and a bowling alley. Releases which could impact the Site may have occurred due to these high-risk uses.

- Releases have occurred at several nearby or upgradient properties, including known spills and contaminated soil at the adjacent gasoline service station, two releases of #2 fuel oil upgradient of the Site, and known chlorinated solvent contamination identified in groundwater approximately 350 feet cross-gradient of the Site from an unknown source. Contamination from these off-Site releases may have impacted the Site.

- A VEC exists for the Site due to two nearby gasoline service stations, several nearby fuel oil releases, and known chlorinated solvent contamination in groundwater identified at a nearby, cross-gradient property. This VEC is considered a REC for the Site.

Recommendations

Based on the findings, opinions, and conclusions discussed herein, Weston & Sampson recommends the performance of a Phase II Environmental Site Assessment to determine if adverse environmental conditions exist associated with the RECs identified above and to characterize the Site for redevelopment and/or reuse.

11.0 SIGNATURES OF THE ENVIRONMENTAL PROFESSIONAL

This ESA was overseen by Qualified Environmental Professionals as defined in ASTM E1527-13 and EPA's AAI Final Rule. Qualifications for the environmental professionals are included in **Appendix H**. Please note that the signatures included below may include individuals acting as an ASTM defined Environmental Professional and those supporting the Environmental Professional in the performance of the Phase I ESA.

Environmental Professional Statement
We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Â§ 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR 312.

Authored by:

Steven D. Shaw
Project Manager

Reviewed by:

Steve LaRosa
Senior Project Manager

12.0 REFERENCES

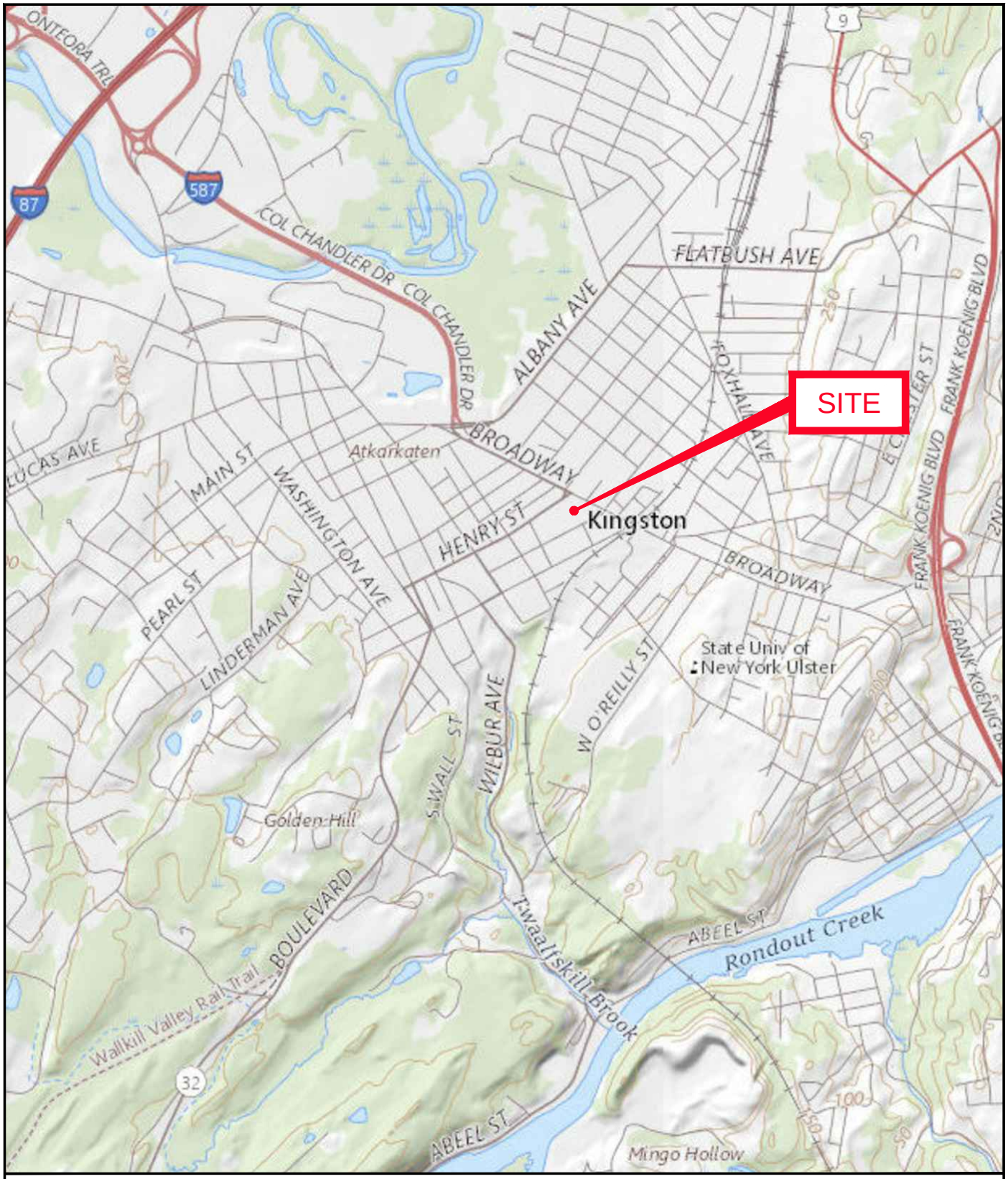
ASTM. E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

ASTM. E2600-15Standard Guide forVapor Encroachment Screening on Property Involved inReal Estate Transactions.

Environmental Data Resources, Inc.The EDR Radius Map Report with GeoCheck, Historical Topo Map Report, Aerial Photo Decade Package Report, and City Directory Image Report, Inquiry Number 5504885.2s. December 6, 2018.

New York State Museum, New York State Geological Survey, New York State Museum Technology Center. 1999.1:250,000 Bedrock Geology of New York State.

Figures



DATA SOURCES:

Printed from USGS The National Map:
National Boundaries Dataset
Ulster County-New York
November, 2018

FIGURE 1

SITE LOCUS MAP

615 BROADWAY

KINGSTON, NEW YORK

SCALE: 1"=2,000'

0 2000 4000

\\wse03.local\WSE\Projects\NY\Kingston, NY\Brownfields Community Wide Assessment Program – 2018\Drawings\Kingston, NY.dwg



DATA SOURCES:

Printed from Orthoimagery
from NYS GIS Clearinghouse
December, 2018

FIGURE 2

AERIAL MAP

615 BROADWAY

KINGSTON, NEW YORK

SCALE: 1"=100'

0 100 200

\\wse03.local\WSE\Projects\NY\Kingston, NY\Brownfields Community Wide Assessment Program – 2018\Drawings\Kingston, NY.dwg

Appendix A:

Photograph Log



1 : View from rear of Site facing northeast.



2 : View facing south. Area drain with patched pavement visible.



3 : View looking to rear of site.



4 : View down Martins Lane to the southeast. Martins Lane is on the Site and provides access to Cedar Street.



5 : View of Site from Martins Lane, looking north.



6 : Rear of lot looking west. Gravel area appears to be former footprint of King's Inn.



7 : Adjacent site to the north, currently developed as a gasoline station.



8 : View of the front of the Site looking west.

Appendix B:

Questionnaires/Checklists

Initials: _____

AAI – USER QUESTIONNAIRE

SITE:

ADDRESS: 615 Broadway Kingston NY 12401

In order to receive CERCLA liability protection, the *user*[1] must provide the following information (if available). Failure to provide this information could result in the determination that "all appropriate inquiry" was not complete.

1. **Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).**

   Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?

   ☐ Yes
   ☐ No
   ☒ Unknown

   If yes, please describe (attach a separate piece of paper if necessary).

2. **Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).**

   Are you aware of any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

   ☐ Yes
   ☒ No
   ☐ Unknown

   If yes, please describe.

3. **Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).**

   As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

   ☐ Yes
   ☒ No
   ☐ Unknown

   If yes, please describe.

[1] The party seeking to complete an AAI to receive CERCLA liability protection

Initials: _____

4. **Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).**

   Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

   ☐ Yes
   ☐ No
   ☑ Unknown

   If yes, please describe.

5. **Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).**

   Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example, as user, (a.) Do you know the past uses of the property? (b.) Do you know of specific chemicals that are present or once were present at the property? (c.) Do you know of any spills or other chemical releases that have taken place at the property? (d.) Do you know of any environmental cleanups that have taken place at the property?

   ☒ Yes
   ☐ No
   ☐ Unknown

   If yes, please describe. ALSO OWNER. KNOW PAST ACTIVITIES ON AND AROUND PROPERTY.

6. **The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).**

   As the user of this ESA, based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of contamination at the property?

   ☒ Yes
   ☐ No
   ☐ Unknown

   If yes, please describe. NEIGHBORING GAS STATION

2/27/19
Date

Signature

Weston & Sampson Phase I ESA Questionnaire
for Property Owner, Occupants, Prospective Purchaser

Description of Site/Address: 615 Broadway Kingston NY 12401

Question	Owner	Occupant or Prospective Purchaser	If yes, provide description
1a. Is the *property* used for an industrial use?	Yes ☐ No ☒ Unk ☐	Yes ☐ No ☒ Unk ☐	
1b. Is any *adjoining property* used for an industrial use?	Yes ☐ No ☒ Unk ☐	Yes ☐ No ☒ Unk ☐	GAS STATION NEXT DOOR (COMMERCIAL, NOT INDUSTRIAL)
2a. Did you observe evidence or do you have any prior knowledge that the *property* has been used for an industrial use in the past?	Yes ☐ No ☒ Unk ☐	Yes ☐ No ☒ Unk ☐	
2b. Did you observe evidence or do you have any prior knowledge that any *adjoining property* has been used for an industrial use in the past?	Yes ☐ No ☐ Unk ☒	Yes ☐ No ☐ Unk ☒	
3a. Is the *property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?	Yes ☐ No ☒ Unk ☐	Yes ☐ No ☒ Unk ☐	
3b. Is any *adjoining property* used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?	Yes ☒ No ☐ Unk ☐	Yes ☒ No ☐ Unk ☐	GAS STATION
4a. Did you observe evidence or do you have any prior knowledge that the *property* has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?	Yes ☐ No ☐ Unk ☒	Yes ☐ No ☐ Unk ☒	

Weston & Sampson Phase I ESA Questionnaire
for Property Owner, Occupants, Prospective Purchaser and Consultant

Question	Owner			Occupants or Prospective Purchaser			If yes, provide description
	Yes	No	Unk	Yes	No	Unk	
4b. Did you observe evidence or do you have any prior knowledge that any *adjoining property* has been used as a gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility (if applicable, identify which)?	☒	☐	☐	☒	☐	☐	GAS STATION
5a. Are there currently any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals in individual containers of >5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the *property* or at the facility?	☐	☒	☐	☐	☒	☐	
5b. Did you observe evidence or do you have any prior knowledge that there have been previously any damaged or discarded automotive or industrial batteries, or pesticides, paints, or other chemicals in individual containers of >5 gal (19 L) in volume or 50 gal (190 L) in the aggregate, stored on or used at the *property* or at the facility?	☐	☐	☒	☐	☐	☒	
6a. Are there currently any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the *property* or at the facility?	☐	☒	☐	☐	☒	☐	
6b. Did you observe evidence or do you have any prior knowledge that there have been previously any industrial *drums* (typically 55 gal (208 L)) or sacks of chemicals located on the *property* or at the facility?	☐	☒	☐	☐	☒	☐	
7a. Did you observe evidence or do you have any prior knowledge that *fil dirt* has been brought onto the *property* that originated from a contaminated site?	☐	☐	☒	☐	☐	☒	
7b. Did you observe evidence or do you have any prior knowledge that *fill dirt* has been brought onto the *property* that is of an unknown origin?	☐	☐	☒	☐	☐	☒	

Weston & Sampson Phase I ESA Questionnaire
for Property Owner, Occupants, Prospective Purchaser and Consultant

Question	Owner			Occupants or Prospective Purchaser			If yes, provide description
8a. Are there currently any *pits, ponds*, or *lagoons* located on the *property* in connection with waste treatment or waste disposal?	Yes	No	Unk	Yes	No	Unk	
	☐	☒	☐	☐	☒	☐	
8b. Did you observe evidence or do you have any prior knowledge that there have been previously, any *pits, ponds*, or *lagoons* located on the *property* in connection with waste treatment or waste disposal?	Yes	No	Unk	Yes	No	Unk	
	☐	☐	☒	☐	☐	☒	
9a. Is there currently any stained soil on the *property*?	Yes	No	Unk	Yes	No	Unk	
	☐	☐	☒	☐	☐	☒	
9b. Did you observe evidence or do you have any prior knowledge that there has been previously, any stained soil on the *property*?	Yes	No	Unk	Yes	No	Unk	
	☐	☐	☒	☐	☐	☒	
10a. Are there currently any registered or unregistered storage tanks (above or underground) located on the *property*?	Yes	No	Unk	Yes	No	Unk	
	☐	☐	☒	☐	☐	☒	
10b. Did you observe evidence or do you have any prior knowledge that there have been previously, any registered or unregistered storage tanks (above or underground) located on the *property*?	Yes	No	Unk	Yes	No	Unk	
	☐	☐	☒	☐	☐	☒	
11a. Are there currently any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* or adjacent to any structure located on the *property*?	Yes	No	Unk	Yes	No	Unk	
	☐	☐	☒	☐	☐	☒	
11b. Did you observe evidence or do you have any prior knowledge that there have been previously, any vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the *property* or adjacent to any structure located on the *property*?	Yes	No	Unk	Yes	No	Unk	
	☐	☐	☒	☐	☐	☒	
12a. Is there currently evidence of leaks, spills or staining by substances other than water, or foul odors, associated with any flooring, drains, walls, ceilings, or exposed grounds on the *property*?	Yes	No	Unk	Yes	No	Unk	
	☐	☒	☐	☐	☒	☐	

Weston & Sampson Phase I ESA Questionnaire
for Property Owner, Occupants, Prospective Purchaser and Consultant

Question	Owner			Occupants or Prospective Purchaser			If yes, provide description
13a. If the *property* is served by a private well or non-public water system, is there evidence or do you have prior knowledge that contaminants have been identified in the well or system that exceed guidelines applicable to the water system?	Yes ☐	No ☒	Unk ☐	Yes ☐	No ☒	Unk ☐	PUBLIC WATER SYSTEM
13b. If the *property* is served by a private well or non-public water system, is there evidence or do you have prior knowledge that the well has been designated as contaminated by any government environmental/health agency?	Yes ☐	No ☒	Unk ☐	Yes ☐	No ☒	Unk ☐	
14. Does the *owner* or *occupant* of the *property* have any knowledge of *environmental liens* or governmental notification relating to past or recurrent violations of environmental laws with respect to the *property* or any facility located on the *property*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	
15a. Has the *owner* or *occupant* of the *property* been informed of the past existence of *hazardous substances* or *petroleum products* with respect to the *property* or any facility located on the *property*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	
15b. Has the *owner* or *occupant* of the *property* been informed of the current existence of *hazardous substances* or *petroleum products* with respect to the *property* or any facility located on the *property*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	
15c. Has the *owner* or *occupant* of the *property* been informed of the past existence of environmental violations with respect to the *property* or any facility located on the *property*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	
15d. Has the *owner* or *occupant* of the *property* been informed of the current existence of environmental violations with respect to the *property* or any facility located on the *property*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	

Weston & Sampson Phase I ESA Questionnaire
for Property Owner, Occupants, Prospective Purchaser and Consultant

Question	Owner			Occupants or Prospective Purchaser			If yes, provide description
16. Does the *owner* or *occupant* of the *property* have any knowledge of any *environmental site assessment* of the *property* or facility that indicated the presence of *hazardous substances* or *petroleum products* on, or contamination of, the *property* or recommended further assessment of the *property*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	
17. Does the *owner* or *occupant* of the *property* know of any past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any *hazardous substance* or *petroleum products* involving the *property* by any *owner* or *occupant* of the *property*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	
18a. Does the *property* discharge *waste-water* (not including sanitary waste or storm water) onto or adjacent to the *property* and/or into a storm water system?	Yes ☐	No ☒	Unk ☐	Yes ☐	No ☒	Unk ☐	
18b. Does the *property* discharge waste water (not including sanitary waste or storm water) onto or adjacent to the *property* and/or into a sanitary sewer system?	Yes ☐	No ☒	Unk ☐	Yes ☐	No ☒	Unk ☐	
19. Did you observe evidence or do you have any prior knowledge that any *hazardous substances* or *petroleum products*, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials have been dumped above grade, buried and/or burned on the *property* ?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	
20. Is there a transformer, capacitor, or any hydraulic equipment for which there are any records indicating the presence of *PCBs*?	Yes ☐	No ☐	Unk ☒	Yes ☐	No ☐	Unk ☒	

This questionnaire answers was provided by:

Date: 2/27/19
Name: BRENNA L. ROBINSON
Signature: [signature]
Title: DIRECTOR, OFFICE OF ECON. COM. DEV.
Firm: CITY OF KINGSTON, NY
Address: 420 BROADWAY
KINGSTON, NY 12401

Phone number: 845 334-3924
Role(s) at the site: PROJECT MANAGER
Number of years at the site: 11
Relationship to *user* (for example, principal, employee, agent, consultant): EMPLOYEE

Appendix C:

Environmental Data Resources Inc. Report

615 Broadway
615 Broadway
Kingston, NY 12401

Inquiry Number: 5504885.2s
December 06, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

615 BROADWAY
KINGSTON, NY 12401

COORDINATES

Latitude (North):	41.9294990 - 41° 55' 46.19''
Longitude (West):	74.0052920 - 74° 0' 19.05''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	582472.9
UTM Y (Meters):	4642213.5
Elevation:	180 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5940395 KINGSTON WEST, NY
Version Date:	2013
East Map:	5939749 KINGSTON EAST, NY
Version Date:	2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150607
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
615 BROADWAY
KINGSTON, NY 12401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	AMERADA HESS CORP	625 BROADWAY	RCRA NonGen / NLR, ICIS, FINDS, ECHO, NY MANIFEST	Higher	16, 0.003, West
A2	CHEEKAM MART, INC.	625 BROADWAY AND HEN	NY UST	Higher	16, 0.003, West
A3	THOMPSON HARVEY L	625 BROADWAY	EDR Hist Auto	Higher	16, 0.003, West
A4	AMERICAN CLEANERS &	625 BROADWAY	EDR Hist Cleaner	Higher	16, 0.003, West
A5	BOB PERRYS SERVICE S	625 BROADWAY	NY LTANKS, NY Spills	Higher	16, 0.003, West
B6	ST MARTINS	40 CEDAR VALLEY RD	NY LTANKS	Higher	60, 0.011, South
A7	AMERICAN CLEANERS &	624 BROADWAY	EDR Hist Cleaner	Higher	96, 0.018, North
C8	ULSTER PERFORMING AR	601 BROADWAY	NY Spills	Higher	102, 0.019, ESE
C9	SAFECO ALARMS	612 BROADWAY	NY LTANKS	Higher	105, 0.020, NE
B10	OBRIEN RESIDENCE	55 CEDAR ST	NY Spills	Higher	158, 0.030, SSW
B11	RUZZO RENTAL	52 CEDAR ST	NY Spills	Higher	208, 0.039, South
A12	SPILL NUMBER 9801863	635 BROADWAY	NY Spills	Lower	211, 0.040, NW
B13	RUPCO, INC	20 CEDAR STREET	NY UST	Higher	219, 0.041, SE
B14	RUPCO, INC	20 CEDAR STREET	NY AST	Higher	219, 0.041, SE
B15	COMMERCIAL RUPCO	20 CEDAR ST	NY Spills	Higher	219, 0.041, SE
D16	VOLPIANI HAWTHORNE	11 FIELD CT	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	235, 0.045, NE
C17	CITY OF KINGSTON FIE	10 FIELD COURT	NY LTANKS	Higher	258, 0.049, ENE
D18	REAR OF RESIDENCE	18 O'NEIL ST	NY Spills	Higher	292, 0.055, NNE
C19	ECKERT WALTER	3 CEDAR	EDR Hist Auto	Higher	326, 0.062, ESE
D20	NEAR O'NEIL ST CENTE	25 FIELD COURT	NY Spills	Higher	347, 0.066, NE
D21	25 FIELD COURT	25 FIELD COURT	NY SHWS	Higher	347, 0.066, NE
E22	BOB PERRYS SERVICE S	649 BROADWAY	NY UST	Lower	379, 0.072, WNW
E23	PERRYS MOBIL SERVICE	649 BROADWAY	EDR Hist Auto	Lower	379, 0.072, WNW
E24	PERRY AUTOMOTIVE	649 BROADWAY	NY Spills	Lower	379, 0.072, WNW
E25	MOBIL S/S	649 BROADWAY	NY LTANKS	Lower	379, 0.072, WNW
E26	MILLER RES	21 VANDUSEN ST	NY LTANKS	Higher	413, 0.078, WNW
E27	RESIDENCE	25 VANDEUSSEN STREET	NY Spills	Higher	423, 0.080, WNW
D28	THE WONDERLY COMPANY	25 CORNELL STREET	NY UST	Higher	453, 0.086, NE
F29	SCHABOT AUTO BODY	29 ONEIL ST	RCRA-CESQG, NJ MANIFEST, NY MANIFEST	Lower	462, 0.087, North
G30	STEFANOWITZ GARAGE	571-577 BROADWAY	NY Spills	Higher	489, 0.093, ESE
G31	GUARANTEE AUTO RADIA	571-575 BROADWAY	EDR Hist Auto	Higher	489, 0.093, ESE
32	ROYAL CARTING TRUCK	CEDAR AND STERLING	NY Spills	Higher	489, 0.093, SW
H33	66 HENRY ST CORP	66 HENRY ST	EDR Hist Auto	Higher	490, 0.093, WSW
G34	SIDEWALK	580 BROADWAY	NY Spills	Higher	518, 0.098, ESE
H35	RESI: JOHNSON	63 HENRY ST	NY Spills	Higher	522, 0.099, WSW
G36	KINGSTON AUTO SUPPLY	561 BROADWAY	NY Spills	Higher	560, 0.106, ESE
F37	STAVO INDUSTRIES INC	26 DOWN ST	RCRA NonGen / NLR, ICIS, FINDS, ECHO, NY MANIFEST	Lower	564, 0.107, NNW
F38	BEAVER INDUSTRIES	26 DOWN STREET	NY Spills	Lower	564, 0.107, NNW
39	SUNOCO FOOD MART	675 BROADWAY	NY UST, NY Spills	Higher	688, 0.130, NW

MAPPED SITES SUMMARY

Target Property Address:
615 BROADWAY
KINGSTON, NY 12401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
40	KINGSTON RAIL YARD	CORNELL STREET BLOCK	US BROWNFIELDS	Higher	711, 0.135, ENE
41	EDWARD HILL ENTERPRI	107 GREENKILL AVENUE	NY UST	Higher	737, 0.140, SSW
42	SPILL NUMBER 0312741	109 CEDAR STREET	NY LTANKS	Higher	750, 0.142, SW
I43	TONY MINERVINI AUTO	117 TREMPER AVE	RCRA NonGen / NLR, NY MANIFEST	Higher	883, 0.167, NE
I44	TONY MINERVINI AUTO	117 TREMPER AVE	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	883, 0.167, NE
J45	FAMILY OF WOODSTOCK,	40 THOMAS STREET	NY UST	Higher	927, 0.176, East
46	PRIVATE HOME	104 HENRY STREET	NY LTANKS	Higher	988, 0.187, WSW
47	CANFIELD SUPPLY	SUSAN & SUMMER STS.	NY LTANKS	Lower	995, 0.188, SE
K48	ARATEX CORP.	13 SOUTH PROSPECT ST	NY LTANKS	Higher	1004, 0.190, SSW
L49	CANFIELD PLUMBING SU	534 BROADWAY	NY UST	Higher	1021, 0.193, ESE
M50	RIOLS RESIDENCE	54 FRANKLIN STREET	NY LTANKS	Higher	1040, 0.197, West
51	CANFIELD MACHINE & T	45 PINE GROVE AVE	NY UST, RCRA NonGen / NLR, FINDS, ECHO, NY...	Lower	1078, 0.204, SE
N52	YMCA OF KINGSTON AND	507 BROADWAY	NY AST	Higher	1090, 0.206, ESE
N53	YMCA OF KINGSTON AND	507 BROADWAY	NY UST	Higher	1090, 0.206, ESE
N54	KINGSTON YMCA	507 BROADWAY	NY LTANKS	Higher	1090, 0.206, ESE
O55	U.S POST OFFICE	90 CORNELL STREET	NY UST	Higher	1118, 0.212, ENE
56	HONDA OF KINGSTON	708 BROADWAY	NY Spills, RCRA NonGen / NLR, FINDS, ECHO, NY...	Higher	1126, 0.213, NW
O57	THE SHIRT FACTORY	77 CORNELL STREET	NY UST	Higher	1140, 0.216, NE
O58	Q D P ELECTRONICS AS	77 CORNELL ST	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	1140, 0.216, NE
O59	GANT SHIRT MAKERS	77 CORNELL STREET	NY DRYCLEANERS	Higher	1140, 0.216, NE
O60	NOT FADE AWAY TIE DY	77 CORNELL ST - 1ST	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	1140, 0.216, NE
O61	Q D P ELECTRONICS AS	77 CORNELL ST 2ND FL	NY LTANKS, RCRA NonGen / NLR, NY MANIFEST	Higher	1140, 0.216, NE
J62	SPILL NUMBER 9906580	150-56 58TH AV	NY LTANKS	Higher	1164, 0.220, East
L63	CANFIELD MACHINE & T	17 DEDERICK ST	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	1168, 0.221, East
K64	E.T. VENTURES LTD	2-6 SOUTH PROSPECT S	NY UST	Higher	1208, 0.229, SSW
65	RESIDENCE	188 TREMPER AVE	NY LTANKS	Higher	1247, 0.236, North
M66	KINGSTON LIBRARY	55 FRANKLIN STREET	NY UST	Higher	1251, 0.237, West
67	NATIONAL MICRONETICS	721 BROADWAY	RCRA NonGen / NLR, FINDS, ECHO, NY MANIFEST	Higher	1280, 0.242, WNW
68	N&S KINGSTON	25 DEDERICK ST	NY UST	Higher	1286, 0.244, ESE
69	MELLEY RESIDENCE	1 CLINTON AVE.	NY LTANKS	Lower	1432, 0.271, SW
P70	BROWN RESIDENCE	96 CLINTON AVE.	NY LTANKS	Higher	1467, 0.278, West
71	ZACCHEO RESIDENCE	25 CLINTON AVE.	NY LTANKS	Lower	1469, 0.278, SW
P72	APT. COMPLEX	96 CLINTON AND FRANK	NY LTANKS	Higher	1520, 0.288, West
73	ADIR GARAGE	495 BROADWAY	NY LTANKS, NY Spills	Higher	1594, 0.302, ESE
74	DEBIASE RES.: 1K UST	147 HENRY ST	NY LTANKS, NY Spills	Higher	1602, 0.303, WSW
Q75	NY TELE.	BRUYN AVE.	NY LTANKS	Higher	1612, 0.305, NNE
76	NATIONAL MICRONETICS	71 SMITH AVE	CORRACTS, NY LTANKS, NY UST, NY AST, NY Spills,...	Higher	1639, 0.310, East
77	UNITED METHODIST CHU	122 CLINTON AVE	NY LTANKS	Higher	1696, 0.321, West
78	SPILL NUMBER 0007750	82 PRINCE ST	NY LTANKS, NY Spills	Higher	1701, 0.322, East

MAPPED SITES SUMMARY

Target Property Address:
615 BROADWAY
KINGSTON, NY 12401

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
R79	NY TEL	80 BRYUN STREET	NY LTANKS	Higher	1741, 0.330, NE
80	FRISS RESIDENCE	58 HOFFMAN ST	NY LTANKS	Higher	1761, 0.334, SE
81	SPILL NUMBER 0107589	155 BRUYN AV	NY LTANKS	Higher	1822, 0.345, NNE
Q82	RESIDENCE	132 ONEIL ST	NY LTANKS	Higher	1834, 0.347, NE
83	VERIZON NEW YORK INC	60 BRUYN AVENUE	NY LTANKS, NY TANKS	Higher	1844, 0.349, NE
84	465 BROADWAY	465 BROADWAY	NY LTANKS	Higher	1895, 0.359, ESE
R85	SPILL NUMBER 9516090	139 CORNELL ST	NY LTANKS, NY Spills	Higher	1905, 0.361, NE
86	C. KINGSTON	464 HASBROCK AVE	NY LTANKS	Higher	1995, 0.378, East
S87	KINGSTON FD	19 EAST O'REILY ST.	NY LTANKS	Higher	2074, 0.393, ESE
S88	KINGSTON POINT SLF	25 EAST O'REILLY ST	NY SWF/LF	Higher	2090, 0.396, ESE
89	HUCK INTL INC	85 GRAND ST	NY LTANKS, NY VCP, NY BROWNFIELDS, NY Spills, RCRA...	Higher	2092, 0.396, ENE
T90	MEAGHER	WYNKOP PLACE	NY LTANKS	Higher	2455, 0.465, East
T91	MEAGHER SCHOOL	BUYNKOOP PLACE	NY LTANKS	Higher	2455, 0.465, East
92	HESS	ALBANY AVE	NY LTANKS, NY Spills	Higher	2484, 0.470, North
T93	REAL ESTATE TRANS.	4 SMITH AVE	NY LTANKS, NY Spills	Higher	2503, 0.474, East
94	KINGSTON SCHOOL	MARYS AVE	NY LTANKS	Higher	2512, 0.476, SSE
95	KINGSTON SCHOOL DIST	403 BROADWAY	NY LTANKS, NY Spills	Higher	2546, 0.482, ESE
96	185 O'NEAL STREET	185 O'NEAL STREET	NY LTANKS	Higher	2547, 0.482, NNE
97	STEWARTS ICE CREAM	GREENKILL AVE	NY LTANKS, NY Spills	Higher	2553, 0.484, SW
98	VAN ALSTYNE RESIDENC	182 ELMENDORF STREET	NY LTANKS	Lower	2566, 0.486, NNE
99	KINGSTON CSD - GEORG	67 WALL ST	NY LTANKS, RCRA NonGen / NLR, FINDS, ECHO, NY...	Higher	2591, 0.491, WSW
100	MJM	ANDREWS ST	NY LTANKS	Higher	2631, 0.498, SE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

EXECUTIVE SUMMARY

State and tribal leaking storage tank lists

INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land
NY HIST LTANKS ---------- Listing of Leaking Storage Tanks

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
NY CBS UST ---------- Chemical Bulk Storage Database
NY MOSF UST ---------- Major Oil Storage Facilities Database
NY MOSF ---------- Major Oil Storage Facility Site Listing
NY CBS ---------- Chemical Bulk Storage Site Listing
NY CBS AST ---------- Chemical Bulk Storage Database
NY MOSF AST ---------- Major Oil Storage Facilities Database
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

NY RES DECL ---------- Restrictive Declarations Listing
NY ENG CONTROLS ---------- Registry of Engineering Controls
NY INST CONTROL ---------- Registry of Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

NY ERP ---------- Environmental Restoration Program Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

NY SWTIRE ---------- Registered Waste Tire Storage & Facility List
NY SWRCY ---------- Registered Recycling Facility List
INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
ODI ---------- Open Dump Inventory
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
NY DEL SHWS ---------- Delisted Registry Sites
US CDL ---------- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

NY HIST UST ---------- Historical Petroleum Bulk Storage Database
NY HIST AST ---------- Historical Petroleum Bulk Storage Database

Local Land Records

NY LIENS ---------- Spill Liens Information

LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
NY Hist Spills ---------- SPILLS Database
NY SPILLS 90 ---------- SPILLS 90 data from FirstSearch
NY SPILLS 80 ---------- SPILLS 80 data from FirstSearch

Other Ascertainable Records

FUDS ---------- Formerly Used Defense Sites
DOD ---------- Department of Defense Sites
SCRD DRYCLEANERS ---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---------- Financial Assurance Information
EPA WATCH LIST ---------- EPA WATCH LIST
2020 COR ACTION ---------- 2020 Corrective Action Program List
TSCA ---------- Toxic Substances Control Act
TRIS ---------- Toxic Chemical Release Inventory System
SSTS ---------- Section 7 Tracking Systems
ROD ---------- Records Of Decision
RMP ---------- Risk Management Plans
RAATS ---------- RCRA Administrative Action Tracking System
PRP ---------- Potentially Responsible Parties
PADS ---------- PCB Activity Database System
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---------- Material Licensing Tracking System
COAL ASH DOE ---------- Steam-Electric Plant Operation Data
COAL ASH EPA ---------- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---------- PCB Transformer Registration Database
RADINFO ---------- Radiation Information Database
HIST FTTS ---------- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---------- Incident and Accident Data
CONSENT ---------- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---------- Indian Reservations
FUSRAP ---------- Formerly Utilized Sites Remedial Action Program
UMTRA ---------- Uranium Mill Tailings Sites
LEAD SMELTERS ---------- Lead Smelter Sites
US AIRS ---------- Aerometric Information Retrieval System Facility Subsystem
US MINES ---------- Mines Master Index File
ABANDONED MINES ---------- Abandoned Mines
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
UXO ---------- Unexploded Ordnance Sites
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing
NY AIRS ---------- Air Emissions Data
NY COAL ASH ---------- Coal Ash Disposal Site Listing
NY E DESIGNATION ---------- E DESIGNATION SITE LISTING
NY Financial Assurance ---------- Financial Assurance Information Listing
NY HSWDS ---------- Hazardous Substance Waste Disposal Site Inventory
NY SPDES ---------- State Pollutant Discharge Elimination System
NY VAPOR REOPENED ---------- Vapor Intrusion Legacy Site List
NY UIC ---------- Underground Injection Control Wells
NY COOLING TOWERS ---------- Registered Cooling Towers

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

NY RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
NY RGA LF ---------- Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NATIONAL MICRONETICS EPA ID:: NYD000799189	***71 SMITH AVE***	***E 1/4 - 1/2 (0.310 mi.)***	***76***	***164***

Federal RCRA generators list

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 RCRA-CESQG site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SCHABOT AUTO BODY	***29 ONEIL ST***	***N 0 - 1/8 (0.087 mi.)***	***F29***	***54***

EXECUTIVE SUMMARY

EPA ID:: NYR000020255

State- and tribal - equivalent CERCLIS

NY SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Conservation's Inactive Hazardous waste Disposal Sites in New York State.

A review of the NY SHWS list, as provided by EDR, and dated 08/09/2018 has revealed that there is 1 NY SHWS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
25 FIELD COURT Site Code: 563818	25 FIELD COURT	NE 0 - 1/8 (0.066 mi.)	D21	41

State and tribal landfill and/or solid waste disposal site lists

NY SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the list.

A review of the NY SWF/LF list, as provided by EDR, and dated 09/30/2018 has revealed that there is 1 NY SWF/LF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KINGSTON POINT SLF	25 EAST O'REILLY ST	ESE 1/4 - 1/2 (0.396 mi.)	S88	193

State and tribal leaking storage tank lists

NY LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the NY LTANKS list, as provided by EDR, and dated 10/16/2018 has revealed that there are 46 NY LTANKS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BOB PERRYS SERVICE S Site ID: 194781 Spill Number/Closed Date: 9002591 / 1990-10-10	***625 BROADWAY***	***W 0 - 1/8 (0.003 mi.)***	***A5***	***18***
ST MARTINS Site ID: 152807 Spill Number/Closed Date: 8703565 / 1987-09-25	40 CEDAR VALLEY RD	S 0 - 1/8 (0.011 mi.)	B6	22
SAFECO ALARMS	612 BROADWAY	NE 0 - 1/8 (0.020 mi.)	C9	25

Site ID: 167295 Spill Number/Closed Date: 9414762 / 1995-02-15				
CITY OF KINGSTON FIE Site ID: 349215 Spill Number/Closed Date: 0504408 / 2006-05-09	10 FIELD COURT	ENE 0 - 1/8 (0.049 mi.)	C17	38
MILLER RES Site ID: 168087 Site ID: 168088 Spill Number/Closed Date: 9710391 / 1998-02-09 Spill Number/Closed Date: 9710402 / 1998-02-26	21 VANDUSEN ST	WNW 0 - 1/8 (0.078 mi.)	E26	49
SPILL NUMBER 0312741 Site ID: 218957 Site ID: 269263 Spill Number/Closed Date: 0312741 / 2004-02-17 Spill Number/Closed Date: 9609988 / 1996-11-12	109 CEDAR STREET	SW 1/8 - 1/4 (0.142 mi.)	42	85
PRIVATE HOME Site ID: 344271 Spill Number/Closed Date: 0501123 / 2005-04-27	104 HENRY STREET	WSW 1/8 - 1/4 (0.187 mi.)	46	95
ARATEX CORP. Site ID: 120706 Spill Number/Closed Date: 9006439 / 1990-09-13	13 SOUTH PROSPECT ST	SSW 1/8 - 1/4 (0.190 mi.)	K48	97
RIOLS RESIDENCE Site ID: 97933 Spill Number/Closed Date: 9106103 / 1991-09-10	54 FRANKLIN STREET	W 1/8 - 1/4 (0.197 mi.)	M50	101
KINGSTON YMCA Site ID: 101334 Spill Number/Closed Date: 8707032 / 1989-01-05	507 BROADWAY	ESE 1/8 - 1/4 (0.206 mi.)	N54	112
Q D P ELECTRONICS AS Site ID: 426960 Spill Number/Closed Date: 1000041 / 2010-10-14	***77 CORNELL ST 2ND FL***	***NE 1/8 - 1/4 (0.216 mi.)***	***O61***	***131***
SPILL NUMBER 9906580 Site ID: 279893 Spill Number/Closed Date: 9906580 / 2000-01-25	150-56 58TH AV	E 1/8 - 1/4 (0.220 mi.)	J62	135
RESIDENCE Site ID: 329180 Spill Number/Closed Date: 0308016 / 2003-11-18	188 TREMPER AVE	N 1/8 - 1/4 (0.236 mi.)	65	143
BROWN RESIDENCE Site ID: 248357 Spill Number/Closed Date: 9400707 / 1994-12-12	96 CLINTON AVE.	W 1/4 - 1/2 (0.278 mi.)	P70	156
APT. COMPLEX Site ID: 72082 Spill Number/Closed Date: 9204506 / 1992-08-12	96 CLINTON AND FRANK	W 1/4 - 1/2 (0.288 mi.)	P72	158
ADIR GARAGE Site ID: 247848 Site ID: 247850 Spill Number/Closed Date: 9307465 / 1994-11-29 Spill Number/Closed Date: 9903340 / 2000-05-02	***495 BROADWAY***	***ESE 1/4 - 1/2 (0.302 mi.)***	***73***	***159***
DEBIASE RES.: 1K UST Site ID: 252455 Spill Number/Closed Date: 9315236 / 1995-01-10	***147 HENRY ST***	***WSW 1/4 - 1/2 (0.303 mi.)***	***74***	***161***
NY TELE.	BRUYN AVE.	NNE 1/4 - 1/2 (0.305 mi.)	Q75	163

Site ID: 245714 Spill Number/Closed Date: 9413239 / 1997-03-19				
NATIONAL MICRONETICS Site ID: 127122 Spill Number/Closed Date: 9405792 / 1994-07-29	***71 SMITH AVE***	***E 1/4 - 1/2 (0.310 mi.)***	***76***	***164***
UNITED METHODIST CHU Site ID: 372204 Spill Number/Closed Date: 0608271 / 2007-02-06	122 CLINTON AVE	W 1/4 - 1/2 (0.321 mi.)	77	179
SPILL NUMBER 0007750 Site ID: 171549 Spill Number/Closed Date: 0007750 / 2000-10-02	***82 PRINCE ST***	***E 1/4 - 1/2 (0.322 mi.)***	***78***	***180***
NY TEL Site ID: 202676 Spill Number/Closed Date: 9206418 / 1992-10-28	80 BRYUN STREET	NE 1/4 - 1/2 (0.330 mi.)	R79	182
FRISS RESIDENCE Site ID: 343565 Spill Number/Closed Date: 0500557 / 2005-07-12	58 HOFFMAN ST	SE 1/4 - 1/2 (0.334 mi.)	80	183
SPILL NUMBER 0107589 Site ID: 115361 Spill Number/Closed Date: 0107589 / 2001-10-25	155 BRUYN AV	NNE 1/4 - 1/2 (0.345 mi.)	81	184
RESIDENCE Site ID: 227166 Spill Number/Closed Date: 9507664 / 1996-01-18	132 ONEIL ST	NE 1/4 - 1/2 (0.347 mi.)	Q82	185
VERIZON NEW YORK INC Site ID: 66735 Spill Number/Closed Date: 8607185 / 1987-03-16	***60 BRUYN AVENUE***	***NE 1/4 - 1/2 (0.349 mi.)***	***83***	***186***
465 BROADWAY Site ID: 199387 Spill Number/Closed Date: 9905768 / 2000-05-02	465 BROADWAY	ESE 1/4 - 1/2 (0.359 mi.)	84	188
SPILL NUMBER 9516090 Site ID: 285842 Spill Number/Closed Date: 8704643 / 1987-09-18	***139 CORNELL ST***	***NE 1/4 - 1/2 (0.361 mi.)***	***R85***	***189***
C. KINGSTON Site ID: 299769 Spill Number/Closed Date: 8706155 / 1990-01-30	464 HASBROCK AVE	E 1/4 - 1/2 (0.378 mi.)	86	191
KINGSTON FD Site ID: 203480 Spill Number/Closed Date: 8808070 / 1989-01-24	19 EAST O'REILY ST.	ESE 1/4 - 1/2 (0.393 mi.)	S87	192
HUCK INTL INC Site ID: 262073 Site ID: 262074 Spill Number/Closed Date: 8702421 / 1987-07-13 Spill Number/Closed Date: 8702581 / 1987-07-13	***85 GRAND ST***	***ENE 1/4 - 1/2 (0.396 mi.)***	***89***	***194***
MEAGHER Site ID: 83854 Spill Number/Closed Date: 8702023 / 1987-09-24	WYNKOP PLACE	E 1/4 - 1/2 (0.465 mi.)	T90	212
MEAGHER SCHOOL Site ID: 190205 Spill Number/Closed Date: 9704427 / 1998-02-26	BUYNKOOP PLACE	E 1/4 - 1/2 (0.465 mi.)	T91	213
HESS	***ALBANY AVE***	***N 1/4 - 1/2 (0.470 mi.)***	***92***	***215***

Site ID: 308078
Site ID: 308079
Site ID: 308080
Spill Number/Closed Date: 8606498 / 1987-01-16
Spill Number/Closed Date: 8708254 / 1988-01-04
Spill Number/Closed Date: 9509055 / 1995-11-01

REAL ESTATE TRANS.	***4 SMITH AVE***	***E 1/4 - 1/2 (0.474 mi.)***	***T93***	***218***
Site ID: 359963				
Spill Number/Closed Date: 0513482 / 2006-02-22				
KINGSTON SCHOOL	MARYS AVE	SSE 1/4 - 1/2 (0.476 mi.)	94	220
Site ID: 313696				
Spill Number/Closed Date: 8701694 / 1987-09-24				
KINGSTON SCHOOL DIST	***403 BROADWAY***	***ESE 1/4 - 1/2 (0.482 mi.)***	***95***	***222***
Site ID: 384149				
Spill Number/Closed Date: 0704067 / 2010-12-31				
185 O'NEAL STREET	185 O'NEAL STREET	NNE 1/4 - 1/2 (0.482 mi.)	96	225
Site ID: 253591				
Spill Number/Closed Date: 9104282 / 1991-07-22				
STEWARTS ICE CREAM	***GREENKILL AVE***	***SW 1/4 - 1/2 (0.484 mi.)***	***97***	***226***
Site ID: 184060				
Spill Number/Closed Date: 8801762 / 1988-06-02				
KINGSTON CSD - GEORG	***67 WALL ST***	***WSW 1/4 - 1/2 (0.491 mi.)***	***99***	***229***
Site ID: 416798				
Spill Number/Closed Date: 0904615 / 2010-12-29				
MJM	ANDREWS ST	SE 1/4 - 1/2 (0.498 mi.)	100	233
Site ID: 257565				
Spill Number/Closed Date: 8701866 / 1987-09-24				

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL S/S	649 BROADWAY	WNW 0 - 1/8 (0.072 mi.)	E25	48
Site ID: 180380				
Spill Number/Closed Date: 9209571 / 1995-02-13				
CANFIELD SUPPLY	SUSAN & SUMMER STS.	SE 1/8 - 1/4 (0.188 mi.)	47	96
Site ID: 292837				
Spill Number/Closed Date: 8907069 / 1989-11-01				
MELLEY RESIDENCE	1 CLINTON AVE.	SW 1/4 - 1/2 (0.271 mi.)	69	155
Site ID: 291957				
Spill Number/Closed Date: 9410869 / 1994-11-17				
ZACCHEO RESIDENCE	25 CLINTON AVE.	SW 1/4 - 1/2 (0.278 mi.)	71	157
Site ID: 284912				
Spill Number/Closed Date: 9103931 / 1992-07-29				
VAN ALSTYNE RESIDENC	182 ELMENDORF STREET	NNE 1/4 - 1/2 (0.486 mi.)	98	228
Site ID: 214349				
Spill Number/Closed Date: 9311337 / 1994-01-10				

State and tribal registered storage tank lists

NY UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database

A review of the NY UST list, as provided by EDR, has revealed that there are 15 NY UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHEEKAM MART, INC. Database: UST, Date of Government Version: 09/25/2018	625 BROADWAY AND HEN	W 0 - 1/8 (0.003 mi.)	A2	12
RUPCO, INC Database: UST, Date of Government Version: 09/25/2018	20 CEDAR STREET	SE 0 - 1/8 (0.041 mi.)	B13	29
THE WONDERLY COMPANY Database: UST, Date of Government Version: 09/25/2018	25 CORNELL STREET	NE 0 - 1/8 (0.086 mi.)	D28	52
SUNOCO FOOD MART Database: UST, Date of Government Version: 09/25/2018	***675 BROADWAY***	***NW 1/8 - 1/4 (0.130 mi.)***	***39***	***71***
EDWARD HILL ENTERPRI Database: UST, Date of Government Version: 09/25/2018	107 GREENKILL AVENUE	SSW 1/8 - 1/4 (0.140 mi.)	41	81
FAMILY OF WOODSTOCK, Database: UST, Date of Government Version: 09/25/2018	40 THOMAS STREET	E 1/8 - 1/4 (0.176 mi.)	J45	93
CANFIELD PLUMBING SU Database: UST, Date of Government Version: 09/25/2018	534 BROADWAY	ESE 1/8 - 1/4 (0.193 mi.)	L49	98
YMCA OF KINGSTON AND Database: UST, Date of Government Version: 09/25/2018	507 BROADWAY	ESE 1/8 - 1/4 (0.206 mi.)	N53	110
U.S POST OFFICE Database: UST, Date of Government Version: 09/25/2018	90 CORNELL STREET	ENE 1/8 - 1/4 (0.212 mi.)	O55	113
THE SHIRT FACTORY Database: UST, Date of Government Version: 09/25/2018	77 CORNELL STREET	NE 1/8 - 1/4 (0.216 mi.)	O57	121
E.T. VENTURES LTD Database: UST, Date of Government Version: 09/25/2018	2-6 SOUTH PROSPECT S	SSW 1/8 - 1/4 (0.229 mi.)	K64	140
KINGSTON LIBRARY Database: UST, Date of Government Version: 09/25/2018	55 FRANKLIN STREET	W 1/8 - 1/4 (0.237 mi.)	M66	144
N&S KINGSTON Database: UST, Date of Government Version: 09/25/2018	25 DEDERICK ST	ESE 1/8 - 1/4 (0.244 mi.)	68	150

Lower Elevation	Address	Direction / Distance	Map ID	Page
BOB PERRYS SERVICE S Database: UST, Date of Government Version: 09/25/2018	649 BROADWAY	WNW 0 - 1/8 (0.072 mi.)	E22	42
CANFIELD MACHINE & T Database: UST, Date of Government Version: 09/25/2018	***45 PINE GROVE AVE***	***SE 1/8 - 1/4 (0.204 mi.)***	***51***	***102***

NY AST: The Aboveground Storage Tank database contains registered ASTs. The data come from the Department of Environmental Conservation's Petroleum Bulk Storage (PBS) Database.

A review of the NY AST list, as provided by EDR, has revealed that there are 2 NY AST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RUPCO, INC Database: AST, Date of Government Version: 09/25/2018 Facility Id: 3-991083	20 CEDAR STREET	SE 0 - 1/8 (0.041 mi.)	B14	31
YMCA OF KINGSTON AND Database: AST, Date of Government Version: 09/25/2018 Facility Id: 3-025518	507 BROADWAY	ESE 1/8 - 1/4 (0.206 mi.)	N52	108

State and tribal voluntary cleanup sites

NY VCP: Voluntary Cleanup Agreements. The voluntary remedial program uses private monies to get contaminated sites remediated to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination.

A review of the NY VCP list, as provided by EDR, has revealed that there is 1 NY VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HUCK INTL INC Database: VCP, Date of Government Version: 08/09/2018 Site Code: 56863	***85 GRAND ST***	***ENE 1/4 - 1/2 (0.396 mi.)***	***89***	***194***

State and tribal Brownfields sites

NY BROWNFIELDS: Brownfields Site List

A review of the NY BROWNFIELDS list, as provided by EDR, and dated 08/09/2018 has revealed that there is 1 NY BROWNFIELDS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HUCK INTL INC Site Code: 554332	***85 GRAND ST***	***ENE 1/4 - 1/2 (0.396 mi.)***	***89***	***194***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program,

which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 09/18/2018 has revealed that there is 1 US BROWNFIELDS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KINGSTON RAIL YARD ACRES property ID: 235926	CORNELL STREET BLOCK	ENE 1/8 - 1/4 (0.135 mi.)	40	76

Records of Emergency Release Reports

NY Spills: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

A review of the NY Spills list, as provided by EDR, and dated 10/16/2018 has revealed that there are 16 NY Spills sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BOB PERRYS SERVICE S Spill Number/Closed Date: 0890748 / 2009-01-30 Spill Number/Closed Date: 1012903 / 2017-02-17 Spill Number/Closed Date: 9400488 / 1995-01-10 Spill Number/Closed Date: 9609505 / 2011-03-28 Site ID: 402404 Site ID: 447202 Site ID: 194782 Site ID: 194783	***625 BROADWAY***	***W 0 - 1/8 (0.003 mi.)***	***A5***	***18***
ULSTER PERFORMING AR Spill Number/Closed Date: 9412758 / 1995-01-10 Site ID: 141934	601 BROADWAY	ESE 0 - 1/8 (0.019 mi.)	C8	24
OBRIEN RESIDENCE Spill Number/Closed Date: 0507845 / 2006-02-24 Site ID: 353333	55 CEDAR ST	SSW 0 - 1/8 (0.030 mi.)	B10	26
RUZZO RENTAL Spill Number/Closed Date: 1406127 / 2014-09-08 Site ID: 499584	52 CEDAR ST	S 0 - 1/8 (0.039 mi.)	B11	27
COMMERCIAL RUPCO Spill Number/Closed Date: 1803003 / 2018-10-02 Site ID: 571621	20 CEDAR ST	SE 0 - 1/8 (0.041 mi.)	B15	33
REAR OF RESIDENCE Spill Number/Closed Date: 9702813 / 1997-06-27 Site ID: 92418	18 O'NEIL ST	NNE 0 - 1/8 (0.055 mi.)	D18	39
NEAR O'NEIL ST CENTE Spill Number/Closed Date: 0905668 / 2014-05-23 Site ID: 417945	25 FIELD COURT	NE 0 - 1/8 (0.066 mi.)	D20	40
RESIDENCE Spill Number/Closed Date: 9500923 / 1995-05-25 Site ID: 71015	25 VANDEUSSEN STREET	WNW 0 - 1/8 (0.080 mi.)	E27	51
STEFANOWITZ GARAGE	571-577 BROADWAY	ESE 0 - 1/8 (0.093 mi.)	G30	59

Spill Number/Closed Date: 9614340 / 2010-03-24 Site ID: 138758				
ROYAL CARTING TRUCK Spill Number/Closed Date: 0701203 / 2007-08-22 Site ID: 380673	CEDAR AND STERLING	SW 0 - 1/8 (0.093 mi.)	32	61
SIDEWALK Spill Number/Closed Date: 9112284 / 1992-03-04 Site ID: 295316	580 BROADWAY	ESE 0 - 1/8 (0.098 mi.)	G34	62
RESI: JOHNSON Spill Number/Closed Date: 9914308 / 2000-03-20 Site ID: 276476	63 HENRY ST	WSW 0 - 1/8 (0.099 mi.)	H35	63
KINGSTON AUTO SUPPLY Spill Number/Closed Date: 9111095 / 1992-01-27 Site ID: 113007	561 BROADWAY	ESE 0 - 1/8 (0.106 mi.)	G36	64

Lower Elevation	Address	Direction / Distance	Map ID	Page
SPILL NUMBER 9801863 Spill Number/Closed Date: 9801863 / 1998-07-14 Site ID: 182035	635 BROADWAY	NW 0 - 1/8 (0.040 mi.)	A12	28
PERRY AUTOMOTIVE Spill Number/Closed Date: 1508314 / 2015-11-10 Site ID: 515895	649 BROADWAY	WNW 0 - 1/8 (0.072 mi.)	E24	47
BEAVER INDUSTRIES Spill Number/Closed Date: 8901299 / 1989-08-09 Site ID: 194644	26 DOWN STREET	NNW 0 - 1/8 (0.107 mi.)	F38	70

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/01/2018 has revealed that there are 12 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AMERADA HESS CORP EPA ID:: NYD986905255	***625 BROADWAY***	***W 0 - 1/8 (0.003 mi.)***	***A1***	***8***
VOLPIANI HAWTHORNE EPA ID:: NYR000028969	***11 FIELD CT***	***NE 0 - 1/8 (0.045 mi.)***	***D16***	***34***
TONY MINERVINI AUTO EPA ID:: NYD982540981	***117 TREMPER AVE***	***NE 1/8 - 1/4 (0.167 mi.)***	***I43***	***86***
TONY MINERVINI AUTO EPA ID:: NYD986964013	***117 TREMPER AVE***	***NE 1/8 - 1/4 (0.167 mi.)***	***I44***	***90***
HONDA OF KINGSTON	***708 BROADWAY***	***NW 1/8 - 1/4 (0.213 mi.)***	***56***	***116***

EPA ID:: NYD122745730				
Q D P ELECTRONICS AS EPA ID:: NYD063788541	***77 CORNELL ST***	***NE 1/8 - 1/4 (0.216 mi.)***	***O58***	***123***
NOT FADE AWAY TIE DY EPA ID:: NYD987020898	***77 CORNELL ST - 1ST***	***NE 1/8 - 1/4 (0.216 mi.)***	***O60***	***127***
Q D P ELECTRONICS AS EPA ID:: NYR000036913	***77 CORNELL ST 2ND FL***	***NE 1/8 - 1/4 (0.216 mi.)***	***O61***	***131***
CANFIELD MACHINE & T EPA ID:: NYD980533517	***17 DEDERICK ST***	***E 1/8 - 1/4 (0.221 mi.)***	***L63***	***136***
NATIONAL MICRONETICS EPA ID:: NYD000799197	***721 BROADWAY***	***WNW 1/8 - 1/4 (0.242 mi.)***	***67***	***146***

Lower Elevation	Address	Direction / Distance	Map ID	Page
STAVO INDUSTRIES INC EPA ID:: NYD982738403	***26 DOWN ST***	***NNW 0 - 1/8 (0.107 mi.)***	***F37***	***65***
CANFIELD MACHINE & T EPA ID:: NYD162495790	***45 PINE GROVE AVE***	***SE 1/8 - 1/4 (0.204 mi.)***	***51***	***102***

NY DRYCLEANERS: A listing of all registered drycleaning facilities.

A review of the NY DRYCLEANERS list, as provided by EDR, and dated 03/07/2018 has revealed that there is 1 NY DRYCLEANERS site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GANT SHIRT MAKERS Facility Id: 3-5108-00012	77 CORNELL STREET	NE 1/8 - 1/4 (0.216 mi.)	O59	127

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 07/01/2018 has revealed that there are 13 NY MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AMERADA HESS CORP EPA ID: NYD986905255	***625 BROADWAY***	***W 0 - 1/8 (0.003 mi.)***	***A1***	***8***
VOLPIANI HAWTHORNE EPA ID: NYR000028969	***11 FIELD CT***	***NE 0 - 1/8 (0.045 mi.)***	***D16***	***34***
TONY MINERVINI AUTO EPA ID: NYD982540981	***117 TREMPER AVE***	***NE 1/8 - 1/4 (0.167 mi.)***	***I43***	***86***
TONY MINERVINI AUTO EPA ID: NYD986964013	***117 TREMPER AVE***	***NE 1/8 - 1/4 (0.167 mi.)***	***I44***	***90***
HONDA OF KINGSTON EPA ID: NYD122745730	***708 BROADWAY***	***NW 1/8 - 1/4 (0.213 mi.)***	***56***	***116***
Q D P ELECTRONICS AS	***77 CORNELL ST***	***NE 1/8 - 1/4 (0.216 mi.)***	***O58***	***123***

EPA ID: NYD063788541

NOT FADE AWAY TIE DY EPA ID: NYD987020898	***77 CORNELL ST - 1ST***	***NE 1/8 - 1/4 (0.216 mi.)***	***O60***	***127***
Q D P ELECTRONICS AS EPA ID: NYR000036913	***77 CORNELL ST 2ND FL***	***NE 1/8 - 1/4 (0.216 mi.)***	***O61***	***131***
CANFIELD MACHINE & T EPA ID: NYD980533517	***17 DEDERICK ST***	***E 1/8 - 1/4 (0.221 mi.)***	***L63***	***136***
NATIONAL MICRONETICS EPA ID: NYD000799197	***721 BROADWAY***	***WNW 1/8 - 1/4 (0.242 mi.)***	***67***	***146***

Lower Elevation	Address	Direction / Distance	Map ID	Page
SCHABOT AUTO BODY EPA ID: NYR000020255	***29 ONEIL ST***	***N 0 - 1/8 (0.087 mi.)***	***F29***	***54***
STAVO INDUSTRIES INC EPA ID: NYD982738403	***26 DOWN ST***	***NNW 0 - 1/8 (0.107 mi.)***	***F37***	***65***
CANFIELD MACHINE & T EPA ID: NYD162495790	***45 PINE GROVE AVE***	***SE 1/8 - 1/4 (0.204 mi.)***	***51***	***102***

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2017 has revealed that there is 1 NJ MANIFEST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SCHABOT AUTO BODY EPA Id: NYR000020255	***29 ONEIL ST***	***N 0 - 1/8 (0.087 mi.)***	***F29***	***54***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 5 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
THOMPSON HARVEY L	625 BROADWAY	W 0 - 1/8 (0.003 mi.)	A3	17
ECKERT WALTER	3 CEDAR	ESE 0 - 1/8 (0.062 mi.)	C19	40

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GUARANTEE AUTO RADIA	571-575 BROADWAY	ESE 0 - 1/8 (0.093 mi.)	G31	60
66 HENRY ST CORP	66 HENRY ST	WSW 0 - 1/8 (0.093 mi.)	H33	62

Lower Elevation	Address	Direction / Distance	Map ID	Page
PERRYS MOBIL SERVICE	649 BROADWAY	WNW 0 - 1/8 (0.072 mi.)	E23	46

EDR Hist Cleaner: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Cleaner list, as provided by EDR, has revealed that there are 2 EDR Hist Cleaner sites within approximately 0.125 miles of the target property.

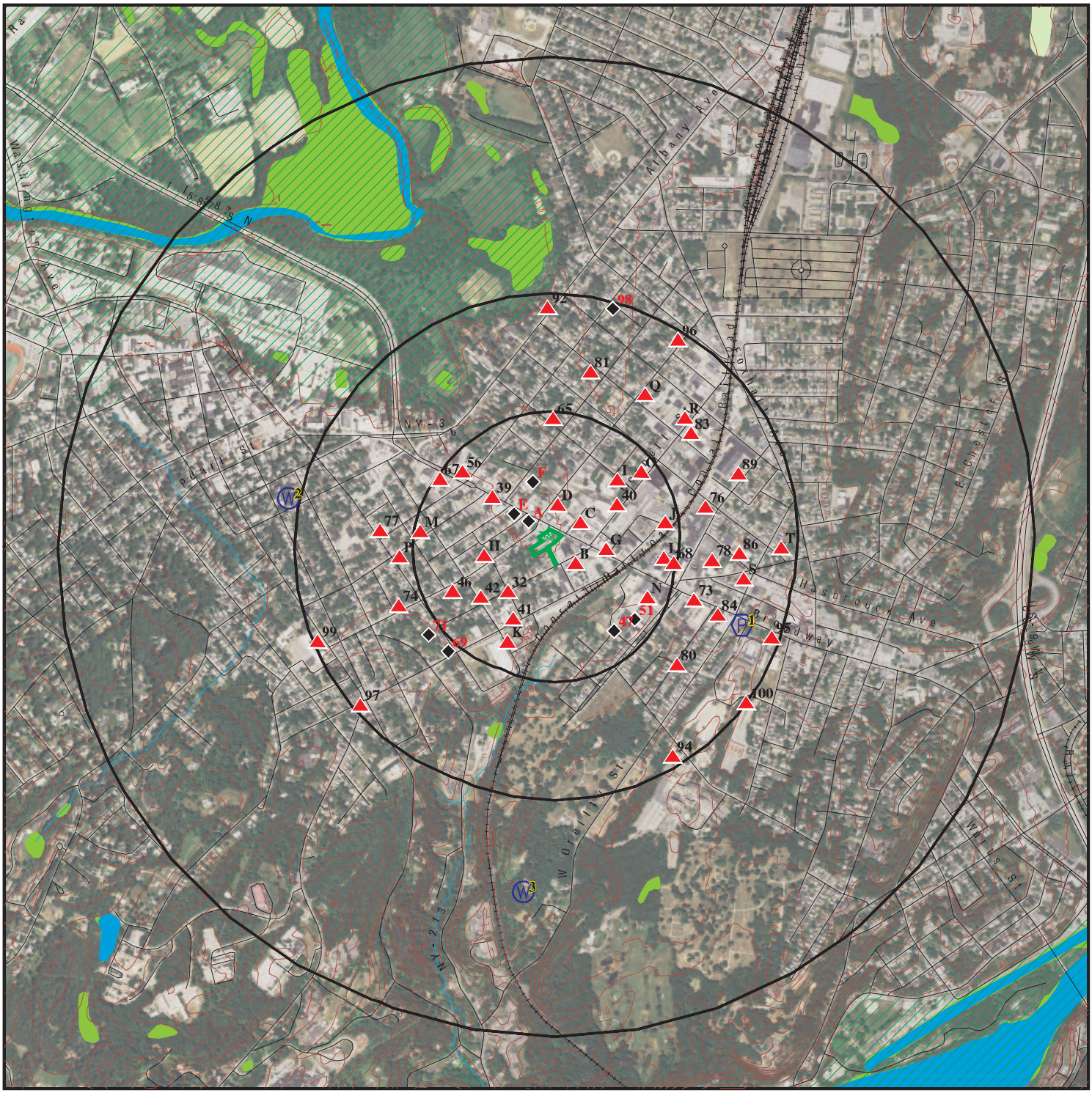
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
AMERICAN CLEANERS &	625 BROADWAY	W 0 - 1/8 (0.003 mi.)	A4	17
AMERICAN CLEANERS &	624 BROADWAY	N 0 - 1/8 (0.018 mi.)	A7	24

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
ECONO-WASH AND DRY CLEANING CENTER	NY SHWS
CH - NORTH ST. KINGSTON MGP	NY SHWS
CENTRAL HUDSON G & E /KINGSTON GAS	SEMS-ARCHIVE

OVERVIEW MAP - 5504885.2S



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	609 Broadway	CLIENT:	Weston & Sampson
ADDRESS:	609 Broadway Kingston NY 12401	CONTACT:	Rachelle Mcknight
		INQUIRY #:	5504885.2s
LAT/LONG:	41.929499 / 74.005292	DATE:	December 06, 2018 3:00 pm

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DETAIL MAP - 5504885.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- 100-year flood zone
- 500-year flood zone

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 609 Broadway	CLIENT: Weston & Sampson
ADDRESS: 609 Broadway Kingston NY 12401	CONTACT: Rachelle Mcknight INQUIRY #: 5504885.2s
LAT/LONG: 41.929499 / 74.005292	DATE: December 06, 2018 3:00 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	1	0	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		1	0	NR	NR	NR	1
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
NY SHWS	1.000		1	0	0	0	NR	1
State and tribal landfill and/or solid waste disposal site lists								
NY SWF/LF	0.500		0	0	1	NR	NR	1
State and tribal leaking storage tank lists								
INDIAN LUST	0.500		0	0	0	NR	NR	0
NY LTANKS	0.500		6	9	31	NR	NR	46
NY HIST LTANKS	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY UST	0.250		4	11	NR	NR	NR	15
NY CBS UST	0.250		0	0	NR	NR	NR	0
NY MOSF UST	0.500		0	0	0	NR	NR	0
NY MOSF	0.500		0	0	0	NR	NR	0
NY CBS	0.250		0	0	NR	NR	NR	0
NY AST	0.250		1	1	NR	NR	NR	2
NY CBS AST	0.250		0	0	NR	NR	NR	0
NY MOSF AST	0.500		0	0	0	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
NY TANKS	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
NY RES DECL	0.125		0	NR	NR	NR	NR	0
NY ENG CONTROLS	0.500		0	0	0	NR	NR	0
NY INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
NY VCP	0.500		0	0	1	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
NY BROWNFIELDS	0.500		0	0	1	NR	NR	1
NY ERP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	1	0	NR	NR	1
Local Lists of Landfill / Solid Waste Disposal Sites								
NY SWTIRE	0.500		0	0	0	NR	NR	0
NY SWRCY	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
NY DEL SHWS	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
NY HIST UST	0.250		0	0	NR	NR	NR	0
NY HIST AST	TP		NR	NR	NR	NR	NR	0
Local Land Records								
NY LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
NY Spills	0.125		16	NR	NR	NR	NR	16
NY Hist Spills	0.125		0	NR	NR	NR	NR	0
NY SPILLS 90	0.125		0	NR	NR	NR	NR	0
NY SPILLS 80	0.125		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		3	9	NR	NR	NR	12
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
NY AIRS	TP		NR	NR	NR	NR	NR	0
NY COAL ASH	0.500		0	0	0	NR	NR	0
NY DRYCLEANERS	0.250		0	1	NR	NR	NR	1
NY E DESIGNATION	0.125		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
NY Financial Assurance	TP		NR	NR	NR	NR	NR	0
NY HSWDS	0.500		0	0	0	NR	NR	0
NY MANIFEST	0.250		4	9	NR	NR	NR	13
NJ MANIFEST	0.250		1	0	NR	NR	NR	1
NY SPDES	TP		NR	NR	NR	NR	NR	0
NY VAPOR REOPENED	0.500		0	0	0	NR	NR	0
NY UIC	TP		NR	NR	NR	NR	NR	0
NY COOLING TOWERS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		5	NR	NR	NR	NR	5
EDR Hist Cleaner	0.125		2	NR	NR	NR	NR	2
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
NY RGA HWS	TP		NR	NR	NR	NR	NR	0
NY RGA LF	TP		NR	NR	NR	NR	NR	0
- Totals --		0	44	41	35	0	0	120

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
West
< 1/8
0.003 mi.
16 ft.

AMERADA HESS CORP
625 BROADWAY
KINGSTON, NY 12401

Site 1 of 7 in cluster A

RCRA NonGen / NLR **1000446714**
ICIS **NYD986905255**
FINDS
ECHO
NY MANIFEST

Relative:
Higher

Actual:
180 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	AMERADA HESS CORP
Facility address:	625 BROADWAY KINGSTON, NY 12401
EPA ID:	NYD986905255
Mailing address:	HESS PLZ TERMINAL OPS WOODBRIDGE, NY 07095
Contact:	Not reported
Contact address:	HESS PLZ TERMINAL OPS WOODBRIDGE, NY 07095
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	AMERADA HESS CORP
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	212-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	AMERADA HESS CORP
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	212-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No

AMERADA HESS CORP (Continued) **1000446714**

On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: AMERADA HESS CORP
Classification: Not a generator, verified

Date form received by agency: 01/28/1998
Site name: AMERADA HESS CORP
Classification: Not a generator, verified

Date form received by agency: 06/29/1990
Site name: AMERADA HESS CORP
Classification: Large Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

ICIS:
Enforcement Action ID: 02-2002-7912
FRS ID: 110029056606
Action Name: BOB PERRY'S MOBIL
Facility Name: AMERADA HESS CORP
Facility Address: 625 BROADWAY
KINGSTON, NY 12401
Enforcement Action Type: RCRA 9006 Field Citation (UST)
Facility County: ULSTER
Program System Acronym: ICIS
Enforcement Action Forum Desc: Administrative - Formal
EA Type Code: 9006FC
Facility SIC Code: 5541
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 41.9298
Longitude in Decimal Degrees: -74.005203
Permit Type Desc: Not reported
Program System Acronym: 25450
Facility NAICS Code: Not reported
Tribal Land Code: Not reported

AMERADA HESS CORP (Continued) **1000446714**

Facility Name: AMERADA HESS CORP
Address: 625 BROADWAY
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 5541

Facility Name: AMERADA HESS CORP
Address: 625 BROADWAY
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: 5541

FINDS:

Registry ID: 110029056606

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1000446714
Registry ID: 110029056606
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110029056606

NY MANIFEST:

Country: USA
EPA ID: NYD986905255
Facility Status: Not reported
Location Address 1: #32429 625 BROADWAY & HENRY
Code: BP

AMERADA HESS CORP (Continued) **1000446714**

Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	KINGSTON
Location State:	NY
Location Zip:	12401
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYD986905255
Mailing Name:	AMERADA HESS
Mailing Contact:	MICHAEL ROWEN
Mailing Address 1:	1 HESS PLAZAWB-6
Mailing Address 2:	Not reported
Mailing City:	WOODBRIDGE
Mailing State:	NJ
Mailing Zip:	07095
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9087506000

NY MANIFEST:

Document ID:	NJA2195049
Manifest Status:	C
seq:	Not reported
Year:	1995
Trans1 State ID:	06815
Trans2 State ID:	Not reported
Generator Ship Date:	10/18/1995
Trans1 Recv Date:	10/18/1995
Trans2 Recv Date:	/ /
TSD Site Recv Date:	10/20/1995
Part A Recv Date:	11/06/1995
Part B Recv Date:	11/06/1995
Generator EPA ID:	NYD986905255
Trans1 EPA ID:	PAD014146179
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002200046
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D018 - BENZENE 0.5 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00030

AMERADA HESS CORP (Continued) **1000446714**

Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

A2 **CHEEKAM MART, INC.** **NY UST** **U001843230**
West **625 BROADWAY AND HENRY ST.** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.003 mi.
16 ft. **Site 2 of 7 in cluster A**

Relative:
Higher

Actual:
180 ft.

UST:

Id/Status:	3-174068 / Active
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	12/03/2022
UTM X:	582445.77667
UTM Y:	4642442.26694
Site Type:	Retail Gasoline Sales

Affiliation Records:

Site Id:	32558
Affiliation Type:	Mail Contact
Company Name:	CHEEKAM KING, LLC
Contact Type:	PRESIDENT
Contact Name:	KAMRAN KHAN
Address1:	5 OLEV LANE
Address2:	Not reported
City:	NEW PALTZ
State:	NY
Zip Code:	12561
Country Code:	999
Phone:	(845) 797-2200
EMail:	CHEEKAM@YAHOO.COM
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2014-09-11

Site Id:	32558
Affiliation Type:	Facility Operator
Company Name:	CHEEKAM MART, INC.
Contact Type:	Not reported
Contact Name:	CHEEFOOI WONG
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 338-2895
EMail:	Not reported
Fax Number:	Not reported

CHEEKAM MART, INC. (Continued) **U001843230**

Modified By: AYLAGATI
Date Last Modified: 2016-11-03

Site Id: 32558
Affiliation Type: Emergency Contact
Company Name: CHEEKAM KING, LLC
Contact Type: Not reported
Contact Name: KAMRAN KHAN
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (845) 797-2200
EMail: Not reported
Fax Number: Not reported
Modified By: jpcummin
Date Last Modified: 2008-08-07

Site Id: 32558
Affiliation Type: Facility Owner
Company Name: CHEEKAM KING, LLC
Contact Type: PRESIDENT
Contact Name: KAMRAN KHAN
Address1: 5 OLEV LANE
Address2: Not reported
City: NEW PALTZ
State: NY
Zip Code: 12561
Country Code: 999
Phone: (845) 797-2200
EMail: CHEEKAM@YAHOO.COM
Fax Number: Not reported
Modified By: BHYUKOWE
Date Last Modified: 2014-09-11

Tank Info:

Tank Number: 1
Tank ID: 71816
Tank Status: Closed Prior to Micro Conversion, 03/91
Material Name: Closed Prior to Micro Conversion, 03/91
Capacity Gallons: 10000
Install Date: 12/01/1969
Date Tank Closed: Not reported
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0008
Common Name of Substance: Diesel

Tightness Test Method: 01
Date Test: 01/01/1988
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT

CHEEKAM MART, INC. (Continued) **U001843230**

Last Modified: 04/14/2017

Equipment Records:

C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
J02 - Dispenser - Suction Dispenser
G00 - Tank Secondary Containment - None
H00 - Tank Leak Detection - None
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None

Tank Number: 1R1
Tank ID: 71819
Tank Status: In Service
Material Name: In Service
Capacity Gallons: 10000
Install Date: 06/01/1990
Date Tank Closed: Not reported
Registered: True
Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 2712
Common Name of Substance: Gasoline/Ethanol

Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: C
Modified By: GAAHLERS
Last Modified: 11/21/2017

Equipment Records:

J01 - Dispenser - Pressurized Dispenser
E04 - Piping Secondary Containment - Double walled UG
F04 - Pipe External Protection - Fiberglass
C03 - Pipe Location - Aboveground/Underground Combination
K01 - Spill Prevention - Catch Basin
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
B04 - Tank External Protection - Fiberglass
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
L99 - Piping Leak Detection - Other
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I01 - Overfill - Float Vent Valve
G04 - Tank Secondary Containment - Double-Walled (Underground)
L07 - Piping Leak Detection - Pressurized Piping Leak Detector

Tank Number: 1R2
Tank ID: 71820
Tank Status: In Service
Material Name: In Service
Capacity Gallons: 10000
Install Date: 06/01/1990
Date Tank Closed: Not reported
Registered: True

CHEEKAM MART, INC. (Continued) **U001843230**

Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 0008
Common Name of Substance: Diesel

Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: C
Modified By: GAAHLERS
Last Modified: 11/21/2017

Equipment Records:

E04 - Piping Secondary Containment - Double walled UG
J01 - Dispenser - Pressurized Dispenser
F04 - Pipe External Protection - Fiberglass
C03 - Pipe Location - Aboveground/Underground Combination
K01 - Spill Prevention - Catch Basin
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
L99 - Piping Leak Detection - Other
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I01 - Overfill - Float Vent Valve
G04 - Tank Secondary Containment - Double-Walled (Underground)
L07 - Piping Leak Detection - Pressurized Piping Leak Detector

Tank Number: 1R3
Tank ID: 71821
Tank Status: In Service
Material Name: In Service
Capacity Gallons: 10000
Install Date: 06/01/1990
Date Tank Closed: Not reported
Registered: True
Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 2712
Common Name of Substance: Gasoline/Ethanol

Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: C
Modified By: GAAHLERS
Last Modified: 11/21/2017

Equipment Records:

E04 - Piping Secondary Containment - Double walled UG
J01 - Dispenser - Pressurized Dispenser
F04 - Pipe External Protection - Fiberglass
C03 - Pipe Location - Aboveground/Underground Combination
K01 - Spill Prevention - Catch Basin
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
A03 - Tank Internal Protection - Fiberglass Liner (FRP)
L99 - Piping Leak Detection - Other

CHEEKAM MART, INC. (Continued) **U001843230**

H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
I01 - Overfill - Float Vent Valve
G04 - Tank Secondary Containment - Double-Walled (Underground)
L07 - Piping Leak Detection - Pressurized Piping Leak Detector

Tank Number:	2
Tank ID:	71817
Tank Status:	Closed Prior to Micro Conversion, 03/91
Material Name:	Closed Prior to Micro Conversion, 03/91
Capacity Gallons:	10000
Install Date:	12/01/1969
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009
Common Name of Substance:	Gasoline
Tightness Test Method:	01
Date Test:	01/01/1988
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
H00 - Tank Leak Detection - None
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None

Tank Number:	3
Tank ID:	71818
Tank Status:	Closed Prior to Micro Conversion, 03/91
Material Name:	Closed Prior to Micro Conversion, 03/91
Capacity Gallons:	10000
Install Date:	12/01/1969
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009
Common Name of Substance:	Gasoline
Tightness Test Method:	01
Date Test:	01/01/1988
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

CHEEKAM MART, INC. (Continued) **U001843230**

Equipment Records:

B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
H00 - Tank Leak Detection - None
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None

A3 **THOMPSON HARVEY L** **EDR Hist Auto** **1020888419**
West **625 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.003 mi.
16 ft. **Site 3 of 7 in cluster A**

Relative: EDR Hist Auto
Higher

Actual: **180 ft.**

Year:	Name:	Type:
1969	THOMPSON HARVEY L	Gasoline Service Stations
1970	THOMPSON HARVEY L	Gasoline Service Stations
1971	THOMPSON HARVEY L	Gasoline Service Stations
1972	THOMPSON HARVEY L	Gasoline Service Stations

A4 **AMERICAN CLEANERS & DYERS CO** **EDR Hist Cleaner** **1019927394**
West **625 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.003 mi.
16 ft. **Site 4 of 7 in cluster A**

Relative: EDR Hist Cleaner
Higher

Actual: **180 ft.**

Year:	Name:	Type:
1971	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1972	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1973	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1974	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1975	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1976	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1977	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1978	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1979	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1980	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs

A5
West
< 1/8
0.003 mi.
16 ft.

BOB PERRYS SERVICE STATION
625 BROADWAY
KINGSTON, NY 12401

Site 5 of 7 in cluster A

Database(s): NY LTANKS, NY Spills
EDR ID Number: S110769436
EPA ID Number: N/A

Relative:
Higher

Actual:
180 ft.

LTANKS:

Spill Number/Closed Date:	9002591 / 1990-10-10
Facility ID:	9002591
Site ID:	194781
Spill Date:	1990-06-06
Spill Cause:	Tank Failure
Spill Source:	Gasoline Station or other PBS Facility
Spill Class:	C3
Cleanup Ceased:	1990-06-18
SWIS:	5630
Investigator:	DUNN
Referred To:	Not reported
Reported to Dept:	1990-06-06
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1990-06-08
Spill Record Last Update:	1990-10-12
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	162299
DEC Memo:	""
Remarks:	"WHILE EXCAVATING KNOWN TANKS ENCOUNTERED THREE ADDITIONAL TANKS WITH SOME CONTAMINATED SOIL AROUND THEM"

All Materials:

Site ID:	194781
Operable Unit ID:	940604
Operable Unit:	01
Material ID:	437333
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	0890748 / 2009-01-30

BOB PERRYS SERVICE STATION (Continued) **S110769436**

Facility ID:	0890748
Facility Type:	ER
DER Facility ID:	351610
Site ID:	402404
DEC Region:	3
Spill Cause:	Housekeeping
Spill Class:	D3
SWIS:	5608
Spill Date:	2008-08-07
Investigator:	jpcummin
Referred To:	Not reported
Reported to Dept:	2008-08-07
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	DEC
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	Not reported
Remediation Phase:	0
Date Entered In Computer:	2008-08-07
Spill Record Last Update:	2009-01-30
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller Company:	Not reported
Contact Name:	CHEEKAM KING
DEC Memo:	"PBS to followup. 1/30/09 Pictures received from Steve Kalka showing buckets and sumps taken care of. jc"
Remarks:	"Spill discovered during inspection. Some product in fill bucket at super tank. Also water with sheen in direct fill sumps."

All Materials:

Site ID:	402404
Operable Unit ID:	1159163
Operable Unit:	01
Material ID:	2150274
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Not reported
Recovered:	Not reported
Oxygenate:	Not reported

Spill Number/Closed Date:	1012903 / 2017-02-17
Facility ID:	1012903
Facility Type:	ER
DER Facility ID:	351610
Site ID:	447202
DEC Region:	3
Spill Cause:	Unknown
Spill Class:	C3
SWIS:	5608

BOB PERRYS SERVICE STATION (Continued) **S110769436**

Spill Date:	2011-03-28
Investigator:	GHPRATT
Referred To:	Not reported
Reported to Dept:	2011-03-28
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Gasoline Station or other PBS Facility
Spill Notifier:	DEC
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	Not reported
Remediation Phase:	0
Date Entered In Computer:	2011-03-28
Spill Record Last Update:	2017-02-17
Spiller Name:	kamran khan
Spiller Company:	Cheekam King, LLC
Spiller Address:	5 olven lane
Spiller Company:	999
Contact Name:	KAMRAN KHAN
DEC Memo:	"3-28-11 Closed out former Hess Spill # 96-09505 based on their conpletion of cleanup of this site. jm 7-25-16 Reviewed file and determined that this spill number would be closed out. This is based on old info when this was former Hess station 96-09505. NFA jm 2-17-17 Spill Closed GHP"
Remarks:	"Former Hess station where they completed cleanup. The current owner is responsible at this time for sampling/monitoring/remediation."

All Materials:

Site ID:	447202
Operable Unit ID:	1197332
Operable Unit:	01
Material ID:	2193618
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9400488 / 1995-01-10
Facility ID:	9400488
Facility Type:	ER
DER Facility ID:	162299
Site ID:	194782
DEC Region:	3
Spill Cause:	Traffic Accident
Spill Class:	D3
SWIS:	5630
Spill Date:	1994-04-11
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1994-04-11
CID:	Not reported

BOB PERRYS SERVICE STATION (Continued) **S110769436**

Water Affected:	Not reported
Spill Source:	Gasoline Station or other PBS Facility
Spill Notifier:	Affected Persons
Cleanup Ceased:	1995-01-10
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1994-04-13
Spill Record Last Update:	1995-01-10
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	""
Remarks:	"CUSTOMER WAS MOVING AND HIT DISPENSER KINGSTON FIRE & POLICE ON SITE CLEANED UP WITH SPEEDI-DRI WASHED DOWN BY FIRE DEPT. S/S SHUT DOWN AND LINES TO BE TESTED"

All Materials:

Site ID:	194782
Operable Unit ID:	997988
Operable Unit:	01
Material ID:	387801
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9609505 / 2011-03-28
Facility ID:	9609505
Facility Type:	ER
DER Facility ID:	162299
Site ID:	194783
DEC Region:	3
Spill Cause:	Unknown
Spill Class:	C3
SWIS:	5630
Spill Date:	1996-10-29
Investigator:	JYMCCART
Referred To:	Not reported
Reported to Dept:	1996-10-29
CID:	233
Water Affected:	Not reported
Spill Source:	Gasoline Station or other PBS Facility
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False

BOB PERRYS SERVICE STATION (Continued) **S110769436**

Remediation Phase:	0
Date Entered In Computer:	1996-10-29
Spill Record Last Update:	2011-08-02
Spiller Name:	KEVIN MCGUINNESS
Spiller Company:	HESS STATION # 32427
Spiller Address:	625 BROADWAY
Spiller Company:	001
Contact Name:	KEVIN MCGUINNESS
DEC Memo:	"10/5/2009 -- Spoke to Hess and EnviroTrac. The system was shut down in April 2009. August sampling shows some sort of increase in Xylenes in one well. Will resample one well in October to confirm the hit. Report may be late October, to confirm or deny the hit. ELM 12-20-10 Spoke with Ed Russo and Dan Ruffini of Envirotrac regarding closure of this site. In the beginning of December I sent a letter (edoc'd) to current owner informing them that Hess is no longer being required to perform any work at this site and they will need to investigate MW2 and sample quarterly for 1 year. jm 3-28-11 This spill number is being closed out based on the cleanup performed and completed by Hess. A new spill number will be opened for this address naming the current owner as the Rp for this site. jm New spill number for this site is 10-12903 jm"
Remarks:	"test results returned today contaimination to soil "

All Materials:

Site ID:	194783
Operable Unit ID:	1040979
Operable Unit:	01
Material ID:	345228
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

B6 **ST MARTINS** **NY LTANKS** **S100139358**
South **40 CEDAR VALLEY RD** **N/A**
< 1/8 **RED OAKS MILL, NY**
0.011 mi.
60 ft. **Site 1 of 6 in cluster B**

Relative: **Higher**
Actual: **181 ft.**

LTANKS:

Spill Number/Closed Date:	8703565 / 1987-09-25
Facility ID:	8703565
Site ID:	152807
Spill Date:	1987-07-31
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Not reported
Cleanup Ceased:	1987-08-20
SWIS:	1400
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-07-31
CID:	Not reported

ST MARTINS (Continued) **S100139358**

Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	1987-08-20
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-08-03
Spill Record Last Update:	1987-09-25
Spiller Name:	Not reported
Spiller Company:	ST MARTINS CHURCH
Spiller Address:	SAME
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	129706
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON / / : 8/20/87-TANK REMOVED.1K TO BE INSTALLED.NFA. "
Remarks:	"TTTF 2K -.730GPH"

All TTF:

Facility ID:	8703565
Spill Number:	8703565
Spill Tank Test:	1531250
Site ID:	152807
Tank Number:	Not reported
Tank Size:	0
Material:	0001
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	152807
Operable Unit ID:	910201
Operable Unit:	01
Material ID:	469793
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

A7 **AMERICAN CLEANERS & DYERS CO** **EDR Hist Cleaner** **1019927393**
North **624 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.018 mi.
96 ft. **Site 6 of 7 in cluster A**

Relative: EDR Hist Cleaner
Higher

Actual:
180 ft.

Year:	Name:	Type:
1969	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs
1970	AMERICAN CLEANERS & DYERS CO	Drycleaning Plants, Except Rugs

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C8 **ULSTER PERFORMING ARTS** **NY Spills** **S102110134**
ESE **601 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY**
0.019 mi.
102 ft. **Site 1 of 4 in cluster C**

Relative: SPILLS:
Higher

Actual:
181 ft.

Spill Number/Closed Date:	9412758 / 1995-01-10
Facility ID:	9412758
Facility Type:	ER
DER Facility ID:	121168
Site ID:	141934
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C4
SWIS:	5630
Spill Date:	1994-12-23
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1994-12-23
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Tank Truck
Spill Notifier:	Responsible Party
Cleanup Ceased:	1995-01-10
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	KOSCO
Spiller Address:	Not reported
Spiller Company:	999
Contact Name:	Not reported
DEC Memo:	""
Remarks:	"LES THAN ONE GAL WAS SPILLED DUE TO A PROBLEM WITH FILL CAP CLEANED UP WITH SPEEDI-DRI"

All Materials:

Site ID:	141934
Operable Unit ID:	1010344
Operable Unit:	01
Material ID:	375051
Material Code:	0001A
Material Name:	#2 fuel oil

ULSTER PERFORMING ARTS (Continued) **S102110134**

Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

C9 **SAFECO ALARMS** **NY LTANKS** **S102674398**
NE **612 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY**
0.020 mi.
105 ft. **Site 2 of 4 in cluster C**

Relative: **Higher**
Actual: **180 ft.**

LTANKS:

Spill Number/Closed Date:	9414762 / 1995-02-15
Facility ID:	9414762
Site ID:	167295
Spill Date:	1995-02-09
Spill Cause:	Tank Overfill
Spill Source:	Commercial/Industrial
Spill Class:	C5
Cleanup Ceased:	1995-02-15
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1995-02-09
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	KOSCO
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	140957
DEC Memo:	""
Remarks:	"BASEMENT TANK CUSTOMER FOUND SPILL AFTER DELIVERY CLEAN UP CREW SENT AND CLEANED UP"

All Materials:

Site ID:	167295
Operable Unit ID:	1012265
Operable Unit:	01
Material ID:	373487
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported

SAFECO ALARMS (Continued) **S102674398**

Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

B10
SSW
< 1/8
0.030 mi.
158 ft.

OBRIEN RESIDENCE **NY Spills** **S107410775**
55 CEDAR ST **N/A**
KINGSTON, NY

Site 2 of 6 in cluster B

Relative:
Higher

Actual:
181 ft.

SPILLS:

Spill Number/Closed Date:	0507845 / 2006-02-24
Facility ID:	0507845
Facility Type:	ER
DER Facility ID:	300653
Site ID:	353333
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C4
SWIS:	5608
Spill Date:	2005-09-29
Investigator:	DXTRAVER
Referred To:	Not reported
Reported to Dept:	2005-09-29
CID:	409
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Local Agency
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2005-09-29
Spill Record Last Update:	2010-05-25
Spiller Name:	SHEWN OBRIEN
Spiller Company:	OBRIEN RESIDENCE
Spiller Address:	55 CEDAR ST
Spiller Company:	001
Contact Name:	SHEWN OBRIEN
DEC Memo:	"Tank had been abandoned four years ago and filled with sand. Tank was removed and found to have leaked. Had quite a few holes. Soil was contaminated under tank. Homeowner did not yet give approval to do clean up. Contacting insurance company. TCR dated 11/05 and addendum dated 2/21/06 received from Tankmasters. NFA DT"
Remarks:	"TANK REMOVAL."

All Materials:

Site ID:	353333
Operable Unit ID:	1110796
Operable Unit:	01
Material ID:	2100837
Material Code:	0001A
Material Name:	#2 fuel oil

OBRIEN RESIDENCE (Continued) **S107410775**

Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

B11 **RUZZO RENTAL** **NY Spills** **S117362698**
South **52 CEDAR ST** **N/A**
< 1/8 **KINGSTON, NY**
0.039 mi.
208 ft. **Site 3 of 6 in cluster B**

Relative: SPILLS:
Higher

Actual:
181 ft.

Spill Number/Closed Date:	1406127 / 2014-09-08
Facility ID:	1406127
Facility Type:	ER
DER Facility ID:	454615
Site ID:	499584
DEC Region:	3
Spill Cause:	Human Error
Spill Class:	B4
SWIS:	5608
Spill Date:	2014-09-05
Investigator:	DXWEITZ
Referred To:	Not reported
Reported to Dept:	2014-09-08
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2014-09-08
Spill Record Last Update:	2014-09-08
Spiller Name:	VICTOR RUZZO
Spiller Company:	KOSCO
Spiller Address:	52 CEDAR ST
Spiller Company:	999
Contact Name:	VICTOR RUZZO
DEC Memo:	"9/8/14 Kosco came to fill AST in basement on 9/5. Tenant, Simon Lowry (845-338-6322 ext. 3422) said that he called Kosco to tell them not to deliver because the tank was already full, but they came anyway, and spilled fuel oil, both inside basement and outside. Mr. Lowry said that there had been some cleanup outside done by Kosco, but wasn't sure if anybody got inside the house. He has not been home since 9/5, but will check later today. Spoke to Victor Ruzzo, the owner, and he didn't know if Kosco finished the cleanup. Spoke to Kelly, at Kosco, who is checking on status, and will call back. Kelly called back to say that Kosco did clean up both the outside and inside to the customer's satisfaction. NFA dw"
Remarks:	"Received a call complaining of an odor on Friday 09/05, did not believe it was reportable after investigation they decided they

RUZZO RENTAL (Continued) **S117362698**

should contact dec, c/u pending"

All Materials:

Site ID:	499584
Operable Unit ID:	1248999
Operable Unit:	01
Material ID:	2250531
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Not reported
Recovered:	Not reported
Oxygenate:	Not reported

A12 **SPILL NUMBER 9801863** **NY Spills** **S104646940**
NW **635 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY**
0.040 mi.
211 ft. **Site 7 of 7 in cluster A**

Relative: **Lower**
Actual: **179 ft.**

SPILLS:

Spill Number/Closed Date:	9801863 / 1998-07-14
Facility ID:	9801863
Facility Type:	ER
DER Facility ID:	152619
Site ID:	182035
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C3
SWIS:	5630
Spill Date:	1998-05-12
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1998-05-12
CID:	207
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1998-05-12
Spill Record Last Update:	1998-07-22
Spiller Name:	ALBERT TEETSEL
Spiller Company:	FLEET BANK
Spiller Address:	635 BROADWAY
Spiller Company:	001
Contact Name:	ALBERT TEETSEL
DEC Memo:	""
Remarks:	"discovered while closing underground tank"

All Materials:

Site ID:	182035

SPILL NUMBER 9801863 (Continued) **S104646940**

Operable Unit ID:	1059760
Operable Unit:	01
Material ID:	323774
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

B13 **RUPCO, INC** **NY UST** **U004289074**
SE **20 CEDAR STREET** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.041 mi.
219 ft. **Site 4 of 6 in cluster B**

Relative: **Higher**

Actual: **181 ft.**

UST:

Id/Status:	3-991083 / Active
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	09/01/2022
UTM X:	Not reported
UTM Y:	Not reported
Site Type:	Other

Affiliation Records:

Site Id:	571370
Affiliation Type:	Facility Owner
Company Name:	RUPCO, INC
Contact Type:	C2G ENVIRONMENTAL CONSULTANTS REPRESENTATIVE
Contact Name:	TONI HOKANSON
Address1:	289 FAIR STREET
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 255-3835
EMail:	Not reported
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-11

Site Id:	571370
Affiliation Type:	Mail Contact
Company Name:	C2 G ENVIRONMENTAL CONSULTANTS, LLC
Contact Type:	Not reported
Contact Name:	TONI HOKANSON
Address1:	83 S. PUTT CORNERS ROAD
Address2:	Not reported
City:	NEW PALTZ
State:	NY
Zip Code:	12561
Country Code:	001

RUPCO, INC (Continued) **U004289074**

Phone:	(845) 255-4900
EMail:	THOKANSON@C2G.US
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-12

Site Id:	571370
Affiliation Type:	Facility Operator
Company Name:	RUPCO, INC
Contact Type:	Not reported
Contact Name:	[INVALID]-
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 255-3835
EMail:	Not reported
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-11

Site Id:	571370
Affiliation Type:	Emergency Contact
Company Name:	RUPCO, INC
Contact Type:	Not reported
Contact Name:	DAVID CLAYTON
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 750-0229
EMail:	Not reported
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-11

Tank Info:

Tank Number:	1
Tank ID:	276175
Tank Status:	Temporarily Out of Service
Material Name:	Temporarily Out of Service
Capacity Gallons:	8000
Install Date:	09/06/2017
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Tightness Test Method:	-
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	AAVITARI

RUPCO, INC (Continued) **U004289074**

Last Modified: 06/11/2018

B14 **RUPCO, INC** **NY AST** **A100462516**
SE **20 CEDAR STREET** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.041 mi.
219 ft. **Site 5 of 6 in cluster B**

Relative:
Higher

Actual:
181 ft.

AST:

Region:	STATE
DEC Region:	3
Site Status:	Active
Facility Id:	3-991083
Program Type:	PBS
UTM X:	Not reported
UTM Y:	Not reported
Expiration Date:	09/01/2022
Site Type:	Other

Affiliation Records:

Site Id:	571370
Affiliation Type:	Facility Owner
Company Name:	RUPCO, INC
Contact Type:	C2G ENVIRONMENTAL CONSULTANTS REPRESENTATIVE
Contact Name:	TONI HOKANSON
Address1:	289 FAIR STREET
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 255-3835
EMail:	Not reported
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-11

Site Id:	571370
Affiliation Type:	Mail Contact
Company Name:	C2 G ENVIRONMENTAL CONSULTANTS, LLC
Contact Type:	Not reported
Contact Name:	TONI HOKANSON
Address1:	83 S. PUTT CORNERS ROAD
Address2:	Not reported
City:	NEW PALTZ
State:	NY
Zip Code:	12561
Country Code:	001
Phone:	(845) 255-4900
EMail:	THOKANSON@C2G.US
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-12

Site Id:	571370
Affiliation Type:	Facility Operator
Company Name:	RUPCO, INC
Contact Type:	Not reported

RUPCO, INC (Continued) **A100462516**

Contact Name:	[INVALID]-
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 255-3835
EMail:	Not reported
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-11

Site Id:	571370
Affiliation Type:	Emergency Contact
Company Name:	RUPCO, INC
Contact Type:	Not reported
Contact Name:	DAVID CLAYTON
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 750-0229
EMail:	Not reported
Fax Number:	Not reported
Modified By:	AAVITARI
Date Last Modified:	2018-06-11

Tank Info:

Tank Number:	2
Tank Id:	276176
Tank Location:	3
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	Temporarily Out of Service
Pipe Model:	Not reported
Install Date:	09/06/2017
Capacity Gallons:	275
Tightness Test Method:	-
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	AAVITARI
Last Modified:	06/11/2018
Material Name:	#2 fuel oil (on-site consumption)

Tank Number:	3
Tank Id:	276177
Tank Location:	2
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	Temporarily Out of Service
Pipe Model:	Not reported
Install Date:	09/06/2017

RUPCO, INC (Continued) **A100462516**

Capacity Gallons:	275
Tightness Test Method:	-
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	AAVITARI
Last Modified:	06/11/2018
Material Name:	#2 fuel oil (on-site consumption)

Tank Number:	4
Tank Id:	276178
Tank Location:	2
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	Temporarily Out of Service
Pipe Model:	Not reported
Install Date:	09/06/2017
Capacity Gallons:	275
Tightness Test Method:	-
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	AAVITARI
Last Modified:	06/11/2018
Material Name:	#2 fuel oil (on-site consumption)

B15 **COMMERCIAL RUPCO** **NY Spills** **S122479879**
SE **20 CEDAR ST** **N/A**
< 1/8 **KINGSTON, NY**
0.041 mi.
219 ft. **Site 6 of 6 in cluster B**

Relative: Higher
Actual: 181 ft.

SPILLS:

Spill Number/Closed Date:	1803003 / 2018-10-02
Facility ID:	1803003
Facility Type:	ER
DER Facility ID:	524734
Site ID:	571621
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C4
SWIS:	5630
Spill Date:	2018-06-18
Investigator:	MXTIPPLE
Referred To:	Not reported
Reported to Dept:	2018-06-18
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0

COMMERCIAL RUPCO (Continued) **S122479879**

Date Entered In Computer:	2018-06-18
Spill Record Last Update:	2018-10-02
Spiller Name:	Not reported
Spiller Company:	AFORTABLE HOUSING
Spiller Address:	Not reported
Spiller Company:	999
Contact Name:	PAUL DAYNE
DEC Memo:	"6/18/18 e-mail from C2G: The 3 ASTs came out fine. All 3 were documented in good/fair condition. The two (2) in the basement were on a good slab with not signs of release. The one (1) outside also appears to be fine however did grab one (1) sample as it was not on concrete. The UST is confirmed to be a 6 K we did identify a few holes in one end of the tank however contamination seems relatively small. We removed approximately two (2) yards of impacted soil with highest PID at 175 parts per million (PPM). I did call in spill number 18-03003 for reference. We sampled the excavation for laboratory data as well as may sample the stockpiled two (2) yards to see if had has go offsite for disposal as it is fairly limited. Tomorrow we plan to dispose of the tanks, backfill, grade etc.. Call me anytime to review. Best regards, Paul Bany Director of Operations, V.P. C2G Environmental Consultants, LLC Cell: (631) 682-3074 pbany@c2g.us - www.C2G.us mt 10-1-18 TCR rec'd from C2G by email 9/28. Forwarded to MT. jc 10/2/18 TCR received, reviewed, NFA. mt"
Remarks:	"it was an underground . They don't know if any ground water was affected yet. The cleanup is in progress"

All Materials:

Site ID:	571621
Operable Unit ID:	1319441
Operable Unit:	01
Material ID:	2327445
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Not reported
Recovered:	Not reported
Oxygenate:	Not reported

D16 **VOLPIANI HAWTHORNE** **RCRA NonGen / NLR** **1004760004**
NE **11 FIELD CT** **FINDS** **NYR000028969**
< 1/8 **KINGSTON, NY 12401** **ECHO**
0.045 mi. **NY MANIFEST**
235 ft. **Site 1 of 5 in cluster D**

Relative: Higher
Actual: 181 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	VOLPIANI HAWTHORNE
Facility address:	11 FIELD CT KINGSTON, NY 12401
EPA ID:	NYR000028969
Mailing address:	RTE 28 KINGSTON, NY 12401
Contact:	DANIEL SILBERBERG
Contact address:	RTE 28 KINGSTON, NY 12401

VOLPIANI HAWTHORNE (Continued) **1004760004**

Contact country: US
Contact telephone: 914-339-6146
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: HAWTHORNE VOLPIANI
Owner/operator address: 896 RTE 28
KINGSTON, NY 12401
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: HAWTHORNE VOLPIANI
Owner/operator address: 896 RTE 28
KINGSTON, NY 12401
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: VOLPIANI HAWTHORNE
Classification: Not a generator, verified

VOLPIANI HAWTHORNE (Continued) **1004760004**

Date form received by agency: 02/28/1998
Site name: VULPLANT HAWTHORNE
Classification: Large Quantity Generator

Date form received by agency: 09/09/1996
Site name: VOLPIANI HAWTHORNE
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: NONE
. Waste name: None

Violation Status: No violations found

FINDS:

Registry ID: 110004528235

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1004760004
Registry ID: 110004528235
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004528235

NY MANIFEST:
Country: USA
EPA ID: NYR000028969
Facility Status: Not reported
Location Address 1: 11 FIELD CT
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: Not reported

NY MANIFEST:
EPAID: NYR000028969
Mailing Name: VOLPIANI HAWTHORNE
Mailing Contact: DANIEL SILBERBERG
Mailing Address 1: 896 RTE 28
Mailing Address 2: Not reported
Mailing City: KINGSTON
Mailing State: NY
Mailing Zip: 12401
Mailing Zip 4: Not reported

VOLPIANI HAWTHORNE (Continued) **1004760004**

Mailing Country:	USA
Mailing Phone:	9143396146

NY MANIFEST:

Document ID:	NJA2590554
Manifest Status:	K
seq:	Not reported
Year:	1997
Trans1 State ID:	17446
Trans2 State ID:	88642
Generator Ship Date:	08/01/1997
Trans1 Recv Date:	08/04/1997
Trans2 Recv Date:	08/05/1997
TSD Site Recv Date:	08/06/1997
Part A Recv Date:	/ /
Part B Recv Date:	09/10/1997
Generator EPA ID:	NYR000028969
Trans1 EPA ID:	NYD980761191
Trans2 EPA ID:	NYD980761191
TSDF ID 1:	NJD002200046
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01270
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	008
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00035
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	100

VOLPIANI HAWTHORNE (Continued) **1004760004**

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

C17 **CITY OF KINGSTON FIELD COURT** **NY LTANKS** **S106972522**
ENE **10 FIELD COURT** **N/A**
< 1/8 **KINGSTON, NY**
0.049 mi.
258 ft. **Site 3 of 4 in cluster C**

Relative:
Higher

Actual:
182 ft.

LTANKS:

Spill Number/Closed Date:	0504408 / 2006-05-09
Facility ID:	0504408
Site ID:	349215
Spill Date:	2005-07-13
Spill Cause:	Tank Failure
Spill Source:	Private Dwelling
Spill Class:	C4
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	2005-07-13
CID:	444
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2005-07-13
Spill Record Last Update:	2006-05-24
Spiller Name:	STEVE KALKA
Spiller Company:	NA
Spiller Address:	10 FIELD COURT
Spiller County:	001
Spiller Contact:	STEVE KALKA
Spiller Phone:	(845) 434-3509
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	295665
DEC Memo:	"550 #2 FO Ust removed 7/13/05. composite samples taken of sides and bottom (2). Results indicate compliance with TAGM's."
Remarks:	"CORROSION IN TANK; 1 CUBIC YARD ON PLASTIC:"

All Materials:

Site ID:	349215
Operable Unit ID:	1106843
Operable Unit:	01
Material ID:	2096162
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	.00
Oxygenate:	Not reported

D18 **REAR OF RESIDENCE** **NY Spills** **S102664253**
NNE **18 O'NEIL ST** **N/A**
< 1/8 **KINGSTON, NY**
0.055 mi.
292 ft. **Site 2 of 5 in cluster D**

Relative:
Higher

Actual:
180 ft.

SPILLS:

Spill Number/Closed Date:	9702813 / 1997-06-27
Facility ID:	9702813
Facility Type:	ER
DER Facility ID:	82993
Site ID:	92418
DEC Region:	3
Spill Cause:	Abandoned Drums
Spill Class:	C3
SWIS:	5630
Spill Date:	1997-06-04
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	1997-06-05
CID:	999
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	DEC
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1997-06-05
Spill Record Last Update:	1998-03-20
Spiller Name:	Not reported
Spiller Company:	WAREHOUSE/FURNITURE FINIS
Spiller Address:	FIELD COURT/OFF BROADWAY
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER 06/27/97 DEC INITIALLY HIRED IDC TO STABILIZE CONTAINERS. BECI AND BILL MORE ALSO ON SITE. RP CONTACTED AND TOOK OVER CLEANUP AND PAYMENT TO CONTRACTOR. NFA; "
Remarks:	"DRUMS LEAKING ON PROPERTY ADJACENT TO RESIDENCE. DRUMS HAVE ODOR OF PAINT THINNER."

All Materials:

Site ID:	92418
Operable Unit ID:	1045534
Operable Unit:	01
Material ID:	335744
Material Code:	0064A
Material Name:	unknown material
Case No.:	Not reported
Material FA:	Other
Quantity:	30.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

C19 **ECKERT WALTER** **EDR Hist Auto** **1020316505**
ESE **3 CEDAR** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.062 mi.
326 ft. **Site 4 of 4 in cluster C**

Relative: EDR Hist Auto
Higher

Actual:
182 ft.

Year:	Name:	Type:
1985	ECKERT WALTER	Gasoline Service Stations
1986	ECKERT WALTER	Gasoline Service Stations
1987	ECKERT WALTER	Gasoline Service Stations
1988	ECKERT WALTER	Gasoline Service Stations
1989	ECKERT WALTER	Gasoline Service Stations, NEC
1990	ECKERT WALTER	Gasoline Service Stations, NEC
1991	ECKERT WALTER	Gasoline Service Stations, NEC
1992	ECKERT WALTER	Gasoline Service Stations, NEC
1993	ECKERT WALTER	Gasoline Service Stations, NEC

D20 **NEAR O'NEIL ST CENTER OF KINGSTON** **NY Spills** **S109828708**
NE **25 FIELD COURT** **N/A**
< 1/8 **KINGSTON, NY**
0.066 mi.
347 ft. **Site 3 of 5 in cluster D**

Relative: SPILLS:
Higher

Actual:
181 ft.

Spill Number/Closed Date:	0905668 / 2014-05-23
Facility ID:	0905668
Facility Type:	ER
DER Facility ID:	367077
Site ID:	417945
DEC Region:	3
Spill Cause:	Unknown
Spill Class:	B3
SWIS:	5608
Spill Date:	2009-08-14
Investigator:	ELMOORE
Referred To:	REMEDIATION
Reported to Dept:	2009-08-14
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2009-08-14
Spill Record Last Update:	2017-11-24
Spiller Name:	Not reported
Spiller Company:	UNK
Spiller Address:	Not reported
Spiller Company:	999
Contact Name:	SAME AS ABOVE
DEC Memo:	"8/14/09: I spoke with Dan at Chazen. Phase II investigation of a former drapery manufacturing facility for a potential buyer. Current owner is a Mrs Spada who reportedly recently inherited the now vacant property. Buyer is a medical group looking to use the location for

NEAR O'NEIL ST CENTER OF KINGSTON (Continued) **S109828708**

doctor's offices. Contamination levels in soil vapor results from beneath the building are relatively high according to Dan. He states he has spoken with Janet Brown of R3 Remediation about the project earlier in the week. He will be following up with her on further investigation. jod 8/26/09: Spills Program is requiring No Further Action as far as petroleum contamination. Janet Brown of R3 Remediation is following up with RP and Albany. Once a BCP number is obtained, spill number will be closed and cross referenced to BCP. jod 5/23/14 As per discussion with Ed moore and John O'Mara NFA JO'M 9/29/2017 -- Chazen submitted records we should have already had in the file: sampling from 2009 indicating PCE and TCE. They were shared specifically so I could then forward to County DOH. Records in D2. ELM 11/24/2017 -- Meeting with County development group in Kingston (George Heitzman and me). DEC agreed to make this site a P site and pay for an initial investigation within the next year or so. County looking to make it a pocket park along their rail trail. ELM"

Remarks: "PCE and TCE in air and ground water/ soil. Lab results today."

All Materials:

Site ID:	417945
Operable Unit ID:	1174149
Operable Unit:	01
Material ID:	2166428
Material Code:	9999
Material Name:	other - pce and TCE in ground water
Case No.:	Not reported
Material FA:	Other
Quantity:	Not reported
Units:	Not reported
Recovered:	Not reported
Oxygenate:	Not reported

D21 **25 FIELD COURT** **NY SHWS** **S121933863**
NE **25 FIELD COURT** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.066 mi.
347 ft. **Site 4 of 5 in cluster D**

Relative:
Higher

Actual:
181 ft.

SHWS:

Program:	HW
Site Code:	563818
Classification:	P
Region:	3
Acres:	0.85
HW Code:	356055
Record Add:	11/02/2017
Record Upd:	11/24/2017
Updated By:	GWHEITZM

Site Description: Location: The site address is 25 Field Ct Kingston NY. It is located in a mixed commercial residential area in Ulster County. Tax Map Identifier: 56.25-3-35 Site Features: The site is a single story brick building made up of three additions on approx. 1.5 acre lot. Building footprint approx. half of lot. Elevations are flat. Investigation of property determined PCE groundwater contamination.Source unknown. Limited groundwater investigations show similar but significantly lower concentrations of PCE. A spill called in 6/4/97 assigned #9702813 was the result of leaking drums of

25 FIELD COURT (Continued) **S121933863**

	"paint thinner". RP was woodworking / furniture maker warehouse. Current Zoning and Land Use: The site is zoned for commercial use. Commercial and residential lots surround site. Woodworking shop and dairy adjacent to site. Rail road spur adjacent to site. DEP laboratory (former electronic manufacturer) within 1/4 mile of site upgradient. Past Use: Commercial Site Geology and Hydrology: Site is predominantly fill underlain by sand and clay layers on top of Silurian limestone and shale.
Env Problem:	Not reported
Health Problem:	As information for this site becomes available, it will be reviewed by the NYSDOH to determine if site contamination presents public health exposure concerns.
Dump:	Not reported
Structure:	Not reported
Lagoon:	Not reported
Landfill:	Not reported
Pond:	Not reported
Disp Start:	Not reported
Disp Term:	Not reported
Lat/Long:	Not reported
Dell:	Not reported
Record Add:	Not reported
Record Upd:	Not reported
Updated By:	Not reported
Own Op:	Owner
Sub Type:	A
Owner Name:	Donna Spada
Owner Company:	none
Owner Address:	46 Crane St
Owner Addr2:	Not reported
Owner City,St,Zip:	Kingston, NY 12401
Owner Country:	United States of America
HW Code:	Not reported
Waste Type:	Not reported
Waste Quantity:	Not reported
Waste Code:	Not reported
Crossref ID:	Not reported
Cross Ref Type Code:	Not reported
Cross Ref Type:	Not reported
Record Added Date:	Not reported
Record Updated:	Not reported
Updated By:	Not reported

E22 **BOB PERRYS SERVICE STATION** **NY UST** **U000378828**
WNW **649 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.072 mi.
379 ft. **Site 1 of 6 in cluster E**

Relative: UST:
Lower

Actual:
179 ft.

Id/Status:	3-164402 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	582346.62682
UTM Y:	4642489.06721
Site Type:	Retail Gasoline Sales

BOB PERRYS SERVICE STATION (Continued) **U000378828**

Affiliation Records:

Site Id:	32245
Affiliation Type:	Facility Owner
Company Name:	ARTHUR FERRARO
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	BOX 86F
Address2:	Not reported
City:	MT MARION
State:	NY
Zip Code:	12456
Country Code:	001
Phone:	(914) 246-4044
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	32245
Affiliation Type:	Mail Contact
Company Name:	ARTHUR FERRARO
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	BOX 86F
Address2:	Not reported
City:	MT MARION
State:	NY
Zip Code:	12456
Country Code:	001
Phone:	(914) 246-4044
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	32245
Affiliation Type:	Facility Operator
Company Name:	BOB PERRYS SERVICE STATION
Contact Type:	Not reported
Contact Name:	ARTHUR FERRARO
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 338-5111
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	32245
Affiliation Type:	Emergency Contact
Company Name:	ARTHUR FERRARO
Contact Type:	Not reported
Contact Name:	ARTHUR FERRARO

BOB PERRYS SERVICE STATION (Continued) **U000378828**

Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 246-4044
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Tank Info:

Tank Number:	1
Tank ID:	70511
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	4000
Install Date:	01/01/1980
Date Tank Closed:	05/01/1998
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009
Common Name of Substance:	Gasoline
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
H04 - Tank Leak Detection - Groundwater Well
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser

Tank Number:	2
Tank ID:	70512
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	10000
Install Date:	01/01/1980
Date Tank Closed:	05/01/1998
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009

BOB PERRYS SERVICE STATION (Continued) **U000378828**

Common Name of Substance: Gasoline

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

I00 - Overfill - None
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
H04 - Tank Leak Detection - Groundwater Well
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser

Tank Number: 3
Tank ID: 70513
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 10000
Install Date: 01/01/1980
Date Tank Closed: 05/01/1998
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0009
Common Name of Substance: Gasoline

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
H04 - Tank Leak Detection - Groundwater Well
I00 - Overfill - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None

Tank Number: 4
Tank ID: 70514
Tank Status: Closed - In Place
Material Name: Closed - In Place
Capacity Gallons: 3000

BOB PERRYS SERVICE STATION (Continued) **U000378828**

Install Date:	01/01/1980
Date Tank Closed:	05/01/1998
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0008
Common Name of Substance:	Diesel
Tightness Test Method:	01
Date Test:	11/01/1992
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

I00 - Overfill - None
A00 - Tank Internal Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
H04 - Tank Leak Detection - Groundwater Well
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser

E23 **PERRYS MOBIL SERVICE STATION** **EDR Hist Auto** **1021030354**
WNW **649 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.072 mi.
379 ft. **Site 2 of 6 in cluster E**

Relative: EDR Hist Auto
Lower

Actual:
179 ft.

Year:	Name:	Type:
1973	RICHIES TEXACO SERVICE STATION	Gasoline Service Stations
1974	RICHIES TEXACO SERVICE STATION	Gasoline Service Stations
1976	KINGSTON TIRE CENTER	Gasoline Service Stations
1994	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
1995	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
1996	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
1997	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
1998	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
1999	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
2000	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
2001	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
2002	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
2003	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
2004	PERRYS MOBIL SERVICE STATION	General Automotive Repair Shops
2005	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2006	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2007	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2008	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2009	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2010	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2011	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2012	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC
2013	PERRYS MOBIL SERVICE STATION	Gasoline Service Stations, NEC

PERRYS MOBIL SERVICE STATION (Continued) **1021030354**

2014 PERRYS MOBIL SERVICE STATION Gasoline Service Stations, NEC

E24 **PERRY AUTOMOTIVE** **NY Spills** **S118263354**
WNW **649 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY**
0.072 mi.
379 ft. **Site 3 of 6 in cluster E**

Relative: **Lower**
Actual: **179 ft.**

SPILLS:

Spill Number/Closed Date:	1508314 / 2015-11-10
Facility ID:	1508314
Facility Type:	ER
DER Facility ID:	151290
Site ID:	515895
DEC Region:	3
Spill Cause:	Housekeeping
Spill Class:	C4
SWIS:	5630
Spill Date:	2015-11-10
Investigator:	JYMCCART
Referred To:	Not reported
Reported to Dept:	2015-11-10
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial Vehicle
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2015-11-10
Spill Record Last Update:	2015-11-10
Spiller Name:	Not reported
Spiller Company:	PERRY AUTOMOTIVE
Spiller Address:	Not reported
Spiller Company:	999
Contact Name:	N/A
DEC Memo:	"11-10-15 Spoke with Allen. He says that Perrys Garage on Broadway in washing big wreckers outside and wash water is going down road entering storm drain system. Referred to DOW. NFA jm"
Remarks:	"washing tow truck/water is going down street into drain"

All Materials:

Site ID:	515895
Operable Unit ID:	1265002
Operable Unit:	01
Material ID:	2268821
Material Code:	0064A
Material Name:	unknown material
Case No.:	Not reported
Material FA:	Other
Quantity:	Not reported
Units:	G
Recovered:	Not reported
Oxygenate:	Not reported

E25
WNW
< 1/8
0.072 mi.
379 ft.

MOBIL S/S
649 BROADWAY
KINGSTON, NY

Site 4 of 6 in cluster E

NY LTANKS **S100492042**
N/A

Relative:
Lower

Actual:
179 ft.

LTANKS:

Spill Number/Closed Date:	9209571 / 1995-02-13
Facility ID:	9209571
Site ID:	180380
Spill Date:	1992-11-17
Spill Cause:	Tank Test Failure
Spill Source:	Gasoline Station or other PBS Facility
Spill Class:	C3
Cleanup Ceased:	1992-11-18
SWIS:	5630
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	1992-11-17
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1992-11-23
Spill Record Last Update:	1995-05-19
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	151290
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER 09/27/95: This is additional information about material spilled from the translation of the old spill file: TANK TEST."
Remarks:	"FUEL WOULD NOT HOLD IN STANDPIPE WILL EIR ASAP"

All TTF:

Facility ID:	9209571
Spill Number:	9209571
Spill Tank Test:	1540857
Site ID:	180380
Tank Number:	Not reported
Tank Size:	0
Material:	0009
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills

MOBIL S/S (Continued) **S100492042**

Last Modified Date: Not reported

All Materials:
Site ID: 180380
Operable Unit ID: 973389
Operable Unit: 01
Material ID: 406615
Material Code: 0009
Material Name: gasoline
Case No.: Not reported
Material FA: Petroleum
Quantity: .00
Units: Not reported
Recovered: .00
Oxygenate: Not reported

E26 **MILLER RES** **NY LTANKS** **S102960208**
WNW **21 VANDUSEN ST** **N/A**
< 1/8 **KINGSTON, NY**
0.078 mi.
413 ft. **Site 5 of 6 in cluster E**

Relative: **Higher**
Actual: **180 ft.**

LTANKS:
Spill Number/Closed Date: 9710391 / 1998-02-09
Facility ID: 9710391
Site ID: 168087
Spill Date: 1997-10-24
Spill Cause: Tank Failure
Spill Source: Private Dwelling
Spill Class: C3
Cleanup Ceased: Not reported
SWIS: 5630
Investigator: RICCI
Referred To: Not reported
Reported to Dept: 1997-11-08
CID: 999
Water Affected: Not reported
Spill Notifier: DEC
Last Inspection: Not reported
Recommended Penalty: False
Meets Standard: True
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: 1997-12-10
Spill Record Last Update: 1998-02-18
Spiller Name: RICK BOTTINI
Spiller Company: ULSTER CO OIL
Spiller Address: Not reported
Spiller County: 001
Spiller Contact: GERALD MILLER
Spiller Phone: (914) 239-5824
Spiller Extention: Not reported
DEC Region: 3
DER Facility ID: 141610
DEC Memo: ""
Remarks: "leak in basement approx 3 weeks ago spill cleaned up by homeowner

MILLER RES (Continued) **S102960208**

spill not reported to dec by oil company odors in house to be vented (insurance - valley group 331-2255 "

All Materials:

Site ID:	168087
Operable Unit ID:	1056769
Operable Unit:	01
Material ID:	328691
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	220.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9710402 / 1998-02-26
Facility ID:	9710402
Site ID:	168088
Spill Date:	1997-10-24
Spill Cause:	Tank Failure
Spill Source:	Private Dwelling
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1997-11-08
CID:	999
Water Affected:	Not reported
Spill Notifier:	DEC
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1997-12-10
Spill Record Last Update:	1998-03-10
Spiller Name:	DICK BOTTINI
Spiller Company:	ULSTER COUNTY OIL
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	GERALD MILLER
Spiller Phone:	(914) 239-5824
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	141610
DEC Memo:	""
Remarks:	"LEAK IN BASEMENT APPROX. 3 WEEKS AGO SPILL CLEANED UP BY HOMEOWNER SPILL NOT REPORTED TO DEC BY OIL CO. ODERS IN THE HOUSE. HOUSE TO BE VENTED(INSURANCE-VALLEY GROUP) 331-2255 ASK FOR DAVE."

All Materials:

Site ID:	168088
Operable Unit ID:	1056783
Operable Unit:	01

MILLER RES (Continued) **S102960208**

Material ID:	328701
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	220.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

E27 **RESIDENCE** **NY Spills** **S102110456**
WNW **25 VANDEUSSEN STREET** **N/A**
< 1/8 **KINGSTON, NY**
0.080 mi.
423 ft. **Site 6 of 6 in cluster E**

Relative: Higher
Actual: 180 ft.

SPILLS:

Spill Number/Closed Date:	9500923 / 1995-05-25
Facility ID:	9500923
Facility Type:	ER
DER Facility ID:	67298
Site ID:	71015
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C3
SWIS:	5630
Spill Date:	1995-04-23
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1995-04-23
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Other
Cleanup Ceased:	1995-05-25
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1995-05-25
Spill Record Last Update:	1995-07-12
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	""
Remarks:	"BROKEN TANK GUAGE"

All Materials:

Site ID:	71015
Operable Unit ID:	1015047
Operable Unit:	01
Material ID:	369538
Material Code:	0001A
Material Name:	#2 fuel oil

RESIDENCE (Continued) **S102110456**

Case No.:	Not reported
Material FA:	Petroleum
Quantity:	2.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

D28 **THE WONDERLY COMPANY** **NY UST** **U003697817**
NE **25 CORNELL STREET** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.086 mi.
453 ft. **Site 5 of 5 in cluster D**

Relative:
Higher

Actual:
183 ft.

UST:

Id/Status:	3-601352 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	582668.29408
UTM Y:	4642460.85020
Site Type:	Manufacturing (Other than Chemical)/Processing

Affiliation Records:

Site Id:	34461
Affiliation Type:	Facility Owner
Company Name:	THE WONDERLY COMPANY
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	25 CORNELL STREET PO BOX 1458
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(914) 331-0148
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34461
Affiliation Type:	Mail Contact
Company Name:	THE WONDERLY COMPANY
Contact Type:	Not reported
Contact Name:	DREW WONDERLY
Address1:	25 CORNELL STREET
Address2:	PO BOX 1458
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(914) 331-0148
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

THE WONDERLY COMPANY (Continued) **U003697817**

Site Id:	34461
Affiliation Type:	Facility Operator
Company Name:	THE WONDERLY COMPANY
Contact Type:	Not reported
Contact Name:	DREW WONDERLY
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 331-0148
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34461
Affiliation Type:	Emergency Contact
Company Name:	THE WONDERLY COMPANY
Contact Type:	Not reported
Contact Name:	DREW WONDERLY
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 331-0148
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Tank Info:

Tank Number:	1
Tank ID:	81811
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	3000
Install Date:	Not reported
Date Tank Closed:	07/01/1999
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)

Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

THE WONDERLY COMPANY (Continued) **U003697817**

G00 - Tank Secondary Containment - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
A00 - Tank Internal Protection - None
D00 - Pipe Type - No Piping

F29 **SCHABOT AUTO BODY** **RCRA-CESQG 1004759763**
North **29 ONEIL ST** **NJ MANIFEST NYR000020255**
< 1/8 **KINGSTON, NY 12401** **NY MANIFEST**
0.087 mi.
462 ft. **Site 1 of 3 in cluster F**

Relative:
Lower

Actual:
179 ft.

RCRA-CESQG:

Date form received by agency:	01/01/2007
Facility name:	SCHABOT AUTO BODY
Facility address:	29 ONEIL ST KINGSTON, NY 12401
EPA ID:	NYR000020255
Mailing address:	ONEIL ST KINGSTON, NY 12401
Contact:	CHRIS REIF
Contact address:	ONEIL ST KINGSTON, NY 12401
Contact country:	US
Contact telephone:	914-338-5453
Contact email:	Not reported
EPA Region:	02
Land type:	Private
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHRISTIAN S REIF
Owner/operator address:	PO BOX 55 CONNELLY, NY 12417
Owner/operator country:	US
Owner/operator telephone:	914-339-5378
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private

SCHABOT AUTO BODY (Continued) **1004759763**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: CHRISTIAN S REIF
Owner/operator address: PO BOX 55
CONNELLY, NY 12417
Owner/operator country: US
Owner/operator telephone: 914-339-5378
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: SCHABOT AUTO BODY
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 02/28/1996
Site name: SCHABOT AUTO BODY
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED

SCHABOT AUTO BODY (Continued) **1004759763**

FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 09/07/2011
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

NJ MANIFEST:
EPA Id: NYR000020255
Mail Address: ONEIL ST
Mail City/State/Zip: KINGSTON, NY 12401
Facility Phone: Not reported
Emergency Phone: Not reported
Contact: CHRIS REIF
Comments: Not reported
SIC Code: Not reported
County: NY111

SCHABOT AUTO BODY (Continued) **1004759763**

Municipal:	Not reported
Previous EPA Id:	Not reported
Gen Flag:	Not reported
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	000209578VES
EPA ID:	NYR000020255
Date Shipped:	04/24/2009
TSDF EPA ID:	NJD980536593
Transporter EPA ID:	NJD080631369
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	04/24/2009
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	04/24/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	KINGSTON, NY 12401
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	F003
Hand Code:	H141
Quantity:	800 P

SCHABOT AUTO BODY (Continued) **1004759763**

NY MANIFEST:

Country:	USA
EPA ID:	NYR000020255
Facility Status:	Not reported
Location Address 1:	29 ONEIL ST
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	KINGSTON
Location State:	NY
Location Zip:	12401
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYR000020255
Mailing Name:	SCHABOT AUTO BODY
Mailing Contact:	CHRIS REIF
Mailing Address 1:	29 ONEIL ST
Mailing Address 2:	Not reported
Mailing City:	KINGSTON
Mailing State:	NY
Mailing Zip:	12401
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143385453

NY MANIFEST:

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2009
Trans1 State ID:	NJD080631369
Trans2 State ID:	Not reported
Generator Ship Date:	04/24/2009
Trans1 Recv Date:	04/24/2009
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/24/2009
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000020255
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD980536593
TSDF ID 2:	Not reported
Manifest Tracking Number:	000209578VES
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported

SCHABOT AUTO BODY (Continued) **1004759763**

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	800.0
Units:	P - Pounds
Number of Containers:	2.0
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1.0
Waste Code:	F003
Waste Code 1_2:	D001
Waste Code 1_3:	Not reported
Waste Code 1_4:	F006
Waste Code 1_5:	D035
Waste Code 1_6:	Not reported

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

G30 **STEFANOWITZ GARAGE** **NY Spills** **S104645752**
ESE **571-577 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY**
0.093 mi.
489 ft. **Site 1 of 4 in cluster G**

Relative: **Higher**
Actual: **183 ft.**

SPILLS:

Spill Number/Closed Date:	9614340 / 2010-03-24
Facility ID:	9614340
Facility Type:	ER
DER Facility ID:	118630
Site ID:	138758
DEC Region:	3
Spill Cause:	Housekeeping
Spill Class:	B3
SWIS:	5630
Spill Date:	1997-03-11
Investigator:	WXWADSWO
Referred To:	Not reported
Reported to Dept:	1997-03-11
CID:	266
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1997-03-11
Spill Record Last Update:	2010-03-24
Spiller Name:	Not reported
Spiller Company:	JIM STEFANOWITZ
Spiller Address:	571-577 BROADWAY
Spiller Company:	001

STEFANOWITZ GARAGE (Continued) **S104645752**

Contact Name: Not reported
DEC Memo: "Prior to Sept, 2004 data translation this spill Lead_DEC Field was WADSWORTH 3/24/2010 - No further complaints or information in 14 years. Likely surficial soils impacted and remedied. nfa ELM "
Remarks: "FORMER RADIATOR REPAIR SHOP. HAS BEEN VACANT FOR ABOUT 15 YEARS. SOIL CONTAMINATION FOUND DURING SITE ASSESSMENT. SOIL BEING STOCKPILED AS NECESSARY."

All Materials:
Site ID: 138758
Operable Unit ID: 1045772
Operable Unit: 01
Material ID: 339446
Material Code: 0009
Material Name: gasoline
Case No.: Not reported
Material FA: Petroleum
Quantity: .00
Units: G
Recovered: .00
Oxygenate: Not reported

G31 **GUARANTEE AUTO RADIATOR WORKS** **EDR Hist Auto** **1020903161**
ESE **571-575 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.093 mi.
489 ft. **Site 2 of 4 in cluster G**

Relative: EDR Hist Auto
Higher

Actual: **183 ft.**

Year:	Name:	Type:
1969	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1970	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1971	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1972	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1973	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1974	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1975	GUARANTEE AUTO RADIACTOR WORKS	Not reported
1976	GUARANTEE AUTO RADIATOR WORKS	Not reported
1977	GUARANTEE AUTO RADIATOR WORKS	Not reported
1978	GUARANTEE AUTO RADIATOR WORKS	Not reported
1979	GUARANTEE AUTO RADIATOR WORKS	Not reported
1980	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1982	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1983	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1985	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1986	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1987	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1988	GUARANTEE AUTO RADIATOR WORKS	Automotive Repair Shops, NEC
1989	GUARANTEE AUTO RADIATOR WORKS	Powertrain Components Repair Services

32
SW
< 1/8
0.093 mi.
489 ft.

ROYAL CARTING TRUCK
CEDAR AND STERLING
KINGSTON, NY

NY Spills **S108636674**
N/A

Relative:
Higher

Actual:
181 ft.

SPILLS:

Spill Number/Closed Date:	0701203 / 2007-08-22
Facility ID:	0701203
Facility Type:	ER
DER Facility ID:	330103
Site ID:	380673
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C4
SWIS:	5608
Spill Date:	2007-04-28
Investigator:	dvwehrfr
Referred To:	Not reported
Reported to Dept:	2007-04-28
CID:	75
Water Affected:	N/A
Spill Source:	Commercial Vehicle
Spill Notifier:	Fire Department
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2007-04-30
Spill Record Last Update:	2007-08-22
Spiller Name:	DEP CHIEF ALLEN
Spiller Company:	ROYAL CARTING TRUCK
Spiller Address:	CEDAR AND STERLING
Spiller Company:	001
Contact Name:	DEP CHIEF ALLEN
DEC Memo:	"EnviroClean hired by RP to cleanup."
Remarks:	"hydraulic line failed on truck-spilled approx 30-35 along the streets in the area-FD enroute with absorbent materials-on scene since 1115-leak contained and truck is stopped-"

All Materials:

Site ID:	380673
Operable Unit ID:	1138152
Operable Unit:	01
Material ID:	2128128
Material Code:	0010
Material Name:	hydraulic oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	30.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

H33 **66 HENRY ST CORP** **EDR Hist Auto** **1020209548**
WSW **66 HENRY ST** **N/A**
< 1/8 **KINGSTON, NY 12401**
0.093 mi.
490 ft. **Site 1 of 2 in cluster H**

Relative: EDR Hist Auto
Higher

Actual: Year: Name: Type:
182 ft. 2001 66 HENRY ST CORP Gasoline Service Stations, NEC
2002 66 HENRY ST CORP Gasoline Service Stations, NEC
2003 66 HENRY ST CORP Gasoline Service Stations, NEC
2004 66 HENRY ST CORP Gasoline Service Stations, NEC
2005 66 HENRY ST CORP Gasoline Service Stations, NEC

G34 **SIDEWALK** **NY Spills** **S102104401**
ESE **580 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY**
0.098 mi.
518 ft. **Site 3 of 4 in cluster G**

Relative: SPILLS:
Higher

Actual: Spill Number/Closed Date: 9112284 / 1992-03-04
184 ft. Facility ID: 9112284
Facility Type: ER
DER Facility ID: 238976
Site ID: 295316
DEC Region: 3
Spill Cause: Equipment Failure
Spill Class: Not reported
SWIS: 5630
Spill Date: 1992-03-02
Investigator: DVWEHRFR
Referred To: Not reported
Reported to Dept: 1992-03-02
CID: Not reported
Water Affected: Not reported
Spill Source: Tank Truck
Spill Notifier: Responsible Party
Cleanup Ceased: 1953-06-18
Cleanup Meets Std: True
Last Inspection: Not reported
Recommended Penalty: False
UST Trust: False
Remediation Phase: 0
Date Entered In Computer: Not reported
Spill Record Last Update: 2003-12-02
Spiller Name: Not reported
Spiller Company: BERARDI FUELS
Spiller Address: 867 FLATBUSH ROAD
Spiller Company: 001
Contact Name: Not reported
DEC Memo: "Prior to Sept, 2004 data translation this spill Lead_DEC Field was WEHRFRITZ "
Remarks: "HYDRAULIC PUMP MALFUNCTIONED ON TRUCK SPILL ON PAVEMENT FD ON SCENE CLEANED UP WITH SPEEDI-DRY"

All Materials:
Site ID: 295316
Operable Unit ID: 965895

SIDEWALK (Continued) **S102104401**

Operable Unit:	01
Material ID:	559099
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

H35 **RESI: JOHNSON** **NY Spills** **S104510980**
WSW **63 HENRY ST** **N/A**
< 1/8 **KINGSTON, NY**
0.099 mi.
522 ft. **Site 2 of 2 in cluster H**

Relative: Higher
Actual: 182 ft.

SPILLS:

Spill Number/Closed Date:	9914308 / 2000-03-20
Facility ID:	9914308
Facility Type:	ER
DER Facility ID:	224779
Site ID:	276476
DEC Region:	3
Spill Cause:	Other
Spill Class:	C4
SWIS:	5630
Spill Date:	2000-03-19
Investigator:	tdghiosa
Referred To:	Not reported
Reported to Dept:	2000-03-20
CID:	323
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2000-03-20
Spill Record Last Update:	2000-03-24
Spiller Name:	MR. KAHN
Spiller Company:	SUNSHINE FUELS
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	GLORIA JOHNSON
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was GHIOSAY 03/20/2000 SUNSHINE FUEL CLEANUP CREW ON SITE CLEANING UP; NFA"
Remarks:	"APPEARS WHEN THE TANK WAS FILLED YESTERDAY THEY FILLED IT TOO FAST AND THE SPILL OCCURED. FD ON SCENE PLACED PADS DOWN."

All Materials:

Site ID:	276476
Operable Unit ID:	1092454

RESI: JOHNSON (Continued) **S104510980**

Operable Unit:	01
Material ID:	292590
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	1.00
Oxygenate:	Not reported

G36 **KINGSTON AUTO SUPPLY** **NY Spills** **S102104324**
ESE **561 BROADWAY** **N/A**
< 1/8 **KINGSTON, NY**
0.106 mi.
560 ft. **Site 4 of 4 in cluster G**

Relative: **Higher**

Actual: **184 ft.**

SPILLS:

Spill Number/Closed Date:	9111095 / 1992-01-27
Facility ID:	9111095
Facility Type:	ER
DER Facility ID:	98630
Site ID:	113007
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	D3
SWIS:	5630
Spill Date:	1992-01-27
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	1992-01-27
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial Vehicle
Spill Notifier:	Fire Department
Cleanup Ceased:	1953-06-18
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	True
Remediation Phase:	0
Date Entered In Computer:	1992-01-28
Spill Record Last Update:	1992-02-11
Spiller Name:	Not reported
Spiller Company:	MR. SZLACHETKA
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	"Administratively closed due to file review and/or information received. If new information arises to contradict this determination DEC reserves the right to reopen this spill without prejudice. Prior to Sept, 2004 data translation this spill Lead_DEC Field was WEHRFRITZ "
Remarks:	"WHILE IN LOT VEHICLE BROKE VALVE ON FUEL TANK BOICEVILLE F.D. ON SCENE PUT DOWN SAWDUST TO CLEAN UP"

All Materials:

KINGSTON AUTO SUPPLY (Continued) **S102104324**

Site ID:	113007
Operable Unit ID:	961228
Operable Unit:	01
Material ID:	416154
Material Code:	0008
Material Name:	diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	30.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

F37 **STAVO INDUSTRIES INC** **RCRA NonGen / NLR** **1000433423**
NNW **26 DOWN ST** **ICIS** **NYD982738403**
< 1/8 **KINGSTON, NY 12401** **FINDS**
0.107 mi. **ECHO**
564 ft. **Site 2 of 3 in cluster F** **NY MANIFEST**

Relative: **Lower**
Actual: **179 ft.**

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	STAVO INDUSTRIES INC
Facility address:	26 DOWN ST KINGSTON, NY 12401-3502
EPA ID:	NYD982738403
Mailing address:	PO BOX 3449 KINGSTON, NY 12401
Contact:	Not reported
Contact address:	PO BOX 3449 KINGSTON, NY 12401
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	UNKNOWN
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	212-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	UNKNOWN
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US

STAVO INDUSTRIES INC (Continued) **1000433423**

Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: STAVO INDUSTRIES INC
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Site name: STAVO INDUSTRIES INC
Classification: Not a generator, verified

Date form received by agency: 07/13/1989
Site name: STAVO INDUSTRIES INC
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

STAVO INDUSTRIES INC (Continued) **1000433423**

. Waste code: D003
. Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

. Waste code: X001
. Waste name: WASTE OILS

. Waste code: X002
. Waste name: POLYCHLORINATED BIPHENOLS (PCBs)

. Waste code: X003
. Waste name: OTHER STATE REGULATED WASTES [i.e., DIESEL FUEL, GASOLINE AND HOME HEATING OIL]

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/21/1989
Date achieved compliance: 09/29/1992
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 09/24/1991
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 7500
Paid penalty amount: 7500

Evaluation Action Summary:
Evaluation date: 09/16/1992
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 07/05/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/29/1992
Evaluation lead agency: State

ICIS:
Enforcement Action ID: 02-1994-0208
FRS ID: 110004430866
Action Name: STAVO INDUSTRIES, INC.
Facility Name: STAVO INDUSTRIES INC
Facility Address: 26 DOWN ST
KINGSTON, NY 124013502
Enforcement Action Type: CWA 309G2A AO For Class I Penalties
Facility County: ULSTER
Program System Acronym: ICIS
Enforcement Action Forum Desc: Administrative - Formal
EA Type Code: 309G2A

STAVO INDUSTRIES INC (Continued) **1000433423**

Facility SIC Code: Not reported
Federal Facility ID: Not reported
Latitude in Decimal Degrees: 41.931214
Longitude in Decimal Degrees: -74.006406
Permit Type Desc: Not reported
Program System Acronym: 13936
Facility NAICS Code: Not reported
Tribal Land Code: Not reported

Facility Name: STAVO INDUSTRIES INC
Address: 26 DOWN ST
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

Facility Name: STAVO INDUSTRIES INC
Address: 26 DOWN ST
Tribal Indicator: N
Fed Facility: No
NAIC Code: Not reported
SIC Code: Not reported

FINDS:

Registry ID: 110004430866

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

STAVO INDUSTRIES INC (Continued) **1000433423**

Envid:	1000433423
Registry ID:	110004430866
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110004430866

NY MANIFEST:

Country:	USA
EPA ID:	NYD982738403
Facility Status:	Not reported
Location Address 1:	(No street address in conversion)
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	KINGSTON
Location State:	NY
Location Zip:	12401
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYD982738403
Mailing Name:	STAVO INDUSTRIES
Mailing Contact:	STAVO INDUSTRIES
Mailing Address 1:	P.O. BOX 3449
Mailing Address 2:	Not reported
Mailing City:	KINGSTON
Mailing State:	NY
Mailing Zip:	12401
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143380466

NY MANIFEST:

Document ID:	MAC4130790
Manifest Status:	C
seq:	Not reported
Year:	1989
Trans1 State ID:	654975MA
Trans2 State ID:	Not reported
Generator Ship Date:	10/31/1989
Trans1 Recv Date:	10/31/1989
Trans2 Recv Date:	/ /
TSD Site Recv Date:	10/31/1989
Part A Recv Date:	11/20/1989
Part B Recv Date:	11/15/1989
Generator EPA ID:	NYD982738403
Trans1 EPA ID:	MAD039322250
Trans2 EPA ID:	Not reported
TSDF ID 1:	MAD053452637
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported

STAVO INDUSTRIES INC (Continued) **1000433423**

Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	B001 - PCB OIL (CONC) FROM TRANS, CAP, ETC
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00429
Units:	P - Pounds
Number of Containers:	002
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00094
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	L Landfill.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

F38 **BEAVER INDUSTRIES** **NY Spills** **S102107045**
NNW **26 DOWN STREET** **N/A**
< 1/8 **KINGSTON, NY**
0.107 mi.
564 ft. **Site 3 of 3 in cluster F**

Relative: **Lower**

Actual: **179 ft.**

SPILLS:

Spill Number/Closed Date:	8901299 / 1989-08-09
Facility ID:	8901299
Facility Type:	ER
DER Facility ID:	162197
Site ID:	194644
DEC Region:	3
Spill Cause:	Abandoned Drums
Spill Class:	Not reported
SWIS:	5630
Spill Date:	1989-05-10
Investigator:	dvwehrfr
Referred To:	Not reported
Reported to Dept:	1989-05-10
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Fire Department
Cleanup Ceased:	1989-08-09
Cleanup Meets Std:	True
Last Inspection:	Not reported

BEAVER INDUSTRIES (Continued) **S102107045**

Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1989-05-18
Spill Record Last Update:	1989-08-09
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was D. WEHRFRITZ 11/29/95: This is additional information about material spilled from the translation of the old spill file: DRUMS/BARRELS."
Remarks:	"NUMERSOU DRUMS/BARRELS CONTAINING HAZARDOUS MATERIAL FOUND BY F.D. IN WAREHOUSE. DRUMS IN POOR CONDITION AND ARE WET FROM SEEPAGE. DRUMS ORIGINATED IN CONNECTICUT. DRUMS HAVE BEEN ON SITE FOR 6MNTHS"

All Materials:

Site ID:	194644
Operable Unit ID:	928303
Operable Unit:	01
Material ID:	449051
Material Code:	0066A
Material Name:	unknown petroleum
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

39
NW
1/8-1/4
0.130 mi.
688 ft.

SUNOCO FOOD MART **NY UST** **U000381523**
675 BROADWAY **NY Spills** **N/A**
KINGSTON, NY 12401

Relative: Higher

Actual: 180 ft.

UST:

Id/Status:	3-497509 / Active
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	02/06/2022
UTM X:	582266.30070
UTM Y:	4642532.22127
Site Type:	Retail Gasoline Sales

Affiliation Records:

Site Id:	33673
Affiliation Type:	Facility Owner
Company Name:	VIRK CONVENIENT MART, INC.
Contact Type:	PRESIDENT
Contact Name:	DALJIT VIRK
Address1:	740 MAIN STREET
Address2:	Not reported
City:	POUGHKEEPSIE
State:	NY
Zip Code:	12603

SUNOCO FOOD MART (Continued) **U000381523**

Country Code:	001
Phone:	(845) 452-3890
EMail:	DALJITVIRK@ME.COM
Fax Number:	Not reported
Modified By:	ELMOORE
Date Last Modified:	2018-02-27

Site Id:	33673
Affiliation Type:	Mail Contact
Company Name:	VIRK CONVENIENT MART, INC.
Contact Type:	Not reported
Contact Name:	DALJIT VIRK
Address1:	740 MAIN STREET
Address2:	Not reported
City:	POUGHKEEPSIE
State:	NY
Zip Code:	12601
Country Code:	001
Phone:	(845) 452-3890
EMail:	DALJITVIRK@ME.COM
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2012-03-15

Site Id:	33673
Affiliation Type:	Facility Operator
Company Name:	SUNOCO FOOD MART
Contact Type:	Not reported
Contact Name:	RANVIR SINGH
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 340-8433
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2017-02-10

Site Id:	33673
Affiliation Type:	Emergency Contact
Company Name:	VIRK CONVENIENT MART, INC.
Contact Type:	Not reported
Contact Name:	DALJIT VIRK
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(914) 452-3890
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2016-11-14

SUNOCO FOOD MART (Continued) **U000381523**

Tank Info:

Tank Number:	1
Tank ID:	76146
Tank Status:	In Service
Material Name:	In Service
Capacity Gallons:	8000
Install Date:	11/01/1981
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Equivalent technology
Material Code:	2712
Common Name of Substance:	Gasoline/Ethanol
Tightness Test Method:	20
Date Test:	11/01/1998
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	BHYUKOWE
Last Modified:	04/14/2017

Equipment Records:

L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
F04 - Pipe External Protection - Fiberglass
G00 - Tank Secondary Containment - None
C02 - Pipe Location - Underground/On-ground
I01 - Overfill - Float Vent Valve
A00 - Tank Internal Protection - None
J01 - Dispenser - Pressurized Dispenser
E04 - Piping Secondary Containment - Double walled UG
K01 - Spill Prevention - Catch Basin
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
H05 - Tank Leak Detection - In-Tank System (ATG)
H99 - Tank Leak Detection - Other
L07 - Piping Leak Detection - Pressurized Piping Leak Detector

Tank Number:	2
Tank ID:	76147
Tank Status:	In Service
Material Name:	In Service
Capacity Gallons:	8000
Install Date:	11/01/1981
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Equivalent technology
Material Code:	2712
Common Name of Substance:	Gasoline/Ethanol
Tightness Test Method:	20
Date Test:	11/01/1998
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	BHYUKOWE

SUNOCO FOOD MART (Continued) **U000381523**

Last Modified: 04/14/2017

Equipment Records:

L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
C02 - Pipe Location - Underground/On-ground
F04 - Pipe External Protection - Fiberglass
G00 - Tank Secondary Containment - None
I01 - Overfill - Float Vent Valve
A00 - Tank Internal Protection - None
J01 - Dispenser - Pressurized Dispenser
E04 - Piping Secondary Containment - Double walled UG
K01 - Spill Prevention - Catch Basin
B04 - Tank External Protection - Fiberglass
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
H05 - Tank Leak Detection - In-Tank System (ATG)
H99 - Tank Leak Detection - Other
L07 - Piping Leak Detection - Pressurized Piping Leak Detector

Tank Number: 3
Tank ID: 76148
Tank Status: In Service
Material Name: In Service
Capacity Gallons: 8000
Install Date: 11/01/1981
Date Tank Closed: Not reported
Registered: True
Tank Location: Underground
Tank Type: Equivalent technology
Material Code: 2712
Common Name of Substance: Gasoline/Ethanol

Tightness Test Method: 20
Date Test: 11/01/1998
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: BHYUKOWE
Last Modified: 04/14/2017

Equipment Records:

L01 - Piping Leak Detection - Interstitial - Electronic Monitoring
C02 - Pipe Location - Underground/On-ground
F04 - Pipe External Protection - Fiberglass
G00 - Tank Secondary Containment - None
I01 - Overfill - Float Vent Valve
A00 - Tank Internal Protection - None
J01 - Dispenser - Pressurized Dispenser
E04 - Piping Secondary Containment - Double walled UG
K01 - Spill Prevention - Catch Basin
D06 - Pipe Type - Fiberglass Reinforced Plastic (FRP)
B04 - Tank External Protection - Fiberglass
H99 - Tank Leak Detection - Other
H05 - Tank Leak Detection - In-Tank System (ATG)
L07 - Piping Leak Detection - Pressurized Piping Leak Detector

SPILLS:
Spill Number/Closed Date: 9903086 / Not Reported
Facility ID: 9903086

SUNOCO FOOD MART (Continued) **U000381523**

Facility Type:	ER
DER Facility ID:	106565
Site ID:	122940
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	Not reported
SWIS:	5630
Spill Date:	1999-06-17
Investigator:	MXTIPPLE
Referred To:	Not reported
Reported to Dept:	1999-06-17
CID:	270
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Affected Persons
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	4
Date Entered In Computer:	1999-06-17
Spill Record Last Update:	2017-05-12
Spiller Name:	THOMAS MICHAEL
Spiller Company:	MID VALLEY OIL
Spiller Address:	1 SOUTH WATER ST
Spiller Company:	001
Contact Name:	CALLER
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER 6/17/99 DOING STATION UPGRADE FOUND LEAK FROM PUMP FILTERS; EXCAVATED SOIL & WILL SAMPLE; REPORT DUE AT DEC WITHIN 30 DAYS File review needed. 6/22/10 DT 12/24/2015 -- PBS follow up warranted. Lead change to MT. ELM 5/12/17 RP letter sent to Mr. Virk requesting work to be completed or documentation the work has been completed. Three 8k tanks installed in 1981, upgrades to completed 1999 when this spill initially called in. mt"
Remarks:	"CALLER DISCOVERED SOME CONTAMINATION UNDER SOME PUMPS"

All Materials:

Site ID:	122940
Operable Unit ID:	1082016
Operable Unit:	01
Material ID:	303011
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	0612221 / 2007-02-20
Facility ID:	0612221
Facility Type:	ER
DER Facility ID:	326602
Site ID:	377027

SUNOCO FOOD MART (Continued) **U000381523**

DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	D4
SWIS:	5608
Spill Date:	2007-02-06
Investigator:	JPCUMMIN
Referred To:	Not reported
Reported to Dept:	2007-02-06
CID:	408
Water Affected:	Not reported
Spill Source:	Gasoline Station or other PBS Facility
Spill Notifier:	DEC
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	True
Remediation Phase:	0
Date Entered In Computer:	2007-02-06
Spill Record Last Update:	2007-02-20
Spiller Name:	JOSHUA CUMMINS
Spiller Company:	BROADWAY CITGO
Spiller Address:	675 BROADWAY
Spiller Company:	001
Contact Name:	JOSHUA CUMMINS
DEC Memo:	"DURING INSPECTION, NOTICED SOME DRIPPING & ACCUMULATED PRODUCT AROUND FILTER. PIPE ALSO VERY WET WITH PRODUCT. ADVISED OPERATOR TO PUT DISPENSER OUT OF ORDER UNTIL FIXED. Based on follow up inspection and conference, leak has been repaired. jc"
Remarks:	"PBS No: 3-497509 HAS NOT YET BEEN CLEANED;"

All Materials:

Site ID:	377027
Operable Unit ID:	1134580
Operable Unit:	01
Material ID:	2124454
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	.00
Oxygenate:	Not reported

40
ENE
1/8-1/4
0.135 mi.
711 ft.

KINGSTON RAIL YARD **US BROWNFIELDS** **1024247166**
CORNELL STREET BLOCK OF CORNELL STREET, ONEIL STREET, TREMPE **N/A**
KINGSTON, NY 12401

Relative:
Higher

Actual:
184 ft.

US BROWNFIELDS:

Property Name:	KINGSTON RAIL YARD
Recipient Name:	R2 TBA (STAG Funded)
Grant Type:	TBA
Property Number:	48.80-1-31-100
Parcel size:	1.05

KINGSTON RAIL YARD (Continued) **1024247166**

Latitude:	41.930467
Longitude:	-74.002486
HCM Label:	Not reported
Map Scale:	Not reported
Point of Reference:	Not reported
Highlights:	Not reported
Datum:	Not reported
Acres Property ID:	235926
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	85773
Assessment Funding Source:	US EPA - TBA Funding
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	EPA
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase II Environmental Assessment
Accomplishment Count:	0
Cooperative Agreement Number:	n/a
Start Date:	02/17/2016 00:00:00
Ownership Entity:	Government
Completion Date:	07/19/2017 00:00:00
Current Owner:	Ulster County
Did Owner Change:	N
Cleanup Required:	Y
Video Available:	N
Photo Available:	Y
Institutional Controls Required:	U
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	Not reported

KINGSTON RAIL YARD (Continued) **1024247166**

No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Y
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	Not reported
PCBs found:	Y
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	1.05
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported

KINGSTON RAIL YARD (Continued) **1024247166**

Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Historic Use: an active railroad switchyard, tourist railyard and rail car storage facility. Currently owned by Ulster
Below Poverty Number:	1427
Below Poverty Percent:	25.3%
Meidan Income:	12588
Meidan Income Number:	2788
Meidan Income Percent:	49.3%
Vacant Housing Number:	302
Vacant Housing Percent:	13.2%
Unemployed Number:	343
Unemployed Percent:	6.1%

Property Name:	KINGSTON RAIL YARD
Recipient Name:	R2 TBA (STAG Funded)
Grant Type:	TBA
Property Number:	48.80-1-31-100
Parcel size:	1.05
Latitude:	41.930467
Longitude:	-74.002486
HCM Label:	Not reported
Map Scale:	Not reported
Point of Reference:	Not reported
Highlights:	Not reported
Datum:	Not reported
Acres Property ID:	235926
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	85773
Assessment Funding Source:	US EPA - TBA Funding
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	EPA
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase II Environmental Assessment
Accomplishment Count:	1
Cooperative Agreement Number:	n/a
Start Date:	02/17/2016 00:00:00
Ownership Entity:	Government
Completion Date:	07/19/2017 00:00:00
Current Owner:	Ulster County
Did Owner Change:	N
Cleanup Required:	Y

KINGSTON RAIL YARD (Continued) **1024247166**

Video Available:	N
Photo Available:	Y
Institutional Controls Required:	U
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	Not reported
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Y
Groundwater cleaned:	Not reported
Lead contaminant found:	Y
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Y
Other contams found description:	Not reported
PAHs found:	Y
PAHs cleaned up:	Not reported
PCBs found:	Y
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Y
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Y
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	1.05
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported

KINGSTON RAIL YARD (Continued) **1024247166**

Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Historic Use: an active railroad switchyard, tourist railyard and rail car storage facility. Currently owned by Ulster
Below Poverty Number:	1427
Below Poverty Percent:	25.3%
Meidan Income:	12588
Meidan Income Number:	2788
Meidan Income Percent:	49.3%
Vacant Housing Number:	302
Vacant Housing Percent:	13.2%
Unemployed Number:	343
Unemployed Percent:	6.1%

41
SSW
1/8-1/4
0.140 mi.
737 ft.

EDWARD HILL ENTERPRISES, INC.
107 GREENKILL AVENUE
KINGSTON, NY 12401

NY UST **U003153230**
N/A

Relative:
Higher

Actual:
181 ft.

UST:

Id/Status:	3-601006 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	582397.58814
UTM Y:	4642157.66562
Site Type:	Other

EDWARD HILL ENTERPRISES, INC. (Continued) **U003153230**

Affiliation Records:

Site Id:	34244
Affiliation Type:	Facility Owner
Company Name:	EDWARD HILL ENTERPRISES, INC.
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	P.O BOX 1012
Address2:	Not reported
City:	PORT EWEN
State:	NY
Zip Code:	12466
Country Code:	001
Phone:	(914) 339-0088
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34244
Affiliation Type:	Mail Contact
Company Name:	EDWARD HILL ENTERPRISES, INC.
Contact Type:	Not reported
Contact Name:	EDWARD HILL
Address1:	P.O BOX 1012
Address2:	Not reported
City:	PORT EWEN
State:	NY
Zip Code:	12466
Country Code:	001
Phone:	(914) 339-0088
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34244
Affiliation Type:	Facility Operator
Company Name:	EDWARD HILL ENTERPRISES, INC.
Contact Type:	Not reported
Contact Name:	EDWARD HILL
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 339-0088
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34244
Affiliation Type:	Emergency Contact
Company Name:	EDWARD HILL ENTERPRISES, INC.
Contact Type:	Not reported
Contact Name:	EDWARD HILL

EDWARD HILL ENTERPRISES, INC. (Continued) **U003153230**

Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 339-0088
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Tank Info:

Tank Number:	1
Tank ID:	80033
Tank Status:	Closed - In Place
Material Name:	Closed - In Place
Capacity Gallons:	500
Install Date:	Not reported
Date Tank Closed:	09/01/1996
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0000
Common Name of Substance:	Empty
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
J00 - Dispenser - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
I00 - Overfill - None
H00 - Tank Leak Detection - None

Tank Number:	2
Tank ID:	80034
Tank Status:	Closed - In Place
Material Name:	Closed - In Place
Capacity Gallons:	1000
Install Date:	Not reported
Date Tank Closed:	09/01/1996
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009

EDWARD HILL ENTERPRISES, INC. (Continued) **U003153230**

Common Name of Substance: Gasoline

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

G00 - Tank Secondary Containment - None
C02 - Pipe Location - Underground/On-ground
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
J00 - Dispenser - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None

Tank Number: 3
Tank ID: 80035
Tank Status: Closed - In Place
Material Name: Closed - In Place
Capacity Gallons: 1000
Install Date: Not reported
Date Tank Closed: 09/01/1996
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0003
Common Name of Substance: #6 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
J00 - Dispenser - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None

42
SW
1/8-1/4
0.142 mi.
750 ft.

SPILL NUMBER 0312741
109 CEDAR STREET
KINGSTON, NY

NY LTANKS

S102448096
N/A

Relative:
Higher

Actual:
183 ft.

LTANKS:

Spill Number/Closed Date:	0312741 / 2004-02-17
Facility ID:	0312741
Site ID:	218957
Spill Date:	2004-02-17
Spill Cause:	Tank Overfill
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	C4
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	UNASSIGNED
Referred To:	Not reported
Reported to Dept:	2004-02-17
CID:	444
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2004-02-17
Spill Record Last Update:	2004-07-27
Spiller Name:	JODI VOSBURGH
Spiller Company:	KINGSTON OIL SUPPLY
Spiller Address:	NORTHBROADWAY
Spiller County:	001
Spiller Contact:	JODI VOSBURGH
Spiller Phone:	(845) 331-0770
Spiller Extention:	3106
DEC Region:	3
DER Facility ID:	181107
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was DISPATCH "
Remarks:	"DRIVER OVERFILLED AND IS BEING CLEANED UP: "

All Materials:

Site ID:	218957
Operable Unit ID:	880052
Operable Unit:	01
Material ID:	497925
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9609988 / 1996-11-12
Facility ID:	9609988
Site ID:	269263

SPILL NUMBER 0312741 (Continued) **S102448096**

Spill Date:	1996-11-09
Spill Cause:	Tank Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	C4
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1996-11-09
CID:	323
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1996-11-09
Spill Record Last Update:	1996-12-12
Spiller Name:	MR LUDANA
Spiller Company:	LUDANA AND LUDANA
Spiller Address:	109 CEDAR ST
Spiller County:	001
Spiller Contact:	MR LUDANA
Spiller Phone:	(914) 331-7498
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	219319
DEC Memo:	""
Remarks:	"SMALL SPILL ONTO CONCRETE FLOOR, CLEANED UP. TANK IS BEING PUMPED OUT."

All Materials:

Site ID:	269263
Operable Unit ID:	1037921
Operable Unit:	01
Material ID:	563901
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	6.00
Units:	G
Recovered:	6.00
Oxygenate:	Not reported

I43 **TONY MINERVINI AUTO BODY** **RCRA NonGen / NLR** **1000440247**
NE **117 TREMPER AVE** **NY MANIFEST** **NYD982540981**
1/8-1/4 **KINGSTON, NY 12401**
0.167 mi.
883 ft. **Site 1 of 2 in cluster I**

Relative: RCRA NonGen / NLR:
Higher Date form received by agency: 01/01/2007
Facility name: TONY MINERVINI AUTO BODY
Actual: Facility address: 117 TREMPER AVE
183 ft. KINGSTON, NY 12401

TONY MINERVINI AUTO BODY (Continued) **1000440247**

EPA ID: NYD982540981
Mailing address: WILBER AVE
KINGSTON, NY 12401
Contact: Not reported
Contact address: WILBER AVE
KINGSTON, NY 12401
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: ANTHONY MINERVINI JR
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: ANTHONY MINERVINI JR
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

TONY MINERVINI AUTO BODY (Continued) **1000440247**

Historical Generators:
Date form received by agency: 01/01/2006
Site name: TONY MINERVINI AUTO BODY
Classification: Not a generator, verified

Date form received by agency: 04/27/1995
Site name: TONY MINERVINI AUTO BODY
Classification: Not a generator, verified

. Waste code: NONE
. Waste name: None

Date form received by agency: 08/29/1988
Site name: TONY MINERVINI AUTO BODY
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

NY MANIFEST:
Country: USA
EPA ID: NYD982540981
Facility Status: Not reported
Location Address 1: 517 WILBER AVENUE
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON

TONY MINERVINI AUTO BODY (Continued) **1000440247**

Location State:	NY
Location Zip:	12401
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYD982540981
Mailing Name:	TONY MINERVINI AUTO BODY
Mailing Contact:	TONY MINERVINI AUTO BODY
Mailing Address 1:	517 WILBER AVENUE
Mailing Address 2:	Not reported
Mailing City:	KINGSTON
Mailing State:	NY
Mailing Zip:	12401
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143381687

NY MANIFEST:

Document ID:	NJA0965425
Manifest Status:	C
seq:	Not reported
Year:	1991
Trans1 State ID:	NJDEPS103
Trans2 State ID:	Not reported
Generator Ship Date:	02/05/1991
Trans1 Recv Date:	02/05/1991
Trans2 Recv Date:	/ /
TSD Site Recv Date:	02/06/1991
Part A Recv Date:	02/21/1991
Part B Recv Date:	02/21/1991
Generator EPA ID:	NYD982540981
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00050
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks

TONY MINERVINI AUTO BODY (Continued) **1000440247**

Handling Method: R Material recovery of more than 75 percent of the total material.
Specific Gravity: 100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

I44 **TONY MINERVINI AUTO BODY** **RCRA NonGen / NLR** **1004757923**
NE **117 TREMPER AVE** **FINDS** **NYD986964013**
1/8-1/4 **KINGSTON, NY 12401** **ECHO**
0.167 mi. **NY MANIFEST**
883 ft. **Site 2 of 2 in cluster I**

Relative:
Higher

Actual:
183 ft.

RCRA NonGen / NLR:
Date form received by agency: 01/01/2007
Facility name: TONY MINERVINI AUTO BODY
Facility address: 117 TREMPER AVE
KINGSTON, NY 12401
EPA ID: NYD986964013
Mailing address: TREMPER AVE
KINGSTON, NY 12401
Contact: ANTHONY MINERVINI
Contact address: TREMPER AVE
KINGSTON, NY 12401
Contact country: US
Contact telephone: 914-338-1887
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: BETTY SPADA
Owner/operator address: 46 CRANE ST
KINGSTON, NY 12401
Owner/operator country: US
Owner/operator telephone: 914-331-0980
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: BETTY SPADA
Owner/operator address: 46 CRANE ST
KINGSTON, NY 12401
Owner/operator country: US
Owner/operator telephone: 914-331-0980
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

TONY MINERVINI AUTO BODY (Continued) **1004757923**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: TONY MINERVINI AUTO BODY
Classification: Not a generator, verified

Date form received by agency: 04/13/1992
Site name: TONY MINERVINI AUTO BODY
Classification: Conditionally Exempt Small Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

TONY MINERVINI AUTO BODY (Continued) **1004757923**

Violation Status: No violations found

FINDS:

Registry ID: 110004424864

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1004757923
Registry ID:	110004424864
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110004424864

NY MANIFEST:

Country:	USA
EPA ID:	NYD986964013
Facility Status:	Not reported
Location Address 1:	117 TREMPER AVENUE
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	KINGSTON
Location State:	NY
Location Zip:	12401
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYD986964013
Mailing Name:	TONY MINERVINI AUTO BODY
Mailing Contact:	TONY
Mailing Address 1:	117 TREMPER AVENUE
Mailing Address 2:	Not reported
Mailing City:	KINGSTON
Mailing State:	NY
Mailing Zip:	12401
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143381887

NY MANIFEST:

Document ID:	NJA3182483
Manifest Status:	Not reported
seq:	01
Year:	2001
Trans1 State ID:	08464
Trans2 State ID:	Not reported
Generator Ship Date:	04/24/2001

TONY MINERVINI AUTO BODY (Continued) **1004757923**

Trans1 Recv Date:	04/24/2001
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	04/27/2001
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYD986964013
Trans1 EPA ID:	ARD069748192
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	01.00

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

J45 **FAMILY OF WOODSTOCK, INC.** **NY UST** **U003790910**
East **40 THOMAS STREET** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.176 mi.
927 ft. **Site 1 of 2 in cluster J**

Relative:
Higher

Actual:
188 ft.

UST:

Id/Status:	3-601472 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	582766.10845
UTM Y:	4642476.18019
Site Type:	Other

Affiliation Records:

Site Id:	34580
Affiliation Type:	Facility Owner

FAMILY OF WOODSTOCK, INC. (Continued) **U003790910**

Company Name:	FAMILY OF WOODSTOCK, INC.
Contact Type:	ENVIRONMENTAL CONSULTANT
Contact Name:	WILLIAM L. GOING
Address1:	PO BOX 3516
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12402
Country Code:	001
Phone:	(845) 331-7080
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2007-12-10

Site Id:	34580
Affiliation Type:	Mail Contact
Company Name:	FAMILY OF WOODSTOCK, INC.
Contact Type:	Not reported
Contact Name:	MICHAEL BERG
Address1:	PO BOX 3516
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12402
Country Code:	001
Phone:	(845) 331-7080
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34580
Affiliation Type:	Facility Operator
Company Name:	FAMILY OF WOODSTOCK, INC.
Contact Type:	Not reported
Contact Name:	MICHAEL BERG
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 331-7080
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2007-12-10

Site Id:	34580
Affiliation Type:	Emergency Contact
Company Name:	FAMILY OF WOODSTOCK, INC.
Contact Type:	Not reported
Contact Name:	MICHAEL BERG
Address1:	Not reported
Address2:	Not reported
City:	Not reported

FAMILY OF WOODSTOCK, INC. (Continued) **U003790910**

State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 331-7080
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2007-12-10

Tank Info:

Tank Number:	1
Tank ID:	82562
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	1000
Install Date:	Not reported
Date Tank Closed:	10/12/2005
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0022
Common Name of Substance:	Waste Oil/Used Oil
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	BHYUKOWE
Last Modified:	04/14/2017

Equipment Records:

C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

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46 **PRIVATE HOME** **NY LTANKS** **S106869287**
WSW **104 HENRY STREET** **N/A**
1/8-1/4 **KINGSTON, NY**
0.187 mi.
988 ft.

Relative:
Higher

Actual:
184 ft.

LTANKS:

Spill Number/Closed Date:	0501123 / 2005-04-27
Facility ID:	0501123
Site ID:	344271
Spill Date:	2005-04-27
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C4
Cleanup Ceased:	Not reported
SWIS:	5600
Investigator:	DXWEITZ

PRIVATE HOME (Continued) **S106869287**

Referred To:	Not reported
Reported to Dept:	2005-04-27
CID:	444
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2005-04-27
Spill Record Last Update:	2005-05-13
Spiller Name:	JODI VOSBURGH
Spiller Company:	KINGSTON OIL SUPPLY
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	JODI VOSBURGH
Spiller Phone:	(845) 331-0770
Spiller Extention:	3106
DEC Region:	3
DER Facility ID:	290935
DEC Memo:	""
Remarks:	"2 CUPS LEAKED OUT AND IS ALL CLEANED UIP:"

All Materials:

Site ID:	344271
Operable Unit ID:	1102919
Operable Unit:	01
Material ID:	583139
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

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47 **CANFIELD SUPPLY** **NY LTANKS** **S102674973**
SE **SUSAN & SUMMER STS.** **N/A**
1/8-1/4 **KINGSTON, NY**
0.188 mi.
995 ft.

Relative: LTANKS:
Lower

Actual:
175 ft.

Spill Number/Closed Date:	8907069 / 1989-11-01
Facility ID:	8907069
Site ID:	292837
Spill Date:	1989-10-17
Spill Cause:	Tank Overfill
Spill Source:	Commercial/Industrial
Spill Class:	Not reported
Cleanup Ceased:	1989-10-18
SWIS:	5630
Investigator:	dvwehrfr
Referred To:	Not reported
Reported to Dept:	1989-10-18

CANFIELD SUPPLY (Continued) **S102674973**

CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Fire Department
Last Inspection:	1989-10-18
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1989-11-01
Spill Record Last Update:	1989-11-14
Spiller Name:	Not reported
Spiller Company:	AMMAD & CO.
Spiller Address:	PO BOX 9
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	237028
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was D. WEHRFRITZ 11/14/89: ENVIRONMENTAL OIL GIVEN PERMISSION TO REMOVE DRUMS WITH CONTAMINATED MATERIAL 11-3-89. NFA. 11/29/95: This is additional information about material spilled from the translation of the old spill file: LARGE PUDDLES."
Remarks:	"UNDERGROUND OIL TANK WAS OVERFILLED. SPILLER USED BUCKETS TO SCOOP UP OIL AND DUMPED BEHIND SUSAN ST. SPILLER ALSO USED HOSE TO WASH OIL AWAY. PUDDLES IN ROADWAY. UCHD IS INVESTIGATING NFA"

All Materials:

Site ID:	292837
Operable Unit ID:	934823
Operable Unit:	01
Material ID:	443866
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

K48 **ARATEX CORP.** **NY LTANKS** **S102673584**
SSW **13 SOUTH PROSPECT STREET** **N/A**
1/8-1/4 **KINGSTON, NY**
0.190 mi.
1004 ft. **Site 1 of 2 in cluster K**

Relative:
Higher

Actual:
181 ft.

LTANKS:

Spill Number/Closed Date:	9006439 / 1990-09-13
Facility ID:	9006439
Site ID:	120706
Spill Date:	1990-09-10
Spill Cause:	Tank Overfill
Spill Source:	Commercial/Industrial
Spill Class:	D3
Cleanup Ceased:	1953-06-18

ARATEX CORP. (Continued) **S102673584**

SWIS:	5630
Investigator:	DUNN
Referred To:	Not reported
Reported to Dept:	1990-09-10
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	104789
DEC Memo:	""
Remarks:	"CONTAMINATED SOIL FOUND DURING TANK REMOVAL P. DUNN ON SITE FOR INSPECTION 40 YARDS STOCKPILED ON PASTIC COMPANY GIVEN OK TO BACKFILL CONT. FOUND ON TOP BY GAS TANK ANDERSON TAKING SOIL TO CATSKILL"

All Materials:

Site ID:	120706
Operable Unit ID:	947080
Operable Unit:	01
Material ID:	433897
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

L49 **CANFIELD PLUMBING SUPPLY WAREHOUSE** **NY UST** **U003740227**
ESE **534 BROADWAY** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.193 mi.
1021 ft. **Site 1 of 2 in cluster L**

Relative: **Higher**
Actual: **189 ft.**

UST:

Id/Status:	3-601396 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	583723.67780
UTM Y:	4641971.39148
Site Type:	Other Wholesale/Retail Sales

CANFIELD PLUMBING SUPPLY WAREHOUSE (Continued) **U003740227**

Affiliation Records:

Site Id:	34504
Affiliation Type:	Facility Owner
Company Name:	JOHN SHULTS
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	534 BROADWAY
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	Not reported
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34504
Affiliation Type:	Mail Contact
Company Name:	JOHN SHULTS
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	45 PINE GROVE AVENUE
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	Not reported
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34504
Affiliation Type:	Facility Operator
Company Name:	CANFIELD PLUMBING SUPPLY WAREHOUSE
Contact Type:	Not reported
Contact Name:	JOHN SHULTS
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	Not reported
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	34504
Affiliation Type:	Emergency Contact
Company Name:	JOHN SHULTS
Contact Type:	Not reported
Contact Name:	ENV. ENG.

CANFIELD PLUMBING SUPPLY WAREHOUSE (Continued) **U003740227**

Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 336-8903
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Tank Info:

Tank Number:	1
Tank ID:	82067
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	2500
Install Date:	Not reported
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009
Common Name of Substance:	Gasoline
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

B00 - Tank External Protection - None
F00 - Pipe External Protection - None
I00 - Overfill - None
H00 - Tank Leak Detection - None
J02 - Dispenser - Suction Dispenser
G00 - Tank Secondary Containment - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
A00 - Tank Internal Protection - None
C01 - Pipe Location - Aboveground

Tank Number:	2
Tank ID:	82068
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	2500
Install Date:	Not reported
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009

CANFIELD PLUMBING SUPPLY WAREHOUSE (Continued) **U003740227**

Common Name of Substance: Gasoline

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
D00 - Pipe Type - No Piping

M50 **RIOLS RESIDENCE** **NY LTANKS** **S100153547**
West **54 FRANKLIN STREET** **N/A**
1/8-1/4 **KINGSTON, NY**
0.197 mi.
1040 ft. **Site 1 of 2 in cluster M**

Relative: **Higher**
Actual: **185 ft.**

LTANKS:

Spill Number/Closed Date: 9106103 / 1991-09-10
Facility ID: 9106103
Site ID: 97933
Spill Date: 1991-09-06
Spill Cause: Tank Failure
Spill Source: Private Dwelling
Spill Class: Not reported
Cleanup Ceased: 1953-06-18
SWIS: 5630
Investigator: DVWEHRFR
Referred To: Not reported
Reported to Dept: 1991-09-06
CID: Not reported
Water Affected: Not reported
Spill Notifier: Other
Last Inspection: Not reported
Recommended Penalty: False
Meets Standard: True
UST Involvement: False
Remediation Phase: 0
Date Entered In Computer: Not reported
Spill Record Last Update: 2003-12-02
Spiller Name: Not reported
Spiller Company: SAME
Spiller Address: Not reported
Spiller County: 001
Spiller Contact: Not reported
Spiller Phone: Not reported
Spiller Extention: Not reported
DEC Region: 3
DER Facility ID: 87183
DEC Memo: "Prior to Sept, 2004 data translation this spill Lead_DEC Field was

RIOLS RESIDENCE (Continued) **S100153547**

WEHRFRITZ "
Remarks: "CONTAINED ON CONCRETE A LEG BUCKLED REPLACE TANK AND CLEANED UP SPILL SPEEDI-DRY WAS APPLIED AND PADS ACCORDING TO AL CARR WHO WAS ON SITE"

All Materials:
Site ID: 97933
Operable Unit ID: 960441
Operable Unit: 01
Material ID: 421843
Material Code: 0001A
Material Name: #2 fuel oil
Case No.: Not reported
Material FA: Petroleum
Quantity: 5.00
Units: G
Recovered: .00
Oxygenate: Not reported

51
SE
1/8-1/4
0.204 mi.
1078 ft.

CANFIELD MACHINE & TOOL DIV
45 PINE GROVE AVE
KINGSTON, NY 12401

NY UST **1000229194**
RCRA NonGen / NLR **NYD162495790**
FINDS
ECHO
NY MANIFEST

Relative:
Lower

Actual:
179 ft.

UST:
Id/Status: 3-138193 / Unregulated/Closed
Program Type: PBS
Region: STATE
DEC Region: 3
Expiration Date: N/A
UTM X: 582836.19782
UTM Y: 4642162.98506
Site Type: Manufacturing (Other than Chemical)/Processing

Affiliation Records:
Site Id: 32118
Affiliation Type: Facility Owner
Company Name: CANFIELD SUPPLY
Contact Type: Not reported
Contact Name: Not reported
Address1: 45 PINE GROVE AVE
Address2: Not reported
City: KINGSTON
State: NY
Zip Code: 12401
Country Code: 001
Phone: (914) 338-0023
EMail: Not reported
Fax Number: Not reported
Modified By: TRANSLAT
Date Last Modified: 2004-03-04

Site Id: 32118
Affiliation Type: Mail Contact
Company Name: CANFIELD SUPPLY
Contact Type: Not reported
Contact Name: Not reported

CANFIELD MACHINE & TOOL DIV (Continued) **1000229194**

Address1:	45 PINE GROVE AVE
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(914) 338-0023
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	32118
Affiliation Type:	Facility Operator
Company Name:	CANFIELD SUPPLY
Contact Type:	Not reported
Contact Name:	DAVE BEATTIE
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 331-6700
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	32118
Affiliation Type:	Emergency Contact
Company Name:	CANFIELD SUPPLY
Contact Type:	Not reported
Contact Name:	JOHN SHUTTS
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 331-0013
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Tank Info:

Tank Number:	1
Tank ID:	70103
Tank Status:	Closed - In Place
Material Name:	Closed - In Place
Capacity Gallons:	7500
Install Date:	06/01/1962
Date Tank Closed:	05/01/1999
Registered:	True
Tank Location:	Underground

CANFIELD MACHINE & TOOL DIV (Continued) **1000229194**

Tank Type: Steel/carbon steel
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: 09
Date Test: 12/01/1987
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
H00 - Tank Leak Detection - None
I00 - Overfill - None

RCRA NonGen / NLR:
Date form received by agency: 01/01/2007
Facility name: CANFIELD MACHINE & TOOL DIV
Facility address: 45 PINE GROVE AVE
KINGSTON, NY 12401-5407
EPA ID: NYD162495790
Mailing address: PINE GROVE AVE
KINGSTON, NY 12401
Contact: Not reported
Contact address: PINE GROVE AVE
KINGSTON, NY 12401
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CANFIELD SUPPLY CO
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: CANFIELD SUPPLY CO
Owner/operator address: NOT REQUIRED

CANFIELD MACHINE & TOOL DIV (Continued) **1000229194**

NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: CANFIELD MACHINE & TOOL DIV
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Site name: CANFIELD MACHINE & TOOL DIV
Classification: Not a generator, verified

Date form received by agency: 03/01/1992
Site name: CANFIELD MACHINE & TOOL
Classification: Large Quantity Generator

Date form received by agency: 08/30/1989
Site name: CANFIELD MACHINE & TOOL DIV
Classification: Large Quantity Generator

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F002

CANFIELD MACHINE & TOOL DIV (Continued) **1000229194**

. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 12/09/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110004385308

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000229194
Registry ID: 110004385308
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004385308

NY MANIFEST:
Country: USA
EPA ID: NYD162495790
Facility Status: Not reported
Location Address 1: 45 PINE GROVE AVENUE
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: Not reported

NY MANIFEST:
EPAID: NYD162495790
Mailing Name: CANFIELD MACHINE CORPORATION
Mailing Contact: CANFIELD MACHINE CORPORATION

CANFIELD MACHINE & TOOL DIV (Continued) **1000229194**

Mailing Address 1:	45 PINE GROVE AVENUE
Mailing Address 2:	Not reported
Mailing City:	KINGSTON
Mailing State:	NY
Mailing Zip:	12401
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143318400

NY MANIFEST:

Document ID:	NYB5077233
Manifest Status:	C
seq:	Not reported
Year:	1994
Trans1 State ID:	R39387ME
Trans2 State ID:	S40283ME
Generator Ship Date:	12/27/1994
Trans1 Recv Date:	12/27/1994
Trans2 Recv Date:	01/02/1995
TSD Site Recv Date:	01/05/1995
Part A Recv Date:	/ /
Part B Recv Date:	01/19/1995
Generator EPA ID:	NYD162495790
Trans1 EPA ID:	CTD982191942
Trans2 EPA ID:	CTD982191942
TSDF ID 1:	OHD980700942
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00350
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	F001 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00025

CANFIELD MACHINE & TOOL DIV (Continued) **1000229194**

Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

N52 **YMCA OF KINGSTON AND ULSTER CO** **NY AST** **U003075519**
ESE **507 BROADWAY** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.206 mi.
1090 ft. **Site 1 of 3 in cluster N**

Relative:
Higher

Actual:
186 ft.

AST:

Region:	STATE
DEC Region:	3
Site Status:	Active
Facility Id:	3-025518
Program Type:	PBS
UTM X:	582841.90856
UTM Y:	4642244.91184
Expiration Date:	10/29/2022
Site Type:	Other

Affiliation Records:

Site Id:	31552
Affiliation Type:	Facility Owner
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	PRESIDENT/CEO
Contact Name:	HEIDI G. KIRSCHNER
Address1:	507 BROADWAY
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 338-3810
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2013-05-29

Site Id:	31552
Affiliation Type:	Mail Contact
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	Not reported
Contact Name:	JOAN KEATING
Address1:	507 BROADWAY
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 338-3810
EMail:	JKEATING@YMCAULSTER.ORG

YMCA OF KINGSTON AND ULSTER CO (Continued) **U003075519**

Fax Number:	Not reported
Modified By:	GAAHLERS
Date Last Modified:	2017-10-12

Site Id:	31552
Affiliation Type:	Facility Operator
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	Not reported
Contact Name:	JOAN KEATING
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 338-3810
EMail:	Not reported
Fax Number:	Not reported
Modified By:	GAAHLERS
Date Last Modified:	2017-10-12

Site Id:	31552
Affiliation Type:	Emergency Contact
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	Not reported
Contact Name:	JOAN KEATING
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 338-3810
EMail:	Not reported
Fax Number:	Not reported
Modified By:	GAAHLERS
Date Last Modified:	2017-10-12

Tank Info:

Tank Number:	2
Tank Id:	77914
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)

Equipment Records:

F00 - Pipe External Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
J02 - Dispenser - Suction Dispenser
D10 - Pipe Type - Copper
A00 - Tank Internal Protection - None
K01 - Spill Prevention - Catch Basin
L09 - Piping Leak Detection - Exempt Suction Piping
H00 - Tank Leak Detection - None
I00 - Overfill - None

YMCA OF KINGSTON AND ULSTER CO (Continued) **U003075519**

	G01 - Tank Secondary Containment - Diking (Aboveground)
Tank Location:	3
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Pipe Model:	Not reported
Install Date:	11/01/1992
Capacity Gallons:	2000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	BHYUKOWE
Last Modified:	04/14/2017
Material Name:	#2 fuel oil (on-site consumption)

N53 **YMCA OF KINGSTON AND ULSTER CO** **NY UST** **U004078941**
ESE **507 BROADWAY** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.206 mi.
1090 ft. **Site 2 of 3 in cluster N**

Relative: **Higher**

Actual: **186 ft.**

UST:

Id/Status:	3-025518 / Active
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	10/29/2022
UTM X:	582841.90856
UTM Y:	4642244.91184
Site Type:	Other

Affiliation Records:

Site Id:	31552
Affiliation Type:	Facility Owner
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	PRESIDENT/CEO
Contact Name:	HEIDI G. KIRSCHNER
Address1:	507 BROADWAY
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 338-3810
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2013-05-29

Site Id:	31552
Affiliation Type:	Mail Contact
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	Not reported
Contact Name:	JOAN KEATING
Address1:	507 BROADWAY
Address2:	Not reported
City:	KINGSTON

YMCA OF KINGSTON AND ULSTER CO (Continued) **U004078941**

State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 338-3810
EMail:	JKEATING@YMCAULSTER.ORG
Fax Number:	Not reported
Modified By:	GAAHLERS
Date Last Modified:	2017-10-12

Site Id:	31552
Affiliation Type:	Facility Operator
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	Not reported
Contact Name:	JOAN KEATING
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 338-3810
EMail:	Not reported
Fax Number:	Not reported
Modified By:	GAAHLERS
Date Last Modified:	2017-10-12

Site Id:	31552
Affiliation Type:	Emergency Contact
Company Name:	YMCA OF KINGSTON AND ULSTER CO
Contact Type:	Not reported
Contact Name:	JOAN KEATING
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 338-3810
EMail:	Not reported
Fax Number:	Not reported
Modified By:	GAAHLERS
Date Last Modified:	2017-10-12

Tank Info:

Tank Number:	1
Tank ID:	73543
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	20000
Install Date:	12/01/1971
Date Tank Closed:	11/01/1992
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)

YMCA OF KINGSTON AND ULSTER CO (Continued) **U004078941**

Tightness Test Method:	03
Date Test:	11/01/1987
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
J02 - Dispenser - Suction Dispenser
G00 - Tank Secondary Containment - None
I04 - Overfill - Product Level Gauge (A/G)
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
H00 - Tank Leak Detection - None

N54 **KINGSTON YMCA** **NY LTANKS** **S100140231**
ESE **507 BROADWAY** **N/A**
1/8-1/4 **KINGSTON, NY**
0.206 mi.
1090 ft. **Site 3 of 3 in cluster N**

Relative:
Higher

Actual:
186 ft.

LTANKS:

Spill Number/Closed Date:	8707032 / 1989-01-05
Facility ID:	8707032
Site ID:	101334
Spill Date:	1987-11-17
Spill Cause:	Tank Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Not reported
Cleanup Ceased:	1989-01-05
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-11-17
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	1989-01-05
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-11-20
Spill Record Last Update:	1989-01-12
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	CONTACT:BOB STUBBS
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	89795
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON "

KINGSTON YMCA (Continued) **S100140231**

Remarks: "20K SYSTEM -.212GPH. MAY ISOLATE AND RETEST OR TO #5.PBS TO FOLLOW"

All TTF:

Facility ID:	8707032
Spill Number:	8707032
Spill Tank Test:	1532307
Site ID:	101334
Tank Number:	Not reported
Tank Size:	0
Material:	0002
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	101334
Operable Unit ID:	910916
Operable Unit:	01
Material ID:	466013
Material Code:	0002A
Material Name:	#4 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

O55 **U.S POST OFFICE** **NY UST** **1000557060**
ENE **90 CORNELL STREET** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.212 mi.
1118 ft. **Site 1 of 6 in cluster O**

Relative:
Higher

Actual:
185 ft.

UST:

Id/Status:	3-448974 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	582741.52349
UTM Y:	4642573.96810
Site Type:	Other

Affiliation Records:

Site Id:	33376
Affiliation Type:	Facility Owner
Company Name:	KINGSTON POSTAL HOLDINGS CO.
Contact Type:	Not reported
Contact Name:	Not reported

U.S POST OFFICE (Continued) **1000557060**

Address1:	290 CENTRAL AVE., STE 205
Address2:	Not reported
City:	LAWRENCE
State:	NY
Zip Code:	11559
Country Code:	001
Phone:	(516) 239-5959
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	33376
Affiliation Type:	Mail Contact
Company Name:	U,S. POSTAL SERVICE
Contact Type:	Not reported
Contact Name:	SHERRY ELKIND
Address1:	90 CORNELL STREET
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401-9998
Country Code:	001
Phone:	(914) 331-5600
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	33376
Affiliation Type:	Facility Operator
Company Name:	U.S POST OFFICE
Contact Type:	Not reported
Contact Name:	U.S.POST OFFICE
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(914) 331-5600
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Site Id:	33376
Affiliation Type:	Emergency Contact
Company Name:	KINGSTON POSTAL HOLDINGS CO.
Contact Type:	Not reported
Contact Name:	CHANDLER BEAUDETTE
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001

U.S POST OFFICE (Continued) **1000557060**

Phone:	(914) 331-5600
EMail:	Not reported
Fax Number:	Not reported
Modified By:	TRANSLAT
Date Last Modified:	2004-03-04

Tank Info:

Tank Number:	1
Tank ID:	74993
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	6000
Install Date:	12/01/1967
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
I04 - Overfill - Product Level Gauge (A/G)
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None
H00 - Tank Leak Detection - None

Tank Number:	2
Tank ID:	74994
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	6000
Install Date:	12/01/1967
Date Tank Closed:	Not reported
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported

U.S POST OFFICE (Continued) **1000557060**

Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
I04 - Overfill - Product Level Gauge (A/G)
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
A00 - Tank Internal Protection - None
H00 - Tank Leak Detection - None

56
NW
1/8-1/4
0.213 mi.
1126 ft.

HONDA OF KINGSTON
708 BROADWAY
KINGSTON, NY 12401

NY Spills **1000184461**
RCRA NonGen / NLR **NYD122745730**
FINDS
ECHO
NY MANIFEST

Relative:
Higher

Actual:
180 ft.

SPILLS:

Spill Number/Closed Date:	9835004 / 1998-11-15
Facility ID:	9835004
Facility Type:	ER
DER Facility ID:	198406
Site ID:	241302
DEC Region:	3
Spill Cause:	Deliberate
Spill Class:	C3
SWIS:	5630
Spill Date:	1998-10-28
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	1998-10-28
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	DEC
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1998-10-28
Spill Record Last Update:	2000-06-06
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller Company:	999
Contact Name:	JIM MOOREHEAD
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER SPILLER CLEANED UP. NFA"
Remarks:	"TWO 55 GAL. DRUMS OF WASTE MATERIAL DUMPED ONTO GROUND AT REAR OF SITE. MATERIAL IS FROM CLEANING OUT OF BAY DRAINS AT SITE. SPILLER TO HIRE CONTRACTOR TO CLEANUP. DEC DLE ON SITE."

All Materials:

Site ID:	241302

HONDA OF KINGSTON (Continued) **1000184461**

Operable Unit ID: 1076949
Operable Unit: 01
Material ID: 309060
Material Code: 0022
Material Name: waste oil/used oil
Case No.: Not reported
Material FA: Petroleum
Quantity: .00
Units: G
Recovered: .00
Oxygenate: Not reported

Site ID: 241302
Operable Unit ID: 1076949
Operable Unit: 01
Material ID: 309062
Material Code: 0059A
Material Name: solvents
Case No.: Not reported
Material FA: Other
Quantity: .00
Units: G
Recovered: .00
Oxygenate: Not reported

Site ID: 241302
Operable Unit ID: 1076949
Operable Unit: 01
Material ID: 309061
Material Code: 0066A
Material Name: unknown petroleum
Case No.: Not reported
Material FA: Petroleum
Quantity: .00
Units: G
Recovered: .00
Oxygenate: Not reported

RCRA NonGen / NLR:
Date form received by agency: 01/01/2007
Facility name: HONDA OF KINGSTON
Facility address: 708 BROADWAY
KINGSTON, NY 12401
EPA ID: NYD122745730
Mailing address: BROADWAY
KINGSTON, NY 12401
Contact: Not reported
Contact address: BROADWAY
KINGSTON, NY 12401
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

HONDA OF KINGSTON (Continued) **1000184461**

Owner/Operator Summary:
- Owner/operator name: FINCHER MOTOR SALES & LEASING
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, WY 99999
- Owner/operator country: US
- Owner/operator telephone: 212-555-1212
- Owner/operator email: Not reported
- Owner/operator fax: Not reported
- Owner/operator extension: Not reported
- Legal status: Private
- Owner/Operator Type: Owner
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

- Owner/operator name: FINCHER MOTOR SALES & LEASING
- Owner/operator address: NOT REQUIRED
  NOT REQUIRED, WY 99999
- Owner/operator country: US
- Owner/operator telephone: 212-555-1212
- Owner/operator email: Not reported
- Owner/operator fax: Not reported
- Owner/operator extension: Not reported
- Legal status: Private
- Owner/Operator Type: Operator
- Owner/Op start date: Not reported
- Owner/Op end date: Not reported

Handler Activities Summary:
- U.S. importer of hazardous waste: No
- Mixed waste (haz. and radioactive): No
- Recycler of hazardous waste: No
- Transporter of hazardous waste: No
- Treater, storer or disposer of HW: No
- Underground injection activity: No
- On-site burner exemption: No
- Furnace exemption: No
- Used oil fuel burner: No
- Used oil processor: No
- User oil refiner: No
- Used oil fuel marketer to burner: No
- Used oil Specification marketer: No
- Used oil transfer facility: No
- Used oil transporter: No

Historical Generators:
- Date form received by agency: 01/01/2006
- Site name: HONDA OF KINGSTON
- Classification: Not a generator, verified

- Date form received by agency: 04/11/1995
- Site name: HONDA OF KINGSTON
- Classification: Not a generator, verified

. Waste code: NONE
. Waste name: None

HONDA OF KINGSTON (Continued) **1000184461**

Date form received by agency: 01/21/1986
Site name: HONDA OF KINGSTON
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

FINDS:

Registry ID: 110004382007

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000184461
Registry ID: 110004382007
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004382007

NY MANIFEST:
Country: USA
EPA ID: NYD122745730
Facility Status: Not reported
Location Address 1: 708 BROADWAY
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: Not reported

NY MANIFEST:
EPAID: NYD122745730
Mailing Name: HONDA OF KINGSTON
Mailing Contact: HONDA OF KINGSTON
Mailing Address 1: 708 BROADWAY
Mailing Address 2: Not reported
Mailing City: KINGSTON
Mailing State: NY

HONDA OF KINGSTON (Continued) **1000184461**

Mailing Zip:	12401
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143318655

NY MANIFEST:

Document ID:	CTB0097863
Manifest Status:	C
seq:	Not reported
Year:	1987
Trans1 State ID:	XH54TR(NJ
Trans2 State ID:	Not reported
Generator Ship Date:	07/30/1987
Trans1 Recv Date:	07/30/1987
Trans2 Recv Date:	/ /
TSD Site Recv Date:	07/31/1987
Part A Recv Date:	07/31/1987
Part B Recv Date:	08/10/1987
Generator EPA ID:	NYD122745730
Trans1 EPA ID:	NJD980787147
Trans2 EPA ID:	Not reported
TSDF ID 1:	CTD072138969
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F003 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00030
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

O57 **THE SHIRT FACTORY** **NY UST** **U004048514**
NE **77 CORNELL STREET** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.216 mi.
1140 ft. **Site 2 of 6 in cluster O**

Relative:
Higher

Actual:
184 ft.

UST:

Id/Status:	3-601722 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	582812.13464
UTM Y:	4642662.51551
Site Type:	Apartment Building/Office Building

Affiliation Records:

Site Id:	345697
Affiliation Type:	Facility Owner
Company Name:	CROSSFIELD MANAGEMENT, LLC
Contact Type:	OWNER
Contact Name:	MICHAEL PIAZZA
Address1:	77 CORNELL STREET
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 354-6383
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2010-10-21

Site Id:	345697
Affiliation Type:	Mail Contact
Company Name:	CROSSFIELD MANAGEMENT LLC
Contact Type:	Not reported
Contact Name:	MICHAEL V. PIAZZA
Address1:	77 CORNELL STREET
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 340-1280
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2010-10-21

Site Id:	345697
Affiliation Type:	Facility Operator
Company Name:	THE SHIRT FACTORY
Contact Type:	Not reported
Contact Name:	MIKE PIAZZA
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN

THE SHIRT FACTORY (Continued) **U004048514**

Zip Code:	Not reported
Country Code:	001
Phone:	(845) 340-1280
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2010-10-21

Site Id:	345697
Affiliation Type:	Emergency Contact
Company Name:	CROSSFIELD MANAGEMENT, LLC
Contact Type:	Not reported
Contact Name:	MIKE PIAZZA
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 340-1280
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2010-10-21

Tank Info:

Tank Number:	1
Tank ID:	206254
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	5000
Install Date:	Not reported
Date Tank Closed:	06/09/2010
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)

Tightness Test Method:	21
Date Test:	01/12/2005
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	BHYUKOWE
Last Modified:	04/14/2017

Equipment Records:

A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
F01 - Pipe External Protection - Painted/Asphalt Coating
K00 - Spill Prevention - None
C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
I05 - Overfill - Vent Whistle

THE SHIRT FACTORY (Continued) **U004048514**

E00 - Piping Secondary Containment - None
H00 - Tank Leak Detection - None
L00 - Piping Leak Detection - None

O58 **Q D P ELECTRONICS ASSEMBLY** **RCRA NonGen / NLR** **1000390606**
NE **77 CORNELL ST** **FINDS** **NYD063788541**
1/8-1/4 **KINGSTON, NY 12401** **ECHO**
0.216 mi. **NY MANIFEST**
1140 ft. **Site 3 of 6 in cluster O**

Relative:
Higher

Actual:
184 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	FX SYSTEMS CORP
Facility address:	77 CORNELL ST KINGSTON, NY 12401-3629
EPA ID:	NYD063788541
Mailing address:	CORNELL ST PO BOX 1818 KINGSTON, NY 12401
Contact:	Not reported
Contact address:	CORNELL ST PO BOX 1818 KINGSTON, NY 12401
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NUTTER EDWARD
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	212-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NUTTER EDWARD
Owner/operator address:	NOT REQUIRED NOT REQUIRED, WY 99999
Owner/operator country:	US
Owner/operator telephone:	212-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

Q D P ELECTRONICS ASSEMBLY (Continued) **1000390606**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:

Date form received by agency: 01/01/2006
Site name: FX SYSTEMS CORP
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Site name: FX SYSTEMS CORP
Classification: Not a generator, verified

Date form received by agency: 05/29/1982
Site name: FX SYSTEMS CORP
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110004363359

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

Q D P ELECTRONICS ASSEMBLY (Continued) **1000390606**

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

FIS (New York - Facility Information System) is New York's Department of Environmental Conservation (DEC) information system for tracking environmental facility information found across the State.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000390606
Registry ID:	110004363359
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110004363359

NY MANIFEST:

Country:	USA
EPA ID:	NYD063788541
Facility Status:	Not reported
Location Address 1:	77 CORNELL ST
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	KINGSTON
Location State:	NY
Location Zip:	12401
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYD063788541
Mailing Name:	F X SYSTEMS CORPORATION
Mailing Contact:	THOMAS BRENNAN
Mailing Address 1:	CPO 1818
Mailing Address 2:	Not reported
Mailing City:	KINGSTON
Mailing State:	NY
Mailing Zip:	12477
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143380515

NY MANIFEST:

Document ID:	NJA0241606
Manifest Status:	C
seq:	Not reported
Year:	1987
Trans1 State ID:	NJDEPS577
Trans2 State ID:	Not reported
Generator Ship Date:	06/12/1987
Trans1 Recv Date:	06/12/1987
Trans2 Recv Date:	/ /
TSD Site Recv Date:	06/12/1987
Part A Recv Date:	06/16/1987
Part B Recv Date:	06/19/1987

Q D P ELECTRONICS ASSEMBLY (Continued) **1000390606**

Generator EPA ID:	NYD063788541
Trans1 EPA ID:	NJD990720658
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002182897
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	F001 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00055
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

O59 **GANT SHIRT MAKERS** **NY DRYCLEANERS** **S110246664**
NE **77 CORNELL STREET** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.216 mi.
1140 ft. **Site 4 of 6 in cluster O**

Relative:
Higher

Actual:
184 ft.

DRYCLEANERS:

Facility ID:	3-5108-00012
Phone Number:	NOT LISTED
Region:	Not reported
Registration Effective Date:	N/A
Inspection Date:	06AUG2
Install Date:	Not reported
Drop Shop:	Not reported
Shutdown:	Y
Alternate Solvent:	Not reported
Current Business:	Not reported

O60 **NOT FADE AWAY TIE DYE CO INC** **RCRA NonGen / NLR** **1000833470**
NE **77 CORNELL ST - 1ST FLOOR** **FINDS** **NYD987020898**
1/8-1/4 **KINGSTON, NY 12401** **ECHO**
0.216 mi. **NY MANIFEST**
1140 ft. **Site 5 of 6 in cluster O**

Relative:
Higher

Actual:
184 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	NOT FADE AWAY TIE DYE CO INC
Facility address:	77 CORNELL ST - 1ST FLOOR KINGSTON, NY 12401
EPA ID:	NYD987020898
Mailing address:	PO BOX 2092 KINGSTON, NY 12401
Contact:	Not reported
Contact address:	PO BOX 2092 KINGSTON, NY 12401
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	MARTIN LEFFER
Owner/operator address:	PO BOX 2092 KINGSTON, NY 12401
Owner/operator country:	US
Owner/operator telephone:	914-339-1087
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	MARTIN LEFFER
Owner/operator address:	PO BOX 2092

NOT FADE AWAY TIE DYE CO INC (Continued) **1000833470**

KINGSTON, NY 12401
Owner/operator country: US
Owner/operator telephone: 914-339-1087
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: NOT FADE AWAY TIE DYE CO INC
Classification: Not a generator, verified

Date form received by agency: 07/14/1999
Site name: NOT FADE AWAY TIE DYE CO INC
Classification: Small Quantity Generator

Date form received by agency: 10/08/1992
Site name: NOT FADE AWAY TIE DYE CO INC
Classification: Large Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D018
. Waste name: BENZENE

. Waste code: D039
. Waste name: TETRACHLOROETHYLENE

NOT FADE AWAY TIE DYE CO INC (Continued) **1000833470**

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - Manifest
Date violation determined: 09/14/1998
Date achieved compliance: 10/19/1998
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/14/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/14/1998
Date achieved compliance: 10/19/1998
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/14/1998
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/27/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - Manifest
Date achieved compliance: 10/19/1998
Evaluation lead agency: State

Evaluation date: 08/27/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/19/1998
Evaluation lead agency: State

FINDS:

Registry ID: 110004497580

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

NOT FADE AWAY TIE DYE CO INC (Continued) **1000833470**

ECHO:
- Envid: 1000833470
- Registry ID: 110004497580
- DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004497580

NY MANIFEST:
- Country: USA
- EPA ID: NYD987020898
- Facility Status: Not reported
- Location Address 1: 77 CORNELL ST
- Code: BP
- Location Address 2: Not reported
- Total Tanks: Not reported
- Location City: KINGSTON
- Location State: NY
- Location Zip: 12401
- Location Zip 4: Not reported

NY MANIFEST:
- EPAID: NYD987020898
- Mailing Name: NOT FADE AWAY GRAPHICS
- Mailing Contact: DEE
- Mailing Address 1: 77 CORNELL ST
- Mailing Address 2: Not reported
- Mailing City: KINGSTON
- Mailing State: NY
- Mailing Zip: 12401
- Mailing Zip 4: Not reported
- Mailing Country: USA
- Mailing Phone: 9143391087

NY MANIFEST:
- Document ID: MAM9109800
- Manifest Status: Not reported
- seq: 01
- Year: 2001
- Trans1 State ID: TNT218034
- Trans2 State ID: NY43803AV
- Generator Ship Date: 02/07/2001
- Trans1 Recv Date: 02/07/2001
- Trans2 Recv Date: 02/07/2001
- TSD Site Recv Date: 02/14/2001
- Part A Recv Date: Not reported
- Part B Recv Date: Not reported
- Generator EPA ID: NYD987020898
- Trans1 EPA ID: SCR000074591
- Trans2 EPA ID: SCR000075150
- TSDF ID 1: MAD982755639
- TSDF ID 2: Not reported
- Manifest Tracking Number: Not reported
- Import Indicator: Not reported
- Export Indicator: Not reported
- Discr Quantity Indicator: Not reported
- Discr Type Indicator: Not reported
- Discr Residue Indicator: Not reported
- Discr Partial Reject Indicator: Not reported

NOT FADE AWAY TIE DYE CO INC (Continued) **1000833470**

Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D011 - SILVER 5.0 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00135
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	01.00

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

O61 **Q D P ELECTRONICS ASSEMBLY** **NY LTANKS** **1001128022**
NE **77 CORNELL ST 2ND FLOOR** **RCRA NonGen / NLR** **NYR000036913**
1/8-1/4 **KINGSTON, NY 12401** **NY MANIFEST**
0.216 mi.
1140 ft. **Site 6 of 6 in cluster O**

Relative: LTANKS:
Higher

Actual:
184 ft.

Spill Number/Closed Date:	1000041 / 2010-10-14
Facility ID:	1000041
Site ID:	426960
Spill Date:	2010-04-01
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5608
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2010-04-01
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2010-04-01
Spill Record Last Update:	2010-10-14
Spiller Name:	MIKE PIAZZA
Spiller Company:	T Shirt Factory
Spiller Address:	77 CORNELL ST
Spiller County:	999
Spiller Contact:	MIKE PIAZZA
Spiller Phone:	(914) 522-6391
Spiller Extention:	Not reported

Q D P ELECTRONICS ASSEMBLY (Continued) **1001128022**

DEC Region: 3
DER Facility ID: 375846
DEC Memo: "4-1-10 Spoke with Ken at WCC Tank. This is a 5k UST. Small ullage leak in tank. This property is already hooked up to natural gas. Ken thinks that the owner plans on pulling the tank. jm Called and spoke with property owner, Mike Piazza. He says that he plans on contacting Conklin Services to come and uncover/retest the tank before deciding what he will do with the tank. He does not use this tank. He said there is oil in the tank. Told him he needs to empty the tank within 24 hours OR make arrangements for retest within 48 hrs. jm 6-9-10 Kathy from US Tank Tech called. Tank failed retest. jc Tank removed. TCR from Enviroclean dated 8/10/10 received. No soil removed from excavation. Postex soil samples from tank excavation sidewalls demonstrate some SVOC's slightly exceed CP draft guidance levels. Area serviced by municipal utilities. Close as does not meet standards. NFA DT 10/14/10"
Remarks: "Caller reporting a tank test failure."

All Materials:
Site ID: 426960
Operable Unit ID: 1182639
Operable Unit: 01
Material ID: 2176823
Material Code: 0001A
Material Name: #2 fuel oil
Case No.: Not reported
Material FA: Petroleum
Quantity: Not reported
Units: G
Recovered: Not reported
Oxygenate: Not reported

RCRA NonGen / NLR:
Date form received by agency: 01/01/2007
Facility name: Q D P ELECTRONICS ASSEMBLY
Facility address: 77 CORNELL ST 2ND FLOOR
SOUTH END
KINGSTON, NY 12401-3629
EPA ID: NYR000036913
Mailing address: PO BOX 1339
KINGSTON, NY 12402-1339
Contact: Not reported
Contact address: PO BOX 1339
KINGSTON, NY 12402-1339
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: HERBERT KREIN
Owner/operator address: PO BOX 1339
KINGSTON, NY 12402

Q D P ELECTRONICS ASSEMBLY (Continued) **1001128022**

Owner/operator country: US
Owner/operator telephone: 914-334-8108
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: HERBERT KREIN
Owner/operator address: PO BOX 1339
KINGSTON, NY 12402
Owner/operator country: US
Owner/operator telephone: 914-334-8108
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: Q D P ELECTRONICS ASSEMBLY
Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Site name: Q D P ELECTRONICS ASSEMBLY
Classification: Not a generator, verified

Date form received by agency: 03/24/1997
Site name: Q D P ELECTRONICS ASSEMBLY
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS

Q D P ELECTRONICS ASSEMBLY (Continued) **1001128022**

CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 09/01/1998
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

NY MANIFEST:
Country: USA
EPA ID: NYR000036913
Facility Status: Not reported
Location Address 1: 77 CORNELL ST
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: Not reported

NY MANIFEST:
EPAID: NYR000036913
Mailing Name: QDP ELECTRONICS ASSEMBLY
Mailing Contact: HERBERT KREIN
Mailing Address 1: P.O. BOX 1339
Mailing Address 2: Not reported
Mailing City: KINGSTON
Mailing State: NY
Mailing Zip: 12402
Mailing Zip 4: 1339
Mailing Country: USA
Mailing Phone: 8453348108

NY MANIFEST:
Document ID: NYC5837253
Manifest Status: Not reported
seq: 01
Year: 2000
Trans1 State ID: ILP226919
Trans2 State ID: Not reported
Generator Ship Date: 12/08/2000
Trans1 Recv Date: 12/08/2000
Trans2 Recv Date: 12/11/2000
TSD Site Recv Date: 12/16/2000
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYR000036913
Trans1 EPA ID: SCR000075150
Trans2 EPA ID: SCR000074591

Q D P ELECTRONICS ASSEMBLY (Continued) **1001128022**

TSDF ID 1:	KYD053348108
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F001 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	02280
Units:	P - Pounds
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00
Waste Code:	F001 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00452
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	01.00

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

J62 **SPILL NUMBER 9906580** **NY LTANKS** **S104620426**
East **150-56 58TH AV** **N/A**
1/8-1/4 **QUEENS, NY**
0.220 mi.
1164 ft. **Site 2 of 2 in cluster J**

Relative: LTANKS:
Higher

Actual:
188 ft.

Spill Number/Closed Date:	9906580 / 2000-01-25
Facility ID:	9906580
Site ID:	279893
Spill Date:	1999-09-02
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	4101

SPILL NUMBER 9906580 (Continued) **S104620426**

Investigator:	O'DOWD
Referred To:	Not reported
Reported to Dept:	1999-09-02
CID:	211
Water Affected:	Not reported
Spill Notifier:	Local Agency
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1999-09-02
Spill Record Last Update:	2000-02-09
Spiller Name:	Not reported
Spiller Company:	UNKNOWN
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	2
DER Facility ID:	227240
DEC Memo:	""
Remarks:	"CALLER STATES UNK COMPANY WAS FILLING TANK WHEN IT OVERFLOWED - PRODUCT DID ENTER SEWER SYSTEM - FIRE DEPT ON SCENE CONTAING - NO CLEAN UP"

All Materials:

Site ID:	279893
Operable Unit ID:	1080991
Operable Unit:	01
Material ID:	299303
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	20.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

L63 **CANFIELD MACHINE & TOOL CO** **RCRA NonGen / NLR** **1000229195**
East **17 DEDERICK ST** **FINDS** **NYD980533517**
1/8-1/4 **KINGSTON, NY 12401** **ECHO**
0.221 mi. **NY MANIFEST**
1168 ft. **Site 2 of 2 in cluster L**

Relative:
Higher

Actual:
190 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	CANFIELD MACHINE & TOOL CO
Facility address:	17 DEDERICK ST KINGSTON, NY 12401-3903
EPA ID:	NYD980533517
Mailing address:	DEDERICK ST KINGSTON, NY 12401
Contact:	Not reported
Contact address:	DEDERICK ST

CANFIELD MACHINE & TOOL CO (Continued) **1000229195**

KINGSTON, NY 12401
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: Not reported
Owner/operator address: NOT REQUIRED
NOT REQUIRED, WY 99999
Owner/operator country: US
Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: CANFIELD MACHINE & TOOL CO

CANFIELD MACHINE & TOOL CO (Continued) **1000229195**

Classification: Not a generator, verified

Date form received by agency: 07/08/1999
Site name: CANFIELD MACHINE & TOOL CO
Classification: Not a generator, verified

Date form received by agency: 10/29/1981
Site name: CANFIELD MACHINE & TOOL CO
Classification: Large Quantity Generator

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/10/1989
Date achieved compliance: 10/23/1989
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/01/1989
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 04/14/1987
Date achieved compliance: 07/22/1987
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 05/11/1987
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/10/1989
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/23/1989
Evaluation lead agency: State

Evaluation date: 04/14/1987

CANFIELD MACHINE & TOOL CO (Continued) **1000229195**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 07/22/1987
Evaluation lead agency: State

Evaluation date: 11/26/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110004387128

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000229195
Registry ID: 110004387128
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004387128

NY MANIFEST:
Country: USA
EPA ID: NYD980533517
Facility Status: Not reported
Location Address 1: 17 DEDERICK STREET
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: Not reported

NY MANIFEST:
EPAID: NYD980533517
Mailing Name: CANFIELD MACHINE & TOOL
Mailing Contact: PETE SHULTS
Mailing Address 1: 17 DEDERICK STREET
Mailing Address 2: Not reported
Mailing City: KINGSTON
Mailing State: NY
Mailing Zip: 12401
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 9143318400

CANFIELD MACHINE & TOOL CO (Continued) **1000229195**

NY MANIFEST:

Document ID:	NJA0841499
Manifest Status:	C
seq:	Not reported
Year:	1990
Trans1 State ID:	NJDEPS-81
Trans2 State ID:	Not reported
Generator Ship Date:	01/24/1990
Trans1 Recv Date:	01/24/1990
Trans2 Recv Date:	/ /
TSD Site Recv Date:	01/24/1990
Part A Recv Date:	02/07/1990
Part B Recv Date:	02/14/1990
Generator EPA ID:	NYD980533517
Trans1 EPA ID:	NJD156163438
Trans2 EPA ID:	Not reported
TSDF ID 1:	NJD002454544
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F002 - HALO SOLV + STILL BOTTOMS FM REC OF SOLV
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00330
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	006
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

K64 **E.T. VENTURES LTD** **NY UST** **U001842949**
SSW **2-6 SOUTH PROSPECT STREET** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.229 mi.
1208 ft. **Site 2 of 2 in cluster K**

Relative: **Higher**

Actual: **182 ft.**

UST:

Id/Status:	3-165255 / Unregulated/Closed
Program Type:	PBS
Region:	STATE

E.T. VENTURES LTD (Continued) **U001842949**

DEC Region: 3
Expiration Date: N/A
UTM X: 582357.70169
UTM Y: 4641957.21281
Site Type: Other

Affiliation Records:

Site Id: 32264
Affiliation Type: Mail Contact
Company Name: E.T. VENTURES LTD
Contact Type: Not reported
Contact Name: STEVE DAVIS
Address1: 2-6 SOUTH PROSPECT STREET
Address2: Not reported
City: KINGSTON
State: NY
Zip Code: 12401
Country Code: 001
Phone: (845) 339-2266
EMail: Not reported
Fax Number: Not reported
Modified By: BHYUKOWE
Date Last Modified: 2004-10-18

Site Id: 32264
Affiliation Type: Facility Operator
Company Name: E.T. VENTURES LTD
Contact Type: Not reported
Contact Name: STEVEN DAVIS
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (845) 339-2200
EMail: Not reported
Fax Number: Not reported
Modified By: BHYUKOWE
Date Last Modified: 2004-10-18

Site Id: 32264
Affiliation Type: Emergency Contact
Company Name: E.T. VENTURES LTD
Contact Type: Not reported
Contact Name: STEVEN DAVIS
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 999
Phone: (845) 338-4475
EMail: Not reported
Fax Number: Not reported
Modified By: BHYUKOWE
Date Last Modified: 2004-10-18

E.T. VENTURES LTD (Continued) **U001842949**

Site Id:	32264
Affiliation Type:	Facility Owner
Company Name:	E.T. VENTURES LTD
Contact Type:	BUILDING SUPERINTENDENT
Contact Name:	STEVEN DAVIS
Address1:	PO BOX 212079
Address2:	Not reported
City:	ROYAL PALM BEACH
State:	FL
Zip Code:	33421
Country Code:	001
Phone:	(561) 329-1135
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2004-10-18

Tank Info:

Tank Number:	1
Tank ID:	70729
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	10000
Install Date:	12/01/1976
Date Tank Closed:	10/08/2004
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)
Tightness Test Method:	20
Date Test:	08/01/1997
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	WXWADSWO
Last Modified:	04/14/2017

Equipment Records:

C03 - Pipe Location - Aboveground/Underground Combination
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
A01 - Tank Internal Protection - Epoxy Liner
H00 - Tank Leak Detection - None
B00 - Tank External Protection - None
F00 - Pipe External Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron
I00 - Overfill - None
L09 - Piping Leak Detection - Exempt Suction Piping

65
North
1/8-1/4
0.236 mi.
1247 ft.

RESIDENCE
188 TREMPER AVE
KINGSTON, NY

NY LTANKS **S106719213**
N/A

Relative:
Higher

Actual:
181 ft.

LTANKS:

Spill Number/Closed Date:	0308016 / 2003-11-18
Facility ID:	0308016
Site ID:	329180
Spill Date:	2003-10-16
Spill Cause:	Tank Overfill
Spill Source:	Tank Truck
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2003-10-29
CID:	282
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2003-10-29
Spill Record Last Update:	2004-07-13
Spiller Name:	CALLER
Spiller Company:	KINGSTON OIL
Spiller Address:	NORTH BROADWAY
Spiller County:	001
Spiller Contact:	JODI VOSBURG
Spiller Phone:	(845) 331-0772
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	264910
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER 10/29/2003 SPILL ON CONCRETE WHICH HAS BEEN CLEANED UP BUT ODORS LINGER. MAY BE IN THE HOT AIR HEATING DUCTS. WILL CALL D. TRAVER WITH MORE INFO ABOUT THE PROBLEM. NYSDOH INSPECTED DUE TO POTENTIAL INDOOR AIR IMPACT. NO IMPACTS NOTED. NFA"
Remarks:	"TANK WAS OVERFILLED ON OCT 16 AND NOW THEY HAVE A IR QUALITY PROBLEM AT THE RESIDENCE SPILL WAS CLEANED UP ON OCT 16 "

All Materials:

Site ID:	329180
Operable Unit ID:	874360
Operable Unit:	01
Material ID:	501537
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	3.00
Units:	G
Recovered:	3.00
Oxygenate:	Not reported

M66 **KINGSTON LIBRARY** **NY UST** **U004109468**
West **55 FRANKLIN STREET** **N/A**
1/8-1/4 **KINGSTON, NY 12401**
0.237 mi.
1251 ft. **Site 2 of 2 in cluster M**

Relative:
Higher

Actual:
185 ft.

UST:

Id/Status:	3-601920 / Unregulated/Closed
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	N/A
UTM X:	582090.25819
UTM Y:	4642460.25861
Site Type:	Municipality (Incl. Waste Water Treatment Plants, Utilities, Swimming Pools, etc.)

Affiliation Records:

Site Id:	387093
Affiliation Type:	Facility Owner
Company Name:	KINGSTON LIBRARY
Contact Type:	LIBRARY DIRECTOR
Contact Name:	BRUCE J. GEORGE
Address1:	55 FRANKLIN STREET
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 331-0507
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2007-09-12

Site Id:	387093
Affiliation Type:	Mail Contact
Company Name:	BRUCE J. GEORGE
Contact Type:	Not reported
Contact Name:	Not reported
Address1:	KINGSTON LIBRARY
Address2:	55 FRANKLIN STREET
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 331-0507
EMail:	DIRECTOR@KINGSTONLIBRARY.ORG
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2007-09-12

Site Id:	387093
Affiliation Type:	Facility Operator
Company Name:	KINGSTON LIBRARY
Contact Type:	Not reported
Contact Name:	KINGSTON LIBRARY
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN

KINGSTON LIBRARY (Continued) **U004109468**

Zip Code:	Not reported
Country Code:	001
Phone:	(845) 331-0507
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2007-09-12

Site Id:	387093
Affiliation Type:	Emergency Contact
Company Name:	KINGSTON LIBRARY
Contact Type:	Not reported
Contact Name:	BRUCE J. GEORGE
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 339-4260
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2007-09-12

Tank Info:

Tank Number:	100
Tank ID:	219375
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	2500
Install Date:	Not reported
Date Tank Closed:	10/03/2007
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)

Tightness Test Method:	00
Date Test:	Not reported
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	BHYUKOWE
Last Modified:	04/14/2017

Equipment Records:

E00 - Piping Secondary Containment - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
K00 - Spill Prevention - None

KINGSTON LIBRARY (Continued) **U004109468**

J00 - Dispenser - None
D00 - Pipe Type - No Piping
L00 - Piping Leak Detection - None

67
WNW
1/8-1/4
0.242 mi.
1280 ft.

NATIONAL MICRONETICS INC
721 BROADWAY
KINGSTON, NY 12401

RCRA NonGen / NLR **1000259757**
FINDS **NYD000799197**
ECHO
NY MANIFEST

Relative:
Higher

Actual:
182 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	NATIONAL MICRONETICS INC
Facility address:	721 BROADWAY KINGSTON, NY 12401
EPA ID:	NYD000799197
Mailing address:	PO BOX 188 WEST HURLEY, NY 12491
Contact:	Not reported
Contact address:	PO BOX 188 WEST HURLEY, NY 12491
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NATIONAL MICRONETICS INC
Owner/operator address:	PO BOX 188 WEST HURLEY, NY 12491
Owner/operator country:	US
Owner/operator telephone:	914-338-0333
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NATIONAL MICRONETICS INC.
Owner/operator address:	PO BOX 188 OPERCITY, NY 99999
Owner/operator country:	US
Owner/operator telephone:	914-338-0333
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

NATIONAL MICRONETICS INC (Continued) **1000259757**

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: NATIONAL MICRONETICS INC
Classification: Not a generator, verified

Date form received by agency: 11/19/1980
Site name: NATIONAL MICRONETICS INC
Classification: Not a generator, verified

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

NATIONAL MICRONETICS INC (Continued) **1000259757**

. Waste code: U112
. Waste name: ACETIC ACID ETHYL ESTER (I)

Date form received by agency: 11/19/1980
Site name: NATIONAL MICRONETICS INC
Classification: Unverified

Date form received by agency: 08/18/1980
Site name: NATIONAL MICRONETICS INC
Classification: Unverified

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: U112
. Waste name: ACETIC ACID ETHYL ESTER (I)

NATIONAL MICRONETICS INC (Continued) **1000259757**

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 09/11/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

FINDS:

Registry ID: 110004331492

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000259757
Registry ID: 110004331492
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110004331492

NY MANIFEST:
Country: USA
EPA ID: NYD000799197
Facility Status: Not reported
Location Address 1: 721 BROADWAY
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: Not reported

NY MANIFEST:
EPAID: NYD000799197
Mailing Name: NATIONAL MICRONETICS INC
Mailing Contact: AMES ROBERT G HEAD ENG
Mailing Address 1: PO BOX 188
Mailing Address 2: Not reported
Mailing City: WEST HURLEY
Mailing State: NY
Mailing Zip: 12491
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 9143380333

NATIONAL MICRONETICS INC (Continued) **1000259757**

NY MANIFEST:

Document ID:	CTA0021183
Manifest Status:	C
seq:	Not reported
Year:	1984
Trans1 State ID:	CT56280
Trans2 State ID:	Not reported
Generator Ship Date:	10/18/1984
Trans1 Recv Date:	10/18/1984
Trans2 Recv Date:	/ /
TSD Site Recv Date:	10/18/1984
Part A Recv Date:	10/29/1984
Part B Recv Date:	10/25/1984
Generator EPA ID:	NYD000799197
Trans1 EPA ID:	CTD009717604
Trans2 EPA ID:	Not reported
TSDF ID 1:	CTD009717604
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F001 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00275
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	005
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

68
ESE
1/8-1/4
0.244 mi.
1286 ft.

N&S KINGSTON
25 DEDERICK ST
KINGSTON, NY 12401

NY UST **U001842803**
N/A

Relative:
Higher

Actual:
190 ft.

UST:

Id/Status:	3-138185 / Unregulated/Closed
Program Type:	PBS
Region:	STATE

N&S KINGSTON (Continued) **U001842803**

DEC Region: 3
Expiration Date: N/A
UTM X: 582892.62148
UTM Y: 4642302.22616
Site Type: Other

Affiliation Records:

Site Id: 32117
Affiliation Type: Facility Owner
Company Name: N&S SUPPLY OF FISHKILL
Contact Type: VP OPERATIONS
Contact Name: WILLIAM HAIGHT
Address1: 205 OLD RT 9
Address2: Not reported
City: FISHKILL
State: NY
Zip Code: 12524
Country Code: 001
Phone: (845) 896-6291
EMail: Not reported
Fax Number: Not reported
Modified By: CLJOHNSO
Date Last Modified: 2017-04-10

Site Id: 32117
Affiliation Type: Mail Contact
Company Name: N&S SUPPLY OF KINGSTON
Contact Type: Not reported
Contact Name: WILLIAM HAIGHT
Address1: 25 DEDERICK ST
Address2: Not reported
City: KINGSTON
State: NY
Zip Code: 12401
Country Code: 001
Phone: (845) 896-6291
EMail: WHAIGHT@NSSUPPLY.COM
Fax Number: Not reported
Modified By: CLJOHNSO
Date Last Modified: 2017-05-04

Site Id: 32117
Affiliation Type: Facility Operator
Company Name: N&S KINGSTON
Contact Type: Not reported
Contact Name: JOHN SHULTS
Address1: Not reported
Address2: Not reported
City: Not reported
State: NN
Zip Code: Not reported
Country Code: 001
Phone: (845) 331-6700
EMail: Not reported
Fax Number: Not reported
Modified By: CLJOHNSO
Date Last Modified: 2017-05-04

N&S KINGSTON (Continued) **U001842803**

Site Id:	32117
Affiliation Type:	Emergency Contact
Company Name:	N&S SUPPLY OF FISHKILL
Contact Type:	Not reported
Contact Name:	WILLIAM HAIGHT
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 896-6291
EMail:	Not reported
Fax Number:	Not reported
Modified By:	CLJOHNSO
Date Last Modified:	2017-04-10

Tank Info:

Tank Number:	1
Tank ID:	70101
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	2000
Install Date:	07/01/1959
Date Tank Closed:	12/01/1998
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0009
Common Name of Substance:	Gasoline
Tightness Test Method:	09
Date Test:	12/01/1987
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

D01 - Pipe Type - Steel/Carbon Steel/Iron
G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
H00 - Tank Leak Detection - None
I00 - Overfill - None
A00 - Tank Internal Protection - None
F00 - Pipe External Protection - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping

Tank Number:	2
Tank ID:	70102
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	2000
Install Date:	06/01/1974

N&S KINGSTON (Continued) **U001842803**

Date Tank Closed: 12/01/1998
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0009
Common Name of Substance: Gasoline

Tightness Test Method: 09
Date Test: 12/01/1987
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

G00 - Tank Secondary Containment - None
J02 - Dispenser - Suction Dispenser
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
A00 - Tank Internal Protection - None
D01 - Pipe Type - Steel/Carbon Steel/Iron

Tank Number: 3
Tank ID: 81718
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 2000
Install Date: Not reported
Date Tank Closed: 12/01/1998
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0009
Common Name of Substance: Gasoline

Tightness Test Method: 00
Date Test: 05/01/1997
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

J00 - Dispenser - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
D00 - Pipe Type - No Piping

N&S KINGSTON (Continued) **U001842803**

Tank Number: 4
Tank ID: 81719
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 4000
Install Date: 06/01/1974
Date Tank Closed: 06/29/2017
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: -
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: ELMOORE
Last Modified: 07/19/2017

Equipment Records:

A00 - Tank Internal Protection - None
G00 - Tank Secondary Containment - None
D00 - Pipe Type - No Piping
J00 - Dispenser - None
H00 - Tank Leak Detection - None
I00 - Overfill - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None

Tank Number: 5
Tank ID: 81758
Tank Status: Closed - Removed
Material Name: Closed - Removed
Capacity Gallons: 2000
Install Date: Not reported
Date Tank Closed: 12/01/1998
Registered: True
Tank Location: Underground
Tank Type: Steel/carbon steel
Material Code: 0001
Common Name of Substance: #2 Fuel Oil (On-Site Consumption)

Tightness Test Method: NN
Date Test: Not reported
Next Test Date: Not reported
Pipe Model: Not reported
Modified By: TRANSLAT
Last Modified: 04/14/2017

Equipment Records:

H00 - Tank Leak Detection - None
I00 - Overfill - None
B00 - Tank External Protection - None
C00 - Pipe Location - No Piping
F00 - Pipe External Protection - None

N&S KINGSTON (Continued) **U001842803**

A00 - Tank Internal Protection - None
G00 - Tank Secondary Containment - None
D00 - Pipe Type - No Piping

69
SW
1/4-1/2
0.271 mi.
1432 ft.

MELLEY RESIDENCE
1 CLINTON AVE.
KINGSTON, NY

NY LTANKS **S102674338**
N/A

Relative:
Lower

Actual:
179 ft.

LTANKS:

Spill Number/Closed Date:	9410869 / 1994-11-17
Facility ID:	9410869
Site ID:	291957
Spill Date:	1994-11-15
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C3
Cleanup Ceased:	1994-11-17
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1994-11-15
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	KOSCO
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	236386
DEC Memo:	""
Remarks:	"SPILL ON GROUND & STONEWALL DRIVER & CREW TO CLEANUP"

All Materials:

Site ID:	291957
Operable Unit ID:	1004792
Operable Unit:	01
Material ID:	376737
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

P70 **BROWN RESIDENCE** **NY LTANKS** **S102674206**
West **96 CLINTON AVE.** **N/A**
1/4-1/2 **KINGSTON, NY**
0.278 mi.
1467 ft. **Site 1 of 2 in cluster P**

Relative:
Higher

Actual:
186 ft.

LTANKS:

Spill Number/Closed Date:	9400707 / 1994-12-12
Facility ID:	9400707
Site ID:	248357
Spill Date:	1994-04-15
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C3
Cleanup Ceased:	1994-12-12
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1994-04-15
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Citizen
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1994-04-21
Spill Record Last Update:	1994-12-12
Spiller Name:	Not reported
Spiller Company:	RJ DITTUS
Spiller Address:	OWNER
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	203783
DEC Memo:	""
Remarks:	"REPEAT PROBLEM SPILLAGE AT FILL/VENT PIPES SHEEN RUNNING OFF INTO STREET ODOR IN BLDG."

All Materials:

Site ID:	248357
Operable Unit ID:	998201
Operable Unit:	01
Material ID:	384489
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

71
SW
1/4-1/2
0.278 mi.
1469 ft.

ZACCHEO RESIDENCE
25 CLINTON AVE.
KINGSTON, NY

NY LTANKS **S100153913**
N/A

Relative:
Lower

Actual:
179 ft.

LTANKS:

Spill Number/Closed Date:	9103931 / 1992-07-29
Facility ID:	9103931
Site ID:	284912
Spill Date:	1991-07-12
Spill Cause:	Tank Failure
Spill Source:	Private Dwelling
Spill Class:	C3
Cleanup Ceased:	1992-07-29
SWIS:	5630
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	1991-07-12
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1991-07-16
Spill Record Last Update:	1992-07-29
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	231039
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was WEHRFRITZ / / : N.F.A. "
Remarks:	"NO HEAT CALL TANK IS CORRODED KOSCO WILL CLEAN UP DEC WILL INVESTIGATE"

All Materials:

Site ID:	284912
Operable Unit ID:	954715
Operable Unit:	01
Material ID:	423041
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

P72 **APT. COMPLEX** **NY LTANKS** **S102673878**
West **96 CLINTON AND FRANKLIN** **N/A**
1/4-1/2 **KINGSTON, NY**
0.288 mi.
1520 ft. **Site 2 of 2 in cluster P**

Relative:
Higher

Actual:
186 ft.

LTANKS:

Spill Number/Closed Date:	9204506 / 1992-08-12
Facility ID:	9204506
Site ID:	72082
Spill Date:	1992-07-20
Spill Cause:	Tank Overfill
Spill Source:	Commercial/Industrial
Spill Class:	C3
Cleanup Ceased:	1992-07-20
SWIS:	5630
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	1992-07-20
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Affected Persons
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1992-07-21
Spill Record Last Update:	1995-05-19
Spiller Name:	Not reported
Spiller Company:	RJ BITTUS
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	68084
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was WEHRFRITZ "
Remarks:	"SPILL ON GROUND BY VENT PIPE OIL SUPPLIER IS KOSCO"

All Materials:

Site ID:	72082
Operable Unit ID:	968200
Operable Unit:	01
Material ID:	412221
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

73
ESE
1/4-1/2
0.302 mi.
1594 ft.

ADIR GARAGE
495 BROADWAY
KINGSTON, NY

NY LTANKS
NY Spills

S104621294
N/A

Relative:
Higher

Actual:
189 ft.

LTANKS:

Spill Number/Closed Date:	9307465 / 1994-11-29
Facility ID:	9307465
Site ID:	247848
Spill Date:	1993-09-20
Spill Cause:	Tank Failure
Spill Source:	Commercial/Industrial
Spill Class:	C3
Cleanup Ceased:	1994-11-29
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1993-09-20
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1993-09-21
Spill Record Last Update:	1994-11-29
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	203510
DEC Memo:	""
Remarks:	"POSSIBLE LINE LEAK LUZON TO TEST OIL ON PARKING LOT"

All Materials:

Site ID:	247848
Operable Unit ID:	986073
Operable Unit:	01
Material ID:	393725
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9903340 / 2000-05-02
Facility ID:	9903340
Site ID:	247850
Spill Date:	1999-06-23

ADIR GARAGE (Continued) **S104621294**

Spill Cause:	Tank Failure
Spill Source:	Commercial/Industrial
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1999-06-23
CID:	257
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1999-06-23
Spill Record Last Update:	2000-05-02
Spiller Name:	FRANK SCARPINATO
Spiller Company:	Not reported
Spiller Address:	495 BROADWAY
Spiller County:	001
Spiller Contact:	FRANK SCARPINATO
Spiller Phone:	(518) 877-3092
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	203510
DEC Memo:	""
Remarks:	"CONTAMINATED SOIL FROM UNDERGROUND TANK "

All Materials:

Site ID:	247850
Operable Unit ID:	1082266
Operable Unit:	01
Material ID:	303265
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	9608440 / 1998-12-30
Facility ID:	9608440
Facility Type:	ER
DER Facility ID:	203510
Site ID:	247849
DEC Region:	3
Spill Cause:	Housekeeping
Spill Class:	C3
SWIS:	5630
Spill Date:	1996-06-26
Investigator:	RICCI

ADIR GARAGE (Continued) **S104621294**

Referred To:	Not reported
Reported to Dept:	1996-10-07
CID:	266
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1996-10-07
Spill Record Last Update:	2000-07-14
Spiller Name:	TOM STOLICHER
Spiller Company:	ADIRONDACK TRAILWAYS
Spiller Address:	495 BROADWAY
Spiller Company:	001
Contact Name:	TOM STOLICHER
DEC Memo:	""
Remarks:	"TANK REMOVAL. SUPERVISED BY LARRY RICCI OF NYS DEC. APPROXIMATELY 10 YARDS OF SOIL REMOVED."

All Materials:

Site ID:	247849
Operable Unit ID:	1036713
Operable Unit:	01
Material ID:	344179
Material Code:	0008
Material Name:	diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

74
WSW
1/4-1/2
0.303 mi.
1602 ft.

DEBIASE RES.: 1K UST **NY LTANKS S102674184**
147 HENRY ST **NY Spills N/A**
KINGSTON, NY

Relative: Higher

Actual: 181 ft.

LTANKS:

Spill Number/Closed Date:	9315236 / 1995-01-10
Facility ID:	9315236
Site ID:	252455
Spill Date:	1994-03-25
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C3
Cleanup Ceased:	1995-01-10
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1994-03-25
CID:	Not reported

DEBIASE RES.: 1K UST (Continued) **S102674184**

Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1994-04-08
Spill Record Last Update:	1995-01-10
Spiller Name:	Not reported
Spiller Company:	KINGSTON OIL
Spiller Address:	NORTH BROADWAY
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	206827
DEC Memo:	""
Remarks:	"KINGSTON OIL WILL CLEAN UP"

All Materials:

Site ID:	252455
Operable Unit ID:	997162
Operable Unit:	01
Material ID:	386997
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	1205935 / 2012-11-27
Facility ID:	1205935
Facility Type:	ER
DER Facility ID:	423198
Site ID:	468916
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C3
SWIS:	5630
Spill Date:	2012-09-14
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2012-09-14
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported

DEBIASE RES.: 1K UST (Continued) **S102674184**

Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2012-09-14
Spill Record Last Update:	2012-11-27
Spiller Name:	DEBIASE, SHELLY
Spiller Company:	DEBIASE
Spiller Address:	147 HENRY ST
Spiller Company:	999
Contact Name:	CHRISTINA VAZQUEZ
DEC Memo:	"9-14-12: V.Mc. call to Christna/VazCo: 1K UST between sidewalk and house, sandy soils. Mun.water & sewer. 9/26/12- VazCo reports that soil excavation to begin tomorrow, 9/27/12. DT 9/27/12- Site inspection. VazCo on site removing tank and excavating impacted soils. Soils are sand and walls of excavation are collapsing. Excavation is some 10 feet deep between two dwellings. Water line is exposed through middle of excavation. Impacts very apparent (dark soil) in bottom of excavation. VazCo to attempt to remove all gross contamination within constraints of site. DT Received TCR from VazCo. Some 35 tons of impacted soil excavated and disposed. Postex soil samples well below cleanup guidance values. Area serviced by municipal water. NFA DT"
Remarks:	"cleanup pending insurance company -"

All Materials:

Site ID:	468916
Operable Unit ID:	1218821
Operable Unit:	01
Material ID:	2217236
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	Not reported
Recovered:	Not reported
Oxygenate:	Not reported

Q75 **NY TELE.** **NY LTANKS** **S101340512**
NNE **BRUYN AVE.** **N/A**
1/4-1/2 **KINGSTON, NY**
0.305 mi.
1612 ft. **Site 1 of 2 in cluster Q**

Relative:
Higher

Actual:
180 ft.

LTANKS:

Spill Number/Closed Date:	9413239 / 1997-03-19
Facility ID:	9413239
Site ID:	245714
Spill Date:	1995-01-04
Spill Cause:	Tank Failure
Spill Source:	Commercial/Industrial
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1995-01-04

NY TELE. (Continued) **S101340512**

CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1995-01-18
Spill Record Last Update:	1997-04-02
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	201772
DEC Memo:	""
Remarks:	"REMOVING TANKS FOUND SOIL CONTAMINATED"

All Materials:

Site ID:	245714
Operable Unit ID:	1006896
Operable Unit:	01
Material ID:	371986
Material Code:	0008
Material Name:	diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	L
Recovered:	.00
Oxygenate:	Not reported

76
East
1/4-1/2
0.310 mi.
1639 ft.

Relative:
Higher

Actual:
187 ft.

NATIONAL MICRONETICS INC
71 SMITH AVE
KINGSTON, NY 12401

CORRACTS **1000259756**
NY LTANKS **NYD000799189**
NY UST
NY AST
NY Spills
RCRA NonGen / NLR
NY MANIFEST

CORRACTS:

EPA ID:	NYD000799189
EPA Region:	2
Area Name:	SITEWIDE
Actual Date:	19980901
Action:	CA050RF - RFA Completed, Assessment was an RFA
NAICS Code(s):	334613 Magnetic and Optical Recording Media Manufacturing
Original schedule date:	Not reported
Schedule end date:	Not reported

EPA ID:	NYD000799189
EPA Region:	2

NATIONAL MICRONETICS INC (Continued) **1000259756**

Area Name: SITEWIDE
Actual Date: 19980901
Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
NAICS Code(s): 334613
Magnetic and Optical Recording Media Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD000799189
EPA Region: 2
Area Name: SITEWIDE
Actual Date: 19960702
Action: CA225YE - Stabilization Measures Evaluation, This facility ,is amenable to stabilization activity based on the, status of corrective action work at the facility, technical factors, the degree of risk, timing considerations and administrative considerations
NAICS Code(s): 334613
Magnetic and Optical Recording Media Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD000799189
EPA Region: 2
Area Name: SITEWIDE
Actual Date: 19940421
Action: CA050 - RFA Completed
NAICS Code(s): 334613
Magnetic and Optical Recording Media Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD000799189
EPA Region: 2
Area Name: SITEWIDE
Actual Date: 19931209
Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority
NAICS Code(s): 334613
Magnetic and Optical Recording Media Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

EPA ID: NYD000799189
EPA Region: 2
Area Name: SITEWIDE
Actual Date: 19930930
Action: CA010 - RFA Initiation
NAICS Code(s): 334613
Magnetic and Optical Recording Media Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

LTANKS:
Spill Number/Closed Date: 9405792 / 1994-07-29
Facility ID: 9405792
Site ID: 127122
Spill Date: 1994-07-27

NATIONAL MICRONETICS INC (Continued) **1000259756**

Spill Cause:	Tank Overfill
Spill Source:	Commercial/Industrial
Spill Class:	C3
Cleanup Ceased:	1994-07-29
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1994-07-28
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	109824
DEC Memo:	""
Remarks:	"TANK BEING TESTED OVERFILLED USING SORBENT PADS & SPEEDI-DRI WILL CLEAN UP & DISPOSE IRA CONKLIN TESTING TANK TANK PASSED"

All Materials:

Site ID:	127122
Operable Unit ID:	1003156
Operable Unit:	01
Material ID:	382375
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	8.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

UST:

Id/Status:	3-004251 / Active
Program Type:	PBS
Region:	STATE
DEC Region:	3
Expiration Date:	01/28/2023
UTM X:	582527.04456
UTM Y:	4642928.03802
Site Type:	Manufacturing (Other than Chemical)/Processing

Affiliation Records:

Site Id:	31353

NATIONAL MICRONETICS INC (Continued) **1000259756**

Affiliation Type:	Mail Contact
Company Name:	NYCDEP
Contact Type:	Not reported
Contact Name:	DONNA NICHOLAS & ALAN KELLY
Address1:	71 SMITH AVE
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 340-7261
EMail:	DNICHOLAS@DEP.NYC.GOV
Fax Number:	Not reported
Modified By:	ELMOORE
Date Last Modified:	2018-01-16

Site Id:	31353
Affiliation Type:	Facility Operator
Company Name:	NYCDEP
Contact Type:	Not reported
Contact Name:	ALAN KELLY
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 340-7778
EMail:	Not reported
Fax Number:	Not reported
Modified By:	ELMOORE
Date Last Modified:	2018-01-16

Site Id:	31353
Affiliation Type:	Emergency Contact
Company Name:	NYCDEP
Contact Type:	Not reported
Contact Name:	WATER SUPPLY CONTROL CENTER
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 334-7163
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2013-01-23

Site Id:	31353
Affiliation Type:	Facility Owner
Company Name:	NYCDEP
Contact Type:	FACILITY AND PROJECT MANAGER
Contact Name:	DONNA NICHOLAS
Address1:	465 COLUMBUS AVENUE
Address2:	Not reported

NATIONAL MICRONETICS INC (Continued) **1000259756**

City:	VALHALLA
State:	NY
Zip Code:	10595
Country Code:	001
Phone:	(914) 742-2000
EMail:	Not reported
Fax Number:	Not reported
Modified By:	ELMOORE
Date Last Modified:	2018-01-16

Tank Info:

Tank Number:	1
Tank ID:	67661
Tank Status:	Closed - Removed
Material Name:	Closed - Removed
Capacity Gallons:	2000
Install Date:	04/01/1983
Date Tank Closed:	11/01/1995
Registered:	True
Tank Location:	Underground
Tank Type:	Steel/carbon steel
Material Code:	0001
Common Name of Substance:	#2 Fuel Oil (On-Site Consumption)
Tightness Test Method:	20
Date Test:	07/01/1994
Next Test Date:	Not reported
Pipe Model:	Not reported
Modified By:	TRANSLAT
Last Modified:	04/14/2017

Equipment Records:

C02 - Pipe Location - Underground/On-ground
G00 - Tank Secondary Containment - None
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
H00 - Tank Leak Detection - None
I00 - Overfill - None
D02 - Pipe Type - Galvanized Steel
F00 - Pipe External Protection - None

AST:

Region:	STATE
DEC Region:	3
Site Status:	Active
Facility Id:	3-004251
Program Type:	PBS
UTM X:	582527.04456
UTM Y:	4642928.03802
Expiration Date:	01/28/2023
Site Type:	Manufacturing (Other than Chemical)/Processing

Affiliation Records:

Site Id:	31353
Affiliation Type:	Mail Contact
Company Name:	NYCDEP

NATIONAL MICRONETICS INC (Continued) **1000259756**

Contact Type:	Not reported
Contact Name:	DONNA NICHOLAS & ALAN KELLY
Address1:	71 SMITH AVE
Address2:	Not reported
City:	KINGSTON
State:	NY
Zip Code:	12401
Country Code:	001
Phone:	(845) 340-7261
EMail:	DNICHOLAS@DEP.NYC.GOV
Fax Number:	Not reported
Modified By:	ELMOORE
Date Last Modified:	2018-01-16

Site Id:	31353
Affiliation Type:	Facility Operator
Company Name:	NYCDEP
Contact Type:	Not reported
Contact Name:	ALAN KELLY
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	001
Phone:	(845) 340-7778
EMail:	Not reported
Fax Number:	Not reported
Modified By:	ELMOORE
Date Last Modified:	2018-01-16

Site Id:	31353
Affiliation Type:	Emergency Contact
Company Name:	NYCDEP
Contact Type:	Not reported
Contact Name:	WATER SUPPLY CONTROL CENTER
Address1:	Not reported
Address2:	Not reported
City:	Not reported
State:	NN
Zip Code:	Not reported
Country Code:	999
Phone:	(845) 334-7163
EMail:	Not reported
Fax Number:	Not reported
Modified By:	BHYUKOWE
Date Last Modified:	2013-01-23

Site Id:	31353
Affiliation Type:	Facility Owner
Company Name:	NYCDEP
Contact Type:	FACILITY AND PROJECT MANAGER
Contact Name:	DONNA NICHOLAS
Address1:	465 COLUMBUS AVENUE
Address2:	Not reported
City:	VALHALLA
State:	NY

NATIONAL MICRONETICS INC (Continued) **1000259756**

Zip Code:	10595
Country Code:	001
Phone:	(914) 742-2000
EMail:	Not reported
Fax Number:	Not reported
Modified By:	ELMOORE
Date Last Modified:	2018-01-16

Tank Info:

Tank Number:	001
Tank Id:	221407
Material Code:	0008
Common Name of Substance:	Diesel

Equipment Records:

E00 - Piping Secondary Containment - None
I02 - Overfill - High Level Alarm
A00 - Tank Internal Protection - None
B01 - Tank External Protection - Painted/Asphalt Coating
D01 - Pipe Type - Steel/Carbon Steel/Iron
F01 - Pipe External Protection - Painted/Asphalt Coating
G09 - Tank Secondary Containment - Modified Double-Walled (Aboveground)
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
J02 - Dispenser - Suction Dispenser
K99 - Spill Prevention - Other
C01 - Pipe Location - Aboveground
I04 - Overfill - Product Level Gauge (A/G)
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
L00 - Piping Leak Detection - None

Tank Location:	3
Tank Type:	Steel/Carbon Steel/Iron
Tank Status:	In Service
Pipe Model:	Not reported
Install Date:	06/01/2007
Capacity Gallons:	1500
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	BHYUKOWE
Last Modified:	04/14/2017
Material Name:	diesel

Tank Number:	002
Tank Id:	221408
Material Code:	2712
Common Name of Substance:	Gasoline/Ethanol

Equipment Records:

J02 - Dispenser - Suction Dispenser
K99 - Spill Prevention - Other
A00 - Tank Internal Protection - None

NATIONAL MICRONETICS INC (Continued) **1000259756**

D01 - Pipe Type - Steel/Carbon Steel/Iron
F01 - Pipe External Protection - Painted/Asphalt Coating
H01 - Tank Leak Detection - Interstitial - Electronic Monitoring
E00 - Piping Secondary Containment - None
I02 - Overfill - High Level Alarm
C01 - Pipe Location - Aboveground
G05 - Tank Secondary Containment - Synthetic Liner
I04 - Overfill - Product Level Gauge (A/G)
B05 - Tank External Protection - Jacketed
H06 - Tank Leak Detection - Impervious Barrier/Concrete Pad (A/G)
L00 - Piping Leak Detection - None

Tank Location:	3
Tank Type:	Steel Tank in Concrete
Tank Status:	In Service
Pipe Model:	Not reported
Install Date:	01/01/2008
Capacity Gallons:	2000
Tightness Test Method:	NN
Date Test:	Not reported
Next Test Date:	Not reported
Date Tank Closed:	Not reported
Register:	True
Modified By:	BHYUKOWE
Last Modified:	04/14/2017
Material Name:	gasoline/ethanol

SPILLS:

Spill Number/Closed Date:	1105164 / 2011-08-06
Facility ID:	1105164
Facility Type:	ER
DER Facility ID:	407442
Site ID:	452803
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	D4
SWIS:	5630
Spill Date:	2011-08-04
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2011-08-04
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	Not reported
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2011-08-04
Spill Record Last Update:	2011-08-06
Spiller Name:	GREGG COSTA
Spiller Company:	NYC DEP
Spiller Address:	71 SMITH AVE
Spiller Company:	999
Contact Name:	GREGG COSTA

NATIONAL MICRONETICS INC (Continued) **1000259756**

DEC Memo: "8/5/11- DEP to cleanup minor leak of lube oil to concrete pad from equipment on site. NFA DT"
Remarks: "Caller reporting a spill of .25 gallons of lube oil to concrete. Clean up is pending."

All Materials:
Site ID: 452803
Operable Unit ID: 1202973
Operable Unit: 01
Material ID: 2199585
Material Code: 0013
Material Name: lube oil
Case No.: Not reported
Material FA: Petroleum
Quantity: .25
Units: G
Recovered: Not reported
Oxygenate: Not reported

RCRA NonGen / NLR:
Date form received by agency: 01/01/2007
Facility name: NATIONAL MICRONETICS INC
Facility address: 71 SMITH AVE
KINGSTON, NY 12401
EPA ID: NYD000799189
Mailing address: SMITH AVE
KINGSTON, NY 12401
Contact: Not reported
Contact address: SMITH AVE
KINGSTON, NY 12401
Contact country: US
Contact telephone: Not reported
Contact email: Not reported
EPA Region: 02
Land type: Facility is not located on Indian land. Additional information is not known.
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NATIONAL MICRONETICS INC
Owner/operator address: PO BOX 188
OPERCITY, NY 99999
Owner/operator country: US
Owner/operator telephone: 914-338-0333
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NATIONAL MICRONETICS INC
Owner/operator address: UNKNOWN
UNKNOWN, NY 99999
Owner/operator country: US

NATIONAL MICRONETICS INC (Continued) **1000259756**

Owner/operator telephone: 212-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: NATIONAL MICRONETICS INC
Classification: Not a generator, verified

Date form received by agency: 04/15/1998
Site name: NATIONAL MICRONETICS INC
Classification: Large Quantity Generator

Date form received by agency: 05/11/1992
Site name: NATIONAL MICRONETICS INC
Classification: Large Quantity Generator

. Waste code: NONE
. Waste name: None

Date form received by agency: 05/11/1992
Site name: NATIONAL MICRONETICS INC
Classification: Large Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT

NATIONAL MICRONETICS INC (Continued) **1000259756**

WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: U034
. Waste name: ACETALDEHYDE, TRICHLORO-

. Waste code: U228
. Waste name: ETHENE, TRICHLORO-

. Waste code: X001
. Waste name: WASTE OILS

Date form received by agency: 02/26/1992
Site name: NATIONAL MICRONETICS
Classification: Large Quantity Generator

Date form received by agency: 03/01/1990
Site name: NATIONAL MICRONETICS INC
Classification: Large Quantity Generator

Date form received by agency: 11/19/1980
Site name: NATIONAL MICRONETICS INC
Classification: Not a generator, verified

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE,

NATIONAL MICRONETICS INC (Continued) **1000259756**

1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: U134
. Waste name: HYDROFLUORIC ACID (C,T)

. Waste code: U228
. Waste name: ETHENE, TRICHLORO-

Corrective Action Summary:

Event date: 09/30/1993
Event: RFA INITIATION

Event date: 12/09/1993
Event: CA PRIORITIZATION-MEDIUM CA PRIORITY

Event date: 04/21/1994
Event: RFA COMPLETED

Event date: 07/02/1996
Event: STABILIZATION MEASURES EVALUATION-FACILITY IS AMENABLE TO STABILIZATION

Event date: 09/01/1998
Event: DETERMINATION OF NEED FOR AN INVESTIGATION-INVESTIGATION IS NOT NECESSARY

Event date: 09/01/1998
Event: RFA COMPLETED-ASSESSMENT WAS A RFA

Facility Has Received Notices of Violations:

NATIONAL MICRONETICS INC (Continued) **1000259756**

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 09/06/1990
Date achieved compliance: 04/18/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/11/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 03/23/1988
Date achieved compliance: 12/28/1988
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 03/23/1988
Date achieved compliance: 08/24/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 04/22/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 09/11/1985
Date achieved compliance: 02/25/1986
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/14/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

NATIONAL MICRONETICS INC (Continued) **1000259756**

Area of violation: TSD - General
Date violation determined: 05/31/1984
Date achieved compliance: 01/16/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 10/31/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 09/06/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 04/18/1991
Evaluation lead agency: State

Evaluation date: 09/22/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/06/1988
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/23/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 08/24/1988
Evaluation lead agency: State

Evaluation date: 03/23/1988
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 12/28/1988
Evaluation lead agency: State

Evaluation date: 09/11/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 02/25/1986
Evaluation lead agency: State

Evaluation date: 05/22/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 05/31/1984

NATIONAL MICRONETICS INC (Continued) **1000259756**

Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: TSD - General
Date achieved compliance: 01/16/1985
Evaluation lead agency: State

NY MANIFEST:
Country: USA
EPA ID: NYD000799189
Facility Status: Not reported
Location Address 1: 33 GRAND ST
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: 3933

NY MANIFEST:
EPAID: NYD000799189
Mailing Name: NATIONAL MICRONETICS INC
Mailing Contact: RON NACCARATO
Mailing Address 1: 71 SMITH AVENUE
Mailing Address 2: Not reported
Mailing City: KINGSTON
Mailing State: NY
Mailing Zip: 12401
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 9143380333

NY MANIFEST:
Document ID: NJA3064559
Manifest Status: Not reported
seq: 01
Year: 1999
Trans1 State ID: 50060
Trans2 State ID: Not reported
Generator Ship Date: 12/13/1999
Trans1 Recv Date: 12/13/1999
Trans2 Recv Date: Not reported
TSD Site Recv Date: 12/14/1999
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD000799189
Trans1 EPA ID: NYD980761191
Trans2 EPA ID: Not reported
TSDF ID 1: NJD002200046
TSDF ID 2: Not reported
Manifest Tracking Number: Not reported
Import Indicator: Not reported
Export Indicator: Not reported
Discr Quantity Indicator: Not reported
Discr Type Indicator: Not reported
Discr Residue Indicator: Not reported
Discr Partial Reject Indicator: Not reported
Discr Full Reject Indicator: Not reported
Manifest Ref Number: Not reported

NATIONAL MICRONETICS INC (Continued) **1000259756**

Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	F005 - UNKNOWN
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00680
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	001
Container Type:	TT - Cargo tank, tank trucks
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

77
West
1/4-1/2
0.321 mi.
1696 ft.

UNITED METHODIST CHURCH
122 CLINTON AVE
KINGSTON, NY

NY LTANKS **S108298652**
N/A

Relative:
Higher

Actual:
186 ft.

LTANKS:

Spill Number/Closed Date:	0608271 / 2007-02-06
Facility ID:	0608271
Site ID:	372204
Spill Date:	2006-10-19
Spill Cause:	Tank Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	2006-10-19
CID:	444
Water Affected:	Not reported
Spill Notifier:	Other
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2006-10-19
Spill Record Last Update:	2007-02-06
Spiller Name:	PAUL WHITE
Spiller Company:	UNITED METHODIST CHURCH
Spiller Address:	122 CLINTON AVE
Spiller County:	001
Spiller Contact:	PAUL WHITE
Spiller Phone:	(845) 336-8407
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	321935

UNITED METHODIST CHURCH (Continued) **S108298652**

DEC Memo: "10/19/06: WAITING FOR KINGSTON CITY PERMIT. VAZ-CO DOING CLEAN UP. TANK PULL WILL HAPPEN 10/23 OR 10/24/06. 11/6/06- VazCo reports they are on site removing impacted soils. Sandy soil conditions. Will excavate as much as practical and collect post ex samples. dt 12-15-06 Closure report rec. 550 #2 FO UST removed on 11-6-06. Holes noted. Samples taken from 4 sidewalls (comp) & bottom. Results were ND for both samples."

Remarks: "removing 275 gallon tank- found contaminated soil;"

All Materials:

Site ID:	372204
Operable Unit ID:	1129951
Operable Unit:	01
Material ID:	2119615
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	.00
Oxygenate:	Not reported

78
East
1/4-1/2
0.322 mi.
1701 ft.

SPILL NUMBER 0007750 **NY LTANKS** **S104782413**
82 PRINCE ST **NY Spills** **N/A**
KINGSTON, NY

Relative: Higher

Actual: 187 ft.

LTANKS:

Spill Number/Closed Date:	0007750 / 2000-10-02
Facility ID:	0007750
Site ID:	171549
Spill Date:	2000-10-02
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C4
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	PJDECICC
Referred To:	Not reported
Reported to Dept:	2000-10-02
CID:	396
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2000-10-02
Spill Record Last Update:	2000-10-03
Spiller Name:	JODI VOSBURGH
Spiller Company:	KINGSTON OIL SUPPLY
Spiller Address:	P.O. BOX 760
Spiller County:	001
Spiller Contact:	JODI VOSBURGH

SPILL NUMBER 0007750 (Continued) **S104782413**

Spiller Phone:	(914) 331-0770
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	144368
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was DECICCO "
Remarks:	"tank overfill...spill on black top. cleaned up."

All Materials:

Site ID:	171549
Operable Unit ID:	830262
Operable Unit:	01
Material ID:	545278
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	1.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	9207647 / 1992-10-07
Facility ID:	9207647
Facility Type:	ER
DER Facility ID:	108877
Site ID:	125880
DEC Region:	3
Spill Cause:	Unknown
Spill Class:	C3
SWIS:	5630
Spill Date:	1992-10-01
Investigator:	VPMCCABE
Referred To:	Not reported
Reported to Dept:	1992-10-01
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Unknown
Spill Notifier:	Fire Department
Cleanup Ceased:	1992-10-07
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1992-10-07
Spill Record Last Update:	1992-10-07
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	""
Remarks:	"STARTED TO SMOLDER ADDED SODIUM ASH TO NUTRILIZE NFA AS PER JOHN O'MARA"

SPILL NUMBER 0007750 (Continued) **S104782413**

All Materials:

Site ID:	125880
Operable Unit ID:	974462
Operable Unit:	01
Material ID:	408273
Material Code:	0066A
Material Name:	unknown petroleum
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

R79 **NY TEL** **NY LTANKS** **S100491627**
NE **80 BRYUN STREET** **N/A**
1/4-1/2 **KINGSTON, NY**
0.330 mi.
1741 ft. **Site 1 of 2 in cluster R**

Relative: **Higher**
Actual: **184 ft.**

LTANKS:

Spill Number/Closed Date:	9206418 / 1992-10-28
Facility ID:	9206418
Site ID:	202676
Spill Date:	1992-09-02
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	C4
Cleanup Ceased:	1992-09-07
SWIS:	5630
Investigator:	DUNN
Referred To:	Not reported
Reported to Dept:	1992-09-02
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1992-09-09
Spill Record Last Update:	1995-05-19
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	168589
DEC Memo:	""
Remarks:	"MANIFOLDED TANKS WILL EIR PETRO-TITE II"

All TTF:

Facility ID:	9206418

NY TEL (Continued) **S100491627**

Spill Number:	9206418
Spill Tank Test:	1540503
Site ID:	202676
Tank Number:	Not reported
Tank Size:	0
Material:	0066A
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	202676
Operable Unit ID:	970016
Operable Unit:	01
Material ID:	410583
Material Code:	0066A
Material Name:	unknown petroleum
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

80
SE
1/4-1/2
0.334 mi.
1761 ft.

FRISS RESIDENCE **NY LTANKS** **S106869150**
58 HOFFMAN ST **N/A**
KINGSTON, NY

Relative:
Higher

Actual:
205 ft.

LTANKS:

Spill Number/Closed Date:	0500557 / 2005-07-12
Facility ID:	0500557
Site ID:	343565
Spill Date:	2005-04-13
Spill Cause:	Tank Failure
Spill Source:	Private Dwelling
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	2005-04-13
CID:	410
Water Affected:	Not reported
Spill Notifier:	Local Agency
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False

FRISS RESIDENCE (Continued) **S106869150**

UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2005-04-13
Spill Record Last Update:	2005-07-12
Spiller Name:	KENNETH FRISS
Spiller Company:	FRISS RESIDENCE
Spiller Address:	58 HOFFMAN ST
Spiller County:	001
Spiller Contact:	KENNETH FRISS
Spiller Phone:	(845) 331-7218
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	290103
DEC Memo:	"CLOSURE REPORT RECEIVED 6-22-05. AS STATED IN REPORT. TANK WAS LOCATED ON A ROCK SLAB AND ENDED UP UNDER AN ADDITION TO THE HOUSE. HOME OWNER NOTICED OIL ODOR AND RETAINED THE SERVICES OF VAZ-CO TO PUMP, REMOVE AND DISPOSE OF FLAT 275 GALLON TANK. TANK WAS CLEANED IN THE CRAWL SPACE AND HAD TO BE CUT UP TO REMOVE IT FROM UNDER THE HOUSE. THERE WAS A MINIMUM AMOUNT OF SOIL THAT HAD ACCUMULATED UNDER THE TANK WHICH WAS SCRAPPED UP AND DRUMMED WITH THE TANK BOTTOM FOR DISPOSAL. AREA IS SERVICED BY MUNICIPAL WATER AND SEWER."
Remarks:	"in basement of a residence tank is behind a wall and is still leaking crew is en route to clear out what then can unknown cause caller states tank just sprung a leak"

All Materials:

Site ID:	343565
Operable Unit ID:	1102247
Operable Unit:	01
Material ID:	582467
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	.00
Oxygenate:	Not reported

81
NNE
1/4-1/2
0.345 mi.
1822 ft.

SPILL NUMBER 0107589 **NY LTANKS** **S105230025**
155 BRUYN AV **N/A**
KINGSTON, NY

Relative:
Higher

Actual:
180 ft.

LTANKS:

Spill Number/Closed Date:	0107589 / 2001-10-25
Facility ID:	0107589
Site ID:	115361
Spill Date:	2001-10-24
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C4
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	UNASSIGNED
Referred To:	Not reported

SPILL NUMBER 0107589 (Continued) **S105230025**

Reported to Dept:	2001-10-24
CID:	211
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2001-10-24
Spill Record Last Update:	2004-09-20
Spiller Name:	JODI VOSBURGH
Spiller Company:	KINGSTON OIL SUPPLY
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	DELSON RES
Spiller Phone:	(845) 331-1739
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	100525
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was DISPATCH "
Remarks:	"appears to be historical spill of several cups - clean up crew enroute"

All Materials:

Site ID:	115361
Operable Unit ID:	845708
Operable Unit:	01
Material ID:	532404
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Q82 **RESIDENCE** **NY LTANKS** **S102674576**
NE **132 ONEIL ST** **N/A**
1/4-1/2 **KINGSTON, NY**
0.347 mi.
1834 ft. **Site 2 of 2 in cluster Q**

Relative:
Higher

Actual:
182 ft.

LTANKS:

Spill Number/Closed Date:	9507664 / 1996-01-18
Facility ID:	9507664
Site ID:	227166
Spill Date:	1995-09-22
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C4
Cleanup Ceased:	1996-01-18
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported

RESIDENCE (Continued) **S102674576**

Reported to Dept:	1995-09-22
CID:	322
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1995-09-22
Spill Record Last Update:	1996-01-18
Spiller Name:	MARGET BENSON
Spiller Company:	KOSCO FUEL
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	OSHAY
Spiller Phone:	(914) 331-4559
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	187511
DEC Memo:	""
Remarks:	"TANK WAS OVERFILLED - ONTO SOIL - SOIL HAS BEEN REMOVED"

All Materials:

Site ID:	227166
Operable Unit ID:	1018539
Operable Unit:	01
Material ID:	362090
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	2.00
Units:	G
Recovered:	2.00
Oxygenate:	Not reported

83
NE
1/4-1/2
0.349 mi.
1844 ft.

VERIZON NEW YORK INC-NY-99551 **NY LTANKS** **S100165354**
60 BRUYN AVENUE **NY TANKS** **N/A**
KINGSTON, NY 12401

Relative:
Higher

Actual:
185 ft.

LTANKS:

Spill Number/Closed Date:	8607185 / 1987-03-16
Facility ID:	8607185
Site ID:	66735
Spill Date:	1987-02-25
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	C3
Cleanup Ceased:	1987-03-16
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-02-25
CID:	Not reported

VERIZON NEW YORK INC-NY-99551 (Continued) **S100165354**

Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	1987-03-16
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1987-02-27
Spill Record Last Update:	1998-01-29
Spiller Name:	Not reported
Spiller Company:	NY TEL
Spiller Address:	SAME
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	63871
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON 02/25/87 TANKS TO BE RETESTED 2/26/87. 02/26/87 TANKS RETESTED; AWAITING TEST RESULTS. 03/16/87 TANK SYSTEM TESTED TIGHT; NFA. "
Remarks:	"TTTF"

All TTF:

Facility ID:	8607185
Spill Number:	8607185
Spill Tank Test:	1530597
Site ID:	66735
Tank Number:	Not reported
Tank Size:	0
Material:	0009
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	66735
Operable Unit ID:	904950
Operable Unit:	01
Material ID:	472708
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	L
Recovered:	.00
Oxygenate:	Not reported

VERIZON NEW YORK INC-NY-99551 (Continued) **S100165354**

TANKS:
- Facility Id: 3-184322
- Region: STATE
- DEC Region: 3
- Site Status: Active
- Program Type: PBS
- Expiration Date: 04/18/2023
- UTM X: 582949.78672
- UTM Y: 4642782.43365

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84 **465 BROADWAY** **NY LTANKS** **S104191704**
ESE **465 BROADWAY** **N/A**
1/4-1/2 **KINGSTON, NY**
0.359 mi.
1895 ft.

Relative: **Higher**

Actual: **193 ft.**

LTANKS:
- Spill Number/Closed Date: 9905768 / 2000-05-02
- Facility ID: 9905768
- Site ID: 199387
- Spill Date: 1999-06-13
- Spill Cause: Tank Failure
- Spill Source: Gasoline Station or other PBS Facility
- Spill Class: B3
- Cleanup Ceased: Not reported
- SWIS: 5630
- Investigator: dxtraver
- Referred To: Not reported
- Reported to Dept: 1999-08-13
- CID: 389
- Water Affected: Not reported
- Spill Notifier: Other
- Last Inspection: Not reported
- Recommended Penalty: False
- Meets Standard: False
- UST Involvement: True
- Remediation Phase: 0
- Date Entered In Computer: 1999-08-13
- Spill Record Last Update: 2000-05-02
- Spiller Name: Not reported
- Spiller Company: SMITHY MOBIL
- Spiller Address: 465 BROADWAY
- Spiller County: 001
- Spiller Contact: Not reported
- Spiller Phone: Not reported
- Spiller Extention: Not reported
- DEC Region: 3
- DER Facility ID: 165949
- DEC Memo: "Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER NFA LETTER SENT 5/2/00."
- Remarks: "CALLER STATES THIS SPILL OCCURED BACK IN JUNE OF THIS YEAR BUT WAS POSS FOUND OR STARTED PRIOR TO 1989 SPILL WAS THE RESULT OF A POSS GAS TANK LEAK UNDERGROUND GAS STATION IS NOW CLOSED CALLER MET WITH REGION 3 TODAY AND WAS ADVISED TO PUT IN 4 MORE GEO PROBES INTO GROUND NO CLEAN UP AS OF YET NO CALLBACK NECESSARY"

All Materials:
- Site ID: 199387

465 BROADWAY (Continued) **S104191704**

Operable Unit ID:	1080215
Operable Unit:	01
Material ID:	302056
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

R85 **SPILL NUMBER 9516090** **NY LTANKS** **S100139447**
NE **139 CORNELL ST** **NY Spills** **N/A**
1/4-1/2 **KINGSTON, NY**
0.361 mi.
1905 ft. **Site 2 of 2 in cluster R**

Relative:
Higher

Actual:
185 ft.

LTANKS:

Spill Number/Closed Date:	8704643 / 1987-09-18
Facility ID:	8704643
Site ID:	285842
Spill Date:	1987-09-03
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Not reported
Cleanup Ceased:	1987-09-18
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-09-03
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-11-09
Spill Record Last Update:	2004-09-30
Spiller Name:	RON DECICCO
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	231709
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON / / : ABANDONING TANK-NFA. "
Remarks:	""

All TTF:

Facility ID:	8704643
Spill Number:	8704643

SPILL NUMBER 9516090 (Continued) **S100139447**

Spill Tank Test:	1531556
Site ID:	285842
Tank Number:	Not reported
Tank Size:	0
Material:	0001
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	285842
Operable Unit ID:	911127
Operable Unit:	01
Material ID:	467270
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	9516090 / 1996-03-16
Facility ID:	9516090
Facility Type:	ER
DER Facility ID:	231709
Site ID:	285843
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C4
SWIS:	5630
Spill Date:	1996-03-15
Investigator:	UNASSIGNED
Referred To:	Not reported
Reported to Dept:	1996-03-15
CID:	322
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1996-03-15

SPILL NUMBER 9516090 (Continued) **S100139447**

Spill Record Last Update:	2000-04-04
Spiller Name:	Not reported
Spiller Company:	139 CORNELL ST
Spiller Address:	139 CORNELL ST
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was "
Remarks:	"oil filter was leaking - repair has been made - spill being cleaned up "

All Materials:

Site ID:	285843
Operable Unit ID:	1030747
Operable Unit:	01
Material ID:	556517
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	1.00
Units:	G
Recovered:	1.00
Oxygenate:	Not reported

86
East
1/4-1/2
0.378 mi.
1995 ft.

C. KINGSTON **NY LTANKS** **S102660768**
464 HASBROCK AVE **N/A**
KINGSTON, NY

Relative:
Higher

Actual:
186 ft.

LTANKS:

Spill Number/Closed Date:	8706155 / 1990-01-30
Facility ID:	8706155
Site ID:	299769
Spill Date:	1987-10-20
Spill Cause:	Tank Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	C3
Cleanup Ceased:	1990-01-30
SWIS:	5630
Investigator:	DUNN
Referred To:	Not reported
Reported to Dept:	1987-10-21
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1987-09-27
Spill Record Last Update:	1990-01-30
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	001

C. KINGSTON (Continued) **S102660768**

Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	242490
DEC Memo:	""
Remarks:	""

All Materials:

Site ID:	299769
Operable Unit ID:	909938
Operable Unit:	01
Material ID:	465179
Material Code:	0008
Material Name:	diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

S87 **KINGSTON FD** **NY LTANKS** **S100137305**
ESE **19 EAST O'REILY ST.** **N/A**
1/4-1/2 **KINGSTON, NY**
0.393 mi.
2074 ft. **Site 1 of 2 in cluster S**

Relative:
Higher

Actual:
188 ft.

LTANKS:

Spill Number/Closed Date:	8808070 / 1989-01-24
Facility ID:	8808070
Site ID:	203480
Spill Date:	1989-01-10
Spill Cause:	Tank Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	C4
Cleanup Ceased:	1989-01-10
SWIS:	5630
Investigator:	dvwehrfr
Referred To:	Not reported
Reported to Dept:	1989-01-10
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	1989-01-10
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1989-01-24
Spill Record Last Update:	1997-10-07
Spiller Name:	Not reported
Spiller Company:	KINGSTON FD
Spiller Address:	19 EAST O'REILY STREET
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported

KINGSTON FD (Continued) **S100137305**

Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	169216
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was D. WEHRFRITZ "
Remarks:	"WASTE OIL TANK. SEAM OPENED. SAWDUST PLACED. CONTRACTOR COMING TO PUMP OUT TANK. FD TO CLEANUP AND DISPOSE. NFA"

All Materials:

Site ID:	203480
Operable Unit ID:	924495
Operable Unit:	01
Material ID:	452835
Material Code:	0024B
Material Name:	2-propanone
Case No.:	00067641
Material FA:	Hazardous Material
Quantity:	50.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

S88 **KINGSTON POINT SLF** **NY SWF/LF** **S102919301**
ESE **25 EAST O'REILLY ST** **N/A**
1/4-1/2 **KINGSTON, NY 00000**
0.396 mi.
2090 ft. **Site 2 of 2 in cluster S**

Relative:
Higher

Actual:
186 ft.

SWF/LF:

Flag:	INACTIVE
Region Code:	3
Phone Number:	Not reported
Owner Name:	CITY OF KINGSTON
Owner Type:	Municipal
Owner Address:	25 EAST O'REILLY ST
Owner Addr2:	Not reported
Owner City,St,Zip:	KINGSTON, NY 12401
Owner Email:	Not reported
Owner Phone:	Not reported
Contact Name:	Not reported
Contact Address:	Not reported
Contact Addr2:	Not reported
Contact City,St,Zip:	Not reported
Contact Email:	Not reported
Contact Phone:	Not reported
Activity Desc:	Landfill - MSW - permit
Activity Number:	[56S08]
Active:	No
East Coordinate:	586321
North Coordinate:	4642311
Accuracy Code:	Not reported
Regulatory Status:	None
Waste Type:	Not reported
Authorization #:	0
Authorization Date:	Not reported
Expiration Date:	Not reported
Operator Name:	CHARLES J COLE

KINGSTON POINT SLF (Continued) **S102919301**

Operator Type: Not reported
Laste Date: Not reported

89
ENE
1/4-1/2
0.396 mi.
2092 ft.

Relative:
Higher

Actual:
186 ft.

HUCK INTL INC
85 GRAND ST
KINGSTON, NY 12401

NY LTANKS **1000266777**
NY VCP **NYD002091239**
NY BROWNFIELDS
NY Spills
RCRA NonGen / NLR
NY MANIFEST

LTANKS:

Spill Number/Closed Date:	8702421 / 1987-07-13
Facility ID:	8702421
Site ID:	262073
Spill Date:	1987-06-24
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Not reported
Cleanup Ceased:	1987-07-13
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-06-24
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	1987-07-13
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-06-29
Spill Record Last Update:	1987-07-29
Spiller Name:	Not reported
Spiller Company:	HUCK MFG
Spiller Address:	SAME
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	214020
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON / / : TO EXCAVATE AND RETEST. / / : 7/13/87-EXCAVATED HOLE-CLEAN-BACKFILLING-NFA. "
Remarks:	"TTTF"

All TTF:

Facility ID:	8702421
Spill Number:	8702421
Spill Tank Test:	1531008
Site ID:	262073
Tank Number:	Not reported
Tank Size:	0
Material:	0002
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported

HUCK INTL INC (Continued) **1000266777**

Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	262073
Operable Unit ID:	908935
Operable Unit:	01
Material ID:	468711
Material Code:	0002A
Material Name:	#4 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	8702581 / 1987-07-13
Facility ID:	8702581
Site ID:	262074
Spill Date:	1987-06-30
Spill Cause:	Tank Test Failure
Spill Source:	Commercial/Industrial
Spill Class:	Not reported
Cleanup Ceased:	1987-07-13
SWIS:	5630
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	1987-06-30
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	1987-07-13
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-07-04
Spill Record Last Update:	1987-07-28
Spiller Name:	Not reported
Spiller Company:	HUCK MFG
Spiller Address:	SAME
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	214020
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was WEHRFRITZ / / : 7/13/87-RETEST FAILED-SAME AS SPILL 87-2421-SEE FOR UPDATES-NFA. "

HUCK INTL INC (Continued) **1000266777**

Remarks: ""

All TTF:

Facility ID:	8702581
Spill Number:	8702581
Spill Tank Test:	1531035
Site ID:	262074
Tank Number:	Not reported
Tank Size:	0
Material:	0002
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	262074
Operable Unit ID:	906767
Operable Unit:	01
Material ID:	468855
Material Code:	0002A
Material Name:	#4 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

VCP:

Program Type:	VCP
Site Code:	56863
HW Code:	V00171
Site Class:	A
SWIS:	5608
Region:	3
Town:	Kingston (c)
Acres:	4.011
Date Record Added:	11/30/2000
Date Record Updated:	07/19/2018
Updated By:	AMOMOROG
Site Description:	Location: The Federal-Mogul/Huck Site is located at 85 Grand Street in the City of Kingston in Ulster County. Site Features: The site consists of two buildings, a former manufacturing building and an attached office building, together occupying 105,000 square feet of the approximately 4-acre site. The remainder of the site consists of paved parking lots, access roads, a grassy area near the office building and narrow landscaped areas in the eastern and southern parking lots. Current Zoning and Land Use: The site is zoned M-2 General Manufacturing, which includes wholesale storage and

HUCK INTL INC (Continued) **1000266777**

warehousing. The former manufacturing building houses self-storage units and the office building is used by a moving and truck rental company. Residential and commercial properties border the site across Tenbroeck Avenue to the northeast and residences and a vacant commercial building are located across Grand Street to the southeast. Two commercial properties, a bottle return center and a warehouse, adjoin the property to the south and CSX Transportation, Inc. (railroad tracks) border the site to the west. Commercial and light industrial properties are directly west of the CSX railroad tracks. All properties within a one-mile radius of the site are serviced by municipal water. Past Use of the Site: The site has been in operation since 1889, used by various companies for automotive, electrical, and refrigeration supplies manufacturing. Site media have been impacted from various manufacturing processes that are known to have occurred at the site, including metal finishing, heat treating, degreasing, and chemical handling and storage. Chlorinated VOCs, SVOCs, metals, and PCBs have been identified in the soil and storm sewer sediment at the site, while metals and VOCs have also been identified in the groundwater at the site. A Phase I environmental assessment was performed in 1991 and Phase II investigations were performed in 1993 and 1997 to evaluate site conditions. Based on the results of the Phase II investigations, Federal-Mogul entered into a Voluntary Cleanup Agreement with the New York State Department of Environmental Conservation on February 6, 2002 (Index no. A3-0372-9807) to investigate and remediate the site. Site Geology and Hydrogeology: Site soils generally consist of 0 to 3 feet of sand or sand and gravel fill material that contains fragments of concrete, glass, asphalt, wood, and other construction debris. The fill material is underlain by a dark yellowish-brown, poorly sorted, fine- to medium-grained sand that grades to a silty sand with increasing depth. The silty sand is underlain by a low permeability clayey silt unit at a depth of approximately 68 feet below ground surface (bgs). The shallow water bearing zone is located approximately 13 to 15 feet bgs. Groundwater flows in a west-southwest direction across the site area.

Env Problem: Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminants of concern include chlorinated VOCs, namely trichloroethene (TCE) and tetrachloroethene (PCE). While most of the site has been sufficiently investigated, the nature and extent of contamination in areas under the former manufacturing building and office building where access was previously limited or unavailable has not been fully delineated. Soil Numerous soil borings were installed on-site from 2002 to 2008 to delineate the horizontal and vertical extent of VOCs in the soil. Based on the results of these investigations, the primary VOCs detected in the on-site soils were TCE, PCE and cis-1,2-dichloroethene (cis-1,2-DCE). They were found at several locations in shallow and deeper soils at concentrations above both the commercial and industrial use soil cleanup objectives (SCOs) established for these compounds. TCE, PCE and cis-1,2-DCE were detected at maximum concentrations of 610 parts per million (ppm), 540 ppm and 1,200 ppm, respectively. Commercial use SCOs for these compounds are 200 ppm, 150 ppm and 500 ppm, respectively. Industrial use SCOs for these compounds are 400 ppm, 300 ppm and 1,000 ppm respectively. SVOCs detected in soil include benzo(a)anthracene, benzo(a)pyrene and benzo(b)fluoranthene at maximum concentrations of 18 ppm, 15 ppm and 15ppm, respectively. Commercial use SCOs for these

HUCK INTL INC (Continued) **1000266777**

compounds are 5.6 ppm, 1.0 ppm and 5.6 ppm, respectively. Industrial use SCOs for these compounds are 11 ppm, 1.1 ppm and 11 ppm, respectively. Metals detected in soil include lead at a maximum concentration of 13,600 ppm, arsenic at a maximum concentration of 32 ppm and cadmium at a maximum concentration of 490 ppm. Commercial use SCOs for these metals are 1,000 ppm, 16 ppm and 9.3 ppm, respectively. Industrial use SCOs for these metals are 3,900 ppm, 16 ppm and 60 ppm, respectively. PCBs were not detected above commercial use SCOs in any of the soil samples. Groundwater Several groundwater investigations have been performed in relation to this site from 2002 through 2011. These investigations found the highest VOC concentrations in groundwater in two areas located under the former manufacturing building. VOCs detected in the groundwater include PCE, TCE, and their breakdown products. Evaluation of the vertical extent of VOCs in the groundwater indicated VOC levels above the New York State Ambient Water Quality Standards were confined mainly to the upper ten feet of the groundwater table. As a result, an AS/SVE system was installed as an IRM in April 2014 with the primary objective of reducing VOCs in groundwater in two source areas under the former manufacturing building that exhibited the highest VOC concentrations. The on-site groundwater sampling results from December 2017 showed a reduction in concentration of the primary contaminants in groundwater compared to the June 2014 sampling results. Maximum concentrations of PCE dropped from 723 parts per billion (ppb) to 330 ppb, while TCE dropped from 4,480 ppb to 2,210 ppb. There was however, a slight increase in the degradation product concentrations; cis-1,2-DCE from 4,570 ppb to 4,800 ppb and trans-1,2-DCE from 10.6 ppb to 18.1 ppb, indicating that breakdown is occurring. Likewise, the off-site groundwater sampling results from June 2017 showed a reduction in concentration of the primary contaminants in groundwater when compared to the June 2014 results. Maximum concentrations of PCE dropped from 174 ppb to 119 ppb, while TCE dropped from 151 ppb to 143 ppb. There was a slight increase in the degradation product concentrations; cis-1,2-DCE from 35.3 ppb to 53.5 ppb and trans-1,2-DCE from non-detect to 0.44 ppb, indicating that breakdown is occurring. The sample results indicate that concentrations of site-related VOCs in groundwater have generally decreased in the source areas and in areas adjacent to, and downgradient from, the source areas. VOC concentrations in monitoring wells located outside the influence of the AS/SVE system have generally remained stable with concentrations of PCE ranging from non-detect to 26.6 ppb, TCE from non-detect to 605 ppb, and cis-1,2-DCE ranging from non-detect to 41.1 ppb. Soil Vapor and Indoor Air Former Manufacturing Building - In 2003 soil vapor samples were collected on-site and found to be impacted by site-related contamination. Additionally, indoor air samples collected in the former manufacturing building were found to be impacted by site-related contamination. As a result, a soil vapor extraction (SVE) system was installed on-site in February 2004 as an IRM along the periphery of the former finish and chemical storage area of the former manufacturing building, and along the eastern and southern property boundaries to address shallow soil vapor impacts in these areas and mitigate their off-site migration. TCE levels measured in the indoor air of the former manufacturing building in 2003 ranged from 17.7 to 258 g/m3. In January 2005, following implementation of the SVE trench system, reductions were observed in concentrations of TCE in the indoor air with levels ranging from non-detect to a

HUCK INTL INC (Continued) **1000266777**

maximum of 51.6 g/m3 in an unoccupied space in the southwest corner of the former manufacturing building. The site property was sold in 2008, and the former manufacturing building is currently used as mini-storage, with an office area that is likely occupied during normal business hours. In 2008, three additional rounds of indoor air testing were performed in the newly occupied office area. The indoor air samples collected in June, July, and August 2008 contained TCE at concentrations of 21.5 g/m3, 18.27 g/m3, and 9.62 g/m3, respectively. Additional indoor air sampling will be conducted during the 2018/2019 heating season. On-Site Office Building - In August 2003, TCE levels measured in the indoor air of the on-site office building ranged from 96.7 to 167 g/m3. As a result, a SSDS was installed as an IRM in the on-site office building in March 2004. During the following heating season in January 2005, noticeable reductions in TCE levels were observed in the indoor air of the on-site office building, with concentrations ranging from non-detect to 0.81 g/m3. The on-site SSDS is inspected on an annual basis to verify proper operation; therefore, no additional indoor air samples have been collected in the on-site office building since 2005. Off-Site Locations - SSDSs have been installed in 17 off-site locations beginning in 2006 to address off-site sub-slab soil vapor and indoor air impacts. Offers were made to conduct soil vapor intrusion (SVI) investigations at 43 off-site properties and sampling has been performed at 22 properties. The remaining 21 property owners either declined or did not respond to the request for sampling. Based on a comparison of data from the 22 buildings to the decision matrices provided in the NYSDOH s Guidance for Evaluating Soil Vapor Intrusion in the State of New York, no further action was ultimately recommended at 10 properties and vapor mitigation was recommended at 12 properties; SSDSs have been installed at each of the 12 properties. Actions were taken to install SSDSs in five additional buildings not sampled for soil vapor intrusion, but based on sampling results of nearby buildings where mitigation was recommended. Further monitoring is not currently required at any of the off-site properties.

Health Problem: Direct contact with contaminants in the soil is unlikely because the majority of the site is covered with buildings and pavement. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in the soil or groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. A sub-slab depressurization system has been installed in the office building and a soil vapor extraction system has been installed adjacent to the former manufacturing building in the vicinity of the main office and former metal finish area to prevent the indoor air quality from being affected by contamination in soil vapor beneath the building. However, the potential exists for inhalation of site contaminants due to soil vapor intrusion for any future on-site redevelopment. Sub-slab depressurization systems have been installed in 17 off-site buildings to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the buildings. The investigation of soil vapor intrusion is on-going at off-site structures with actions being taken as necessary to address exposures.

HUCK INTL INC (Continued) **1000266777**

Dump:	False
Structure:	False
Lagoon:	False
Landfill:	False
Pond:	False
Disp Start:	Not reported
Disp Term:	Not reported
Lat/Long:	Not reported
Dell:	Not reported
Record Add:	10/18/2012 4:07:00 PM
Record Upd:	2/14/2018 1:33:00 PM
Updated By:	DRLANNER
Own Op:	Applicant/Requestor
Sub Type:	P03
Owner Name:	Mark T. Bauer, P.E.
Owner Company:	Federal-Mogul Corporation
Owner Address:	27300 West Eleven Mile Road
Owner Addr2:	Not reported
Owner City,St,Zip:	Southfield, MI 48034
Owner Country:	United States of America
Own Op:	Document Repository
Sub Type:	C01
Owner Name:	Margie Menard
Owner Company:	Kingston Library
Owner Address:	55 Franklin Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Kingston, NY 12401-0494
Owner Country:	United States of America
Own Op:	Document Repository
Sub Type:	B99
Owner Name:	Michael J. Knipfing
Owner Company:	NYSDEC Region 3
Owner Address:	21 South Putt Corners Road
Owner Addr2:	Not reported
Owner City,St,Zip:	New Paltz, NY 12561-1696
Owner Country:	United States of America
HW Code:	V00171
Waste Type:	Hazardous Substances
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	vinyl chloride
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	tetrachloroethene (PCE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	trichloroethene (TCE)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	1,2-dichloroethene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171

HUCK INTL INC (Continued) **1000266777**

Waste Type:	xylene (mixed)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	toluene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	indeno(1,2,3-CD)pyrene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	cis-1,2-dichloroethene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	benzo(a)anthracene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	trans-1,2-dichloroethene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	cadmium
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	benzo(b)fluoranthene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	benzo(a)pyrene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	cyanides(soluble cyanide salts)
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	arsenic
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	lead
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	barium
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
HW Code:	V00171
Waste Type:	dibenz[a,h]anthracene
Waste Quantity:	UNKNOWN
Waste Code:	Not reported
Crossref ID:	number 6211, Volume 6294, page 121
Cross Ref Type Code:	25

HUCK INTL INC (Continued) **1000266777**

Cross Ref Type:	County Recording Identifier
Record Added Date:	5/30/2018 2:33:00 PM
Record Updated:	5/30/2018 2:36:00 PM
Updated By:	DRLANNER
Crossref ID:	C356054
Cross Ref Type Code:	22
Cross Ref Type:	BCP Site ID
Record Added Date:	6/30/2017 2:55:00 PM
Record Updated:	6/30/2017 2:55:00 PM
Updated By:	BRHUMPHR
Crossref ID:	00-TEMP-00-62(I
Cross Ref Type Code:	20
Cross Ref Type:	Haz. Substance ID
Record Added Date:	11/30/2000 4:07:00 PM
Record Updated:	2/24/2005 3:54:00 PM
Updated By:	VCPTRANS
Crossref ID:	3-174521
Cross Ref Type Code:	18
Cross Ref Type:	PBS No.
Record Added Date:	1/18/2011 5:55:00 PM
Record Updated:	1/18/2011 5:55:00 PM
Updated By:	JPCUMMIN

BROWNFIELDS:

Program:	BCP
Site Code:	554332
Acres:	4.01
HW Code:	C356054
SWIS:	5608
Town:	Kingston (c)
Record Added Date:	06/30/2017
Record Updated Date:	07/30/2018
Update By:	BRHUMPHR
Site Description:	Location: The Former Huck Manufacturing Site is located at 85 Grand Street in the city of Kingston in Ulster County. Site Features: The site consists of two buildings, a former manufacturing building and an attached office building, together occupying 105,000 square feet of the 4.5-acre site. The remainder of the site consists of paved parking lots, access roads and a grassy area near the office building. Current Zoning and Land Use: The site is located in a mixed light-industrial, commercial, and residential area, with residences located both northeast and southeast of the site. All properties within a one-mile radius of the site are serviced by municipal water. Currently, Allways Moving and Storage uses the site for their moving and indoor self-storage business. Past Use of the Site: The site has been used for nearly 100 years for automotive, electrical, and refrigeration supplies manufacturing. Chlorinated VOCs, SVOCs, metals, and PCBs have been identified in the soil and storm sewer sediment at the site, while metals and VOCs have also been identified in the groundwater at the site. The soil and storm sewer sediment contamination resulted from various manufacturing processes that are known to have occurred at the site, including metal finishing, heat treating, and degreasing. Site Geology and Hydrogeology: Site soils generally consist of 0 to 3 feet of sand or sand and gravel fill material, followed by poorly sorted sand grading to silty sand down to approximately 68 feet below the ground surface (bgs), all of which is underlain by at least 10 feet of hard clay. The shallow water

HUCK INTL INC (Continued) **1000266777**

	bearing zone is located approximately 15 to 20 feet bgs. Groundwater flows in a westerly direction across the site area.
Env Problem:	Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminants of concern include chlorinated VOCs, namely trichloroethene (TCE) and tetrachloroethene (PCE). Soil - Numerous soil borings were installed on-site from 2002 to 2008 to delineate the horizontal and vertical extent of VOCs in the soil. Based on the results of these investigations, the primary VOCs detected in the on-site soils were TCE, PCE and cis-1,2-dichloroethene (cis-1,2-DCE). They were found at several locations in shallow and deeper soils at concentrations above the soil cleanup objectives (SCOs) established for these compounds. Groundwater - Several groundwater investigations have been performed in relation to this site from 2002 through 2011. These investigations found the highest VOC concentrations in groundwater in two areas located under the former manufacturing building. VOCs detected in the groundwater include PCE, TCE, and their breakdown products. Quarterly groundwater monitoring was initiated in late 2012, at which time total VOCs were found at one on-site location in excess of 10,150 ppb. Since 2012 total VOC levels found in off-site wells located downgradient from the site ranged from non-detect to approximately 160 ppb. Evaluation of the vertical extent of VOCs in the groundwater indicated VOC levels above the New York State ambient water quality standards were confined mainly to the upper ten feet of the groundwater table. Soil Vapor and Indoor Air Soil vapor was found to be impacted by site-related contamination. A soil vapor extraction (SVE) system and a sub-slab depressurization system (SSDS) were installed and brought on-line during 2004-2005 to address shallow soil vapor impacts in the on-site parking areas located adjacent to Grand Street and indoor air impacts to an on-site office building. In addition, SSDSs have been installed in 17 off-site locations to address off-site indoor air impacts.
Health Problem:	Information submitted with the BCP application regarding the conditions at the site are currently under review and will be revised as additional information becomes available.
Dump:	Not reported
Structure:	Not reported
Lagoon:	Not reported
Landfill:	Not reported
Pond:	Not reported
Disp Start:	Not reported
Disp Term:	Not reported
Lat/Long:	Not reported
Dell:	Not reported
Record Add:	Not reported
Record Upd:	Not reported
Updated By:	Not reported
Own Op:	Applicant/Requestor
Sub Type:	P02
Owner Name:	Mark T. Bauer
Owner Company:	Federal-Mogul LLC
Owner Address:	27300 West 11 Mile Road
Owner Addr2:	Not reported
Owner City,St,Zip:	Southfield, MI 48034
Owner Country:	United States of America
Own Op:	Owner
Sub Type:	NNN

HUCK INTL INC (Continued) **1000266777**

Owner Name:	Not reported
Owner Company:	Grand Street Realty Corp
Owner Address:	85 Grand Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Kingston, NY 12401
Owner Country:	United States of America
Own Op:	Document Repository
Sub Type:	NNN
Owner Name:	Margie Menard
Owner Company:	Kingston Library
Owner Address:	55 Franklin Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Kingston, NY 12401
Owner Country:	United States of America
Own Op:	On-Site Operator
Sub Type:	NNN
Owner Name:	Not reported
Owner Company:	Allways Moving and Storage
Owner Address:	85 Grand Street
Owner Addr2:	Not reported
Owner City,St,Zip:	Kingston, NY 12401
Owner Country:	United States of America
HW Code:	Not reported
Waste Type:	Not reported
Waste Quantity:	Not reported
Waste Code:	Not reported
Crossref ID:	Not reported
Cross Ref Type Code:	Not reported
Cross Ref Type:	Not reported
Record Added Date:	Not reported
Record Updated:	Not reported
Updated By:	Not reported

SPILLS:

Spill Number/Closed Date:	9307530 / 1994-11-29
Facility ID:	9307530
Facility Type:	ER
DER Facility ID:	266074
Site ID:	330800
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C3
SWIS:	5630
Spill Date:	1993-09-20
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1993-09-21
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Responsible Party
Cleanup Ceased:	1994-11-29
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0

HUCK INTL INC (Continued) **1000266777**

Date Entered In Computer:	1993-09-22
Spill Record Last Update:	1994-11-29
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	""
Remarks:	"55 GAL DRUM LEAKING SLOWLY SPILL CONTAINED ON PAVEMENT TO TEST WATER REMAINING IN DRUM MOST OF SPILL EVAPORATED"

All Materials:

Site ID:	330800
Operable Unit ID:	986108
Operable Unit:	01
Material ID:	393789
Material Code:	0066A
Material Name:	unknown petroleum
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	30.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9309732 / 1994-11-29
Facility ID:	9309732
Facility Type:	ER
DER Facility ID:	266074
Site ID:	330801
DEC Region:	3
Spill Cause:	Housekeeping
Spill Class:	C3
SWIS:	5630
Spill Date:	1992-11-11
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1993-11-11
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Major Facility (MOSF) > 400,000 gal
Spill Notifier:	Responsible Party
Cleanup Ceased:	1994-11-29
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1993-11-18
Spill Record Last Update:	1994-11-29
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	""
Remarks:	"HISTORIC SPILL 100 YEARS OLD REFER TO HSWR"

HUCK INTL INC (Continued) **1000266777**

All Materials:

Site ID:	330801
Operable Unit ID:	991251
Operable Unit:	01
Material ID:	392384
Material Code:	0064A
Material Name:	unknown material
Case No.:	Not reported
Material FA:	Other
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9011875 / 1991-03-19
Facility ID:	9011875
Facility Type:	ER
DER Facility ID:	230212
Site ID:	283835
DEC Region:	3
Spill Cause:	Human Error
Spill Class:	Not reported
SWIS:	5600
Spill Date:	1991-02-12
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	1991-02-12
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Commercial/Industrial
Spill Notifier:	Responsible Party
Cleanup Ceased:	1953-06-18
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	1991-02-15
Spill Record Last Update:	1991-06-25
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller Company:	999
Contact Name:	Not reported
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was WEHRFRITZ 09/27/95: This is additional information about material spilled from the translation of the old spill file: WASTE SODIUM HYDRO. "
Remarks:	"MATERIAL SPILLED FROM A 55 GAL DRUM AFTER IT TIPPED OVER CONTAINED WITH ABSORBENT MATERIAL AND VACCED UP OVER 45 GAL WAS RECOVERED AND THE REMAINING WAS SOAKED INTO THE PADS AND CONCRETE NO ODOR,FUMES"

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	HUCK INTL INC

HUCK INTL INC (Continued) **1000266777**

Facility address:	85 GRAND ST KINGSTON, NY 12401
EPA ID:	NYD002091239
Mailing address:	GRAND ST KINGSTON, NY 12401
Contact:	Not reported
Contact address:	GRAND ST KINGSTON, NY 12401
Contact country:	US
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	02
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	FEDERAL MOGUL CORP
Owner/operator address:	26555 NORTHWESTERN HWY SOUTHFIELD, MI 48034
Owner/operator country:	US
Owner/operator telephone:	313-354-7700
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	FEDERAL MOGUL CORP
Owner/operator address:	26555 NORTHWESTERN HWY SOUTHFIELD, MI 48034
Owner/operator country:	US
Owner/operator telephone:	313-354-7700
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No

HUCK INTL INC (Continued) **1000266777**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: HUCK INTL INC
Classification: Not a generator, verified

Date form received by agency: 09/07/1999
Site name: HUCK INTL INC
Classification: Not a generator, verified

Date form received by agency: 02/25/1998
Site name: HUCK INTERNATIONAL, INC., I.S.D.
Classification: Large Quantity Generator

Date form received by agency: 03/28/1996
Site name: HUCK INTERNATIONAL INC
Classification: Large Quantity Generator

Date form received by agency: 04/04/1994
Site name: HUCK INTERNATIONAL, INC.
Classification: Large Quantity Generator

Date form received by agency: 08/07/1992
Site name: HUCK INTL INC
Classification: Large Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D010
. Waste name: SELENIUM

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE,

HUCK INTL INC (Continued) **1000266777**

ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: X001
. Waste name: WASTE OILS

Date form received by agency: 04/16/1992
Site name: HUCK INTLINC
Classification: Large Quantity Generator

Date form received by agency: 03/01/1990
Site name: HUCK MANUFACTURING COMPANY
Classification: Large Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/16/1999
Date achieved compliance: 12/01/1999
Violation lead agency: EPA
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 11/05/1999
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 07/05/1994

HUCK INTL INC (Continued) **1000266777**

Date achieved compliance: 09/23/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/05/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 07/05/1994
Date achieved compliance: 09/23/1994
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/05/1994
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 05/16/1990
Date achieved compliance: 10/22/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/20/1990
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/16/1999
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 12/01/1999
Evaluation lead agency: EPA

Evaluation date: 03/25/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 09/23/1994
Evaluation lead agency: State

Evaluation date: 03/25/1994
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: LDR - General
Date achieved compliance: 09/23/1994
Evaluation lead agency: State

HUCK INTL INC (Continued) **1000266777**

Evaluation date: 05/16/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/22/1990
Evaluation lead agency: State

NY MANIFEST:
Country: USA
EPA ID: NYD002091239
Facility Status: Not reported
Location Address 1: 85 GRAND STREET
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: KINGSTON
Location State: NY
Location Zip: 12401
Location Zip 4: Not reported

NY MANIFEST:
EPAID: NYD002091239
Mailing Name: HUCK INTERNATIONAL INCORPORATED
Mailing Contact: WILLIAM R SHORT
Mailing Address 1: 85 GRAND STREET
Mailing Address 2: Not reported
Mailing City: KINGSTON
Mailing State: NY
Mailing Zip: 12401
Mailing Zip 4: Not reported
Mailing Country: USA
Mailing Phone: 9143317300

NY MANIFEST:
Document ID: CTF1035627
Manifest Status: Not reported
seq: 01
Year: 2002
Trans1 State ID: MA55664
Trans2 State ID: HQ21866OR
Generator Ship Date: 07/29/2002
Trans1 Recv Date: 07/29/2002
Trans2 Recv Date: 08/05/2002
TSD Site Recv Date: 08/14/2002
Part A Recv Date: Not reported
Part B Recv Date: Not reported
Generator EPA ID: NYD002091239
Trans1 EPA ID: MAD039322250
Trans2 EPA ID: OHD009865825
TSDF ID 1: CTD000604488
TSDF ID 2: Not reported
Manifest Tracking Number: Not reported
Import Indicator: Not reported
Export Indicator: Not reported
Discr Quantity Indicator: Not reported
Discr Type Indicator: Not reported
Discr Residue Indicator: Not reported
Discr Partial Reject Indicator: Not reported
Discr Full Reject Indicator: Not reported

HUCK INTL INC (Continued) **1000266777**

Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D006 - CADMIUM 1.0 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00350
Units:	P - Pounds
Number of Containers:	001
Container Type:	DM - Metal drums, barrels
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	01.00

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

T90 **MEAGHER** **NY LTANKS** **S104073763**
East **WYNKOP PLACE** **N/A**
1/4-1/2 **KINGSTON, NY**
0.465 mi.
2455 ft. **Site 1 of 3 in cluster T**

Relative: **Higher**

Actual: **189 ft.**

LTANKS:

Spill Number/Closed Date:	8702023 / 1987-09-24
Facility ID:	8702023
Site ID:	83854
Spill Date:	1987-06-10
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Not reported
Cleanup Ceased:	1987-09-24
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-06-10
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	1987-09-24
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-06-29
Spill Record Last Update:	1987-09-24
Spiller Name:	Not reported
Spiller Company:	KINGSTON SCHOOLS
Spiller Address:	SAME
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3

MEAGHER (Continued) **S104073763**

DER Facility ID: 77143
DEC Memo: "Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON / / : SPILLE TO EXCAVATE AND RETEST. "
Remarks: "TTTF"

All TTF:
Facility ID: 8702023
Spill Number: 8702023
Spill Tank Test: 1530936
Site ID: 83854
Tank Number: Not reported
Tank Size: 0
Material: 0001
EPA UST: Not reported
UST: Not reported
Cause: Not reported
Source: Not reported
Test Method: 00
Test Method 2: Unknown
Leak Rate: .00
Gross Fail: Not reported
Modified By: Spills
Last Modified Date: Not reported

All Materials:
Site ID: 83854
Operable Unit ID: 906352
Operable Unit: 01
Material ID: 471904
Material Code: 0001A
Material Name: #2 fuel oil
Case No.: Not reported
Material FA: Petroleum
Quantity: .00
Units: Not reported
Recovered: .00
Oxygenate: Not reported

T91 **MEAGHER SCHOOL** **NY LTANKS** **S102659645**
East **BUYNKOOP PLACE** **N/A**
1/4-1/2 **KINGSTON, NY**
0.465 mi.
2455 ft. **Site 2 of 3 in cluster T**

Relative: **Higher**
Actual: **189 ft.**

LTANKS:
Spill Number/Closed Date: 9704427 / 1998-02-26
Facility ID: 9704427
Site ID: 190205
Spill Date: 1997-07-14
Spill Cause: Tank Test Failure
Spill Source: Institutional, Educational, Gov., Other
Spill Class: D4
Cleanup Ceased: Not reported
SWIS: 5630
Investigator: RICCI
Referred To: Not reported
Reported to Dept: 1997-07-14

MEAGHER SCHOOL (Continued) **S102659645**

CID:	267
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1997-07-14
Spill Record Last Update:	1998-03-10
Spiller Name:	GREG FELTON
Spiller Company:	MEAGHER SCHOOL
Spiller Address:	BUYNKOOP PLACE
Spiller County:	001
Spiller Contact:	GREG FELTON
Spiller Phone:	(914) 331-3480
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	158709
DEC Memo:	""
Remarks:	"TANK TEST FAILURE WILL BE RETESTED POSS PIPING PROBLEM"

All TTF:

Facility ID:	9704427
Spill Number:	9704427
Spill Tank Test:	1545211
Site ID:	190205
Tank Number:	1
Tank Size:	6000
Material:	0001
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	01
Test Method 2:	Petro-Tite/Petro Comp
Leak Rate:	-.09
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	190205
Operable Unit ID:	1047654
Operable Unit:	01
Material ID:	333679
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

92
North
1/4-1/2
0.470 mi.
2484 ft.

HESS
ALBANY AVE
KINGSTON, NY

NY LTANKS
NY Spills

S102105258
N/A

Relative:
Higher

Actual:
192 ft.

LTANKS:

Spill Number/Closed Date:	8606498 / 1987-01-16
Facility ID:	8606498
Site ID:	308078
Spill Date:	1987-01-16
Spill Cause:	Tank Overfill
Spill Source:	Tank Truck
Spill Class:	Not reported
Cleanup Ceased:	1987-01-16
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-01-16
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	DEC
Last Inspection:	1987-01-16
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	HESS MART
Spiller Address:	SAME
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	248806
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON / / : 1/16/87-CLEANED UP BY FD. "
Remarks:	"TANK OVERFILL"

All Materials:

Site ID:	308078
Operable Unit ID:	904077
Operable Unit:	01
Material ID:	472062
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	40.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	8708254 / 1988-01-04
Facility ID:	8708254
Site ID:	308079

HESS (Continued) **S102105258**

Spill Date:	1987-12-22
Spill Cause:	Tank Overfill
Spill Source:	Commercial/Industrial
Spill Class:	Not reported
Cleanup Ceased:	1988-01-04
SWIS:	5630
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	1987-12-22
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	DEC
Last Inspection:	1988-01-04
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-12-28
Spill Record Last Update:	1988-04-05
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	248806
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER / / : TICKET ISSUED- FAILURE TO REPORT, SPILLER CLEANING. 01/04/88: AS PER JIM DECKER,MANAGER: VENT LINE ON WASTE OIL TANK INCORRECTLY INSTALLED, PRESSURE BLEW OUT PRODUCT FROM VENT LINE. SPILLER REMOVED SMALL QUANTITY OF CONTAMINATED SOIL, SPILLER CLEANED UP. N.F.A. "
Remarks:	""

All Materials:

Site ID:	308079
Operable Unit ID:	912883
Operable Unit:	01
Material ID:	463648
Material Code:	0022
Material Name:	waste oil/used oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	100.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

Spill Number/Closed Date:	9509055 / 1995-11-01
Facility ID:	9509055
Site ID:	308080
Spill Date:	1995-10-23
Spill Cause:	Tank Overfill
Spill Source:	Gasoline Station or other PBS Facility
Spill Class:	D4

HESS (Continued) **S102105258**

Cleanup Ceased:	1995-11-01
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1995-10-23
CID:	270
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1995-10-23
Spill Record Last Update:	1995-11-20
Spiller Name:	MARGARET BENSON
Spiller Company:	KOSCO
Spiller Address:	PO BOX 760
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	248806
DEC Memo:	""
Remarks:	""

All Materials:

Site ID:	308080
Operable Unit ID:	1019628
Operable Unit:	01
Material ID:	360019
Material Code:	0008
Material Name:	diesel
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	4.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	9212743 / 1993-02-17
Facility ID:	9212743
Facility Type:	ER
DER Facility ID:	265071
Site ID:	329455
DEC Region:	3
Spill Cause:	Unknown
Spill Class:	C3
SWIS:	5630
Spill Date:	1993-02-10
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	1993-02-10
CID:	Not reported

HESS (Continued) **S102105258**

Water Affected:	Not reported
Spill Source:	Gasoline Station or other PBS Facility
Spill Notifier:	Citizen
Cleanup Ceased:	1993-02-17
Cleanup Meets Std:	False
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller Company:	001
Contact Name:	Not reported
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was WEHRFRITZ "
Remarks:	"HEAVY PETROLEUM ODOR & SPILL ON GROUND APPROX. 6'X 30' SPEEDI-DRI HAS BEEN APPLIED"

All Materials:

Site ID:	329455
Operable Unit ID:	977147
Operable Unit:	01
Material ID:	402576
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

T93 **REAL ESTATE TRANS.** **NY LTANKS** **S108637125**
East **4 SMITH AVE** **NY Spills** **N/A**
1/4-1/2 **KINGSTON, NY**
0.474 mi.
2503 ft. **Site 3 of 3 in cluster T**

Relative: **Higher**
Actual: **190 ft.**

LTANKS:

Spill Number/Closed Date:	0513482 / 2006-02-22
Facility ID:	0513482
Site ID:	359963
Spill Date:	2006-02-22
Spill Cause:	Tank Overfill
Spill Source:	Private Dwelling
Spill Class:	C4
Cleanup Ceased:	Not reported
SWIS:	5630
Investigator:	DVWEHRFR
Referred To:	Not reported
Reported to Dept:	2006-02-22
CID:	407
Water Affected:	Not reported
Spill Notifier:	Responsible Party

REAL ESTATE TRANS. (Continued) **S108637125**

Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2006-02-22
Spill Record Last Update:	2006-02-23
Spiller Name:	TERESA CAIN
Spiller Company:	KINGSTON OIL CO
Spiller Address:	15 NORTH BROADWAY
Spiller County:	001
Spiller Contact:	BARBARA WALLA
Spiller Phone:	(845) 338-8353
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	310079
DEC Memo:	""
Remarks:	"Amount half gallon, being cleaned up."

All Materials:

Site ID:	359963
Operable Unit ID:	1117153
Operable Unit:	01
Material ID:	2107626
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	0701804 / 2007-05-15
Facility ID:	0701804
Facility Type:	ER
DER Facility ID:	330803
Site ID:	381402
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C2
SWIS:	5608
Spill Date:	2007-05-14
Investigator:	jymccart
Referred To:	Not reported
Reported to Dept:	2007-05-14
CID:	444
Water Affected:	Not reported
Spill Source:	Private Dwelling
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False

REAL ESTATE TRANS. (Continued) **S108637125**

Remediation Phase:	0
Date Entered In Computer:	2007-05-15
Spill Record Last Update:	2007-05-16
Spiller Name:	SHAWN DENVER- LAWYER
Spiller Company:	REAL ESTATE TRANS.
Spiller Address:	4 SMITH AVE
Spiller Company:	001
Contact Name:	SHAWN DENVER- LAWYER
DEC Memo:	"CALLED AND LEFT MESSAGE FOR THERESA TO RETRURN CALL. SPOKE WITH THERESA. HOME HAS BEEN UNOCCUPIED FOR QUITE A WHILE. KOSCO WAS CALLED TO MEASURE FUEL IN TANK (275 BASEMENT) FOR REAL ESTATE TRANSACTION REASONS AND FOUND 7' AREA OF STAIN ON BASEMENT FLOOR & BROKEN GAUGE. SPOKE WITH ATTY SHAWN DENVER. HOUSE CLOSING IS TOMORROW. SHAWN WILL CONTACT HIS CLIENT AND KOSCO TO DISCUSS AND CALL BACK. 5/15/07: SPOKE WITH SHAWN DENVER, THERESA AND BOB @ KOSCO. KOSCO CLEANED UP SPILL WITH SPEEDIDRI & REMOVED 10 GALLONS FROM TANK. LEAK APPREARED TO BE FROM BROKEN FUEL GAUGE. -- NFA"
Remarks:	"BROKEN GAUGE ON CONCRETE AND IN PROCESS OF CLEANING"

All Materials:

Site ID:	381402
Operable Unit ID:	1138857
Operable Unit:	01
Material ID:	2128860
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	.00
Oxygenate:	Not reported

94
SSE
1/4-1/2
0.476 mi.
2512 ft.

KINGSTON SCHOOL **NY LTANKS** **S100139195**
MARYS AVE **N/A**
KINGSTON, NY

Relative:
Higher

Actual:
244 ft.

LTANKS:

Spill Number/Closed Date:	8701694 / 1987-09-24
Facility ID:	8701694
Site ID:	313696
Spill Date:	1987-05-30
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	D3
Cleanup Ceased:	1987-09-24
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-05-30
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	1987-09-24
Recommended Penalty:	False

KINGSTON SCHOOL (Continued) **S100139195**

Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1987-06-08
Spill Record Last Update:	1987-09-24
Spiller Name:	Not reported
Spiller Company:	KINGSTON SCHOOL DIST
Spiller Address:	SAME
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	252935
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON / / : SPILLER TO RETEST. / / : SPILLER TO RETEST. TANK REMOVED.NFA. "
Remarks:	"TTTF 3K"

All TTF:

Facility ID:	8701694
Spill Number:	8701694
Spill Tank Test:	1530886
Site ID:	313696
Tank Number:	Not reported
Tank Size:	0
Material:	0009
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	313696
Operable Unit ID:	908332
Operable Unit:	01
Material ID:	471608
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

95
ESE
1/4-1/2
0.482 mi.
2546 ft.

KINGSTON SCHOOL DISTRICT
403 BROADWAY
KINGSTON, NY

NY LTANKS
NY Spills

S106698220
N/A

Relative:
Higher

Actual:
209 ft.

LTANKS:

Spill Number/Closed Date:	0704067 / 2010-12-31
Facility ID:	0704067
Site ID:	384149
Spill Date:	2007-07-11
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	B4
Cleanup Ceased:	Not reported
SWIS:	5608
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2007-07-11
CID:	444
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2007-07-11
Spill Record Last Update:	2010-12-31
Spiller Name:	BOB TERWILIGER
Spiller Company:	KINGSTON SCHOOL DISTRICT
Spiller Address:	403 BROADWAY
Spiller County:	001
Spiller Contact:	BOB TERWILIGER
Spiller Phone:	(845) 331-3480
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	64356
DEC Memo:	" Spoke with Bob Cunningham. Tank to be emptied tomorrow. Tank removed. See Spill No. 0809806. NFA this Spill. Dt 12/31/10"
Remarks:	"BELOW PRODUCT LEVEL"

All TTF:

Facility ID:	0704067
Spill Number:	0704067
Spill Tank Test:	1550977
Site ID:	384149
Tank Number:	1
Tank Size:	5000
Material:	0001
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	03
Test Method 2:	Horner EZ Check I or II
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Watchdog
Last Modified Date:	Not reported

KINGSTON SCHOOL DISTRICT (Continued) **S106698220**

All Materials:

Site ID:	384149
Operable Unit ID:	1141459
Operable Unit:	01
Material ID:	2131672
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	G
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	0809806 / 2010-12-31
Facility ID:	0809806
Facility Type:	ER
DER Facility ID:	356547
Site ID:	407301
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	C3
SWIS:	5630
Spill Date:	2008-12-02
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2008-12-02
CID:	Not reported
Water Affected:	Not reported
Spill Source:	Institutional, Educational, Gov., Other
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2008-12-02
Spill Record Last Update:	2010-12-31
Spiller Name:	BOB TERWILLAGER
Spiller Company:	KINGSTON HIGH SCHOOL
Spiller Address:	403 BROADWAY
Spiller Company:	999
Contact Name:	DARREN OSWALD
DEC Memo:	"12-2-08: 12:30: DARREN OSWALD/ L&O: Ust being removed has failed tank test several months ago. 6/10/10- File review needed. DT 12/31/10- TCR received from Entek during meeting on 11/10/10. Some 156 tons impacted soils removed. Postex soil samples had only one VOC at trace level from bottom sample. NFA DT "
Remarks:	"CALLER STATES THAT THEY WERE REMOVING A 5000 GALLON UST AND NOTICED SOIL CONTAMINATION. CLEAN UP IS IN PROGRESS."

All Materials:

Site ID:	407301
Operable Unit ID:	1163854

KINGSTON SCHOOL DISTRICT (Continued) **S106698220**

Operable Unit:	01
Material ID:	2155195
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	Not reported
Oxygenate:	Not reported

Spill Number/Closed Date:	0405191 / 2004-08-12
Facility ID:	0405191
Facility Type:	ER
DER Facility ID:	64356
Site ID:	67337
DEC Region:	3
Spill Cause:	Other
Spill Class:	C3
SWIS:	5608
Spill Date:	2004-08-09
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2004-08-11
CID:	403
Water Affected:	Not reported
Spill Source:	Institutional, Educational, Gov., Other
Spill Notifier:	Other
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2004-08-11
Spill Record Last Update:	2004-10-07
Spiller Name:	BOB
Spiller Company:	Not reported
Spiller Address:	403 BROADWAY
Spiller Company:	001
Contact Name:	BOB
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was TRAVER 08/11/2004 LEFT MESSAGE TO CONTACT D. TRAVER, NYSDEC. Caller stated that fuel tank on forklift was punctured. All on pavement and cleaned up with speedidry. NFA"
Remarks:	"fuel tank was punctured causing about 5 gallons to spill.spill was cleaned up"

All Materials:

Site ID:	67337
Operable Unit ID:	888026
Operable Unit:	01
Material ID:	489253
Material Code:	0008
Material Name:	diesel
Case No.:	Not reported
Material FA:	Petroleum

KINGSTON SCHOOL DISTRICT (Continued) **S106698220**

Quantity:	5.00
Units:	G
Recovered:	5.00
Oxygenate:	Not reported

96
NNE
1/4-1/2
0.482 mi.
2547 ft.

185 O'NEAL STREET
185 O'NEAL STREET
KINGSTON, NY

NY LTANKS **S100153723**
N/A

Relative:
Higher

Actual:
184 ft.

LTANKS:

Spill Number/Closed Date:	9104282 / 1991-07-22
Facility ID:	9104282
Site ID:	253591
Spill Date:	1991-07-22
Spill Cause:	Tank Test Failure
Spill Source:	Private Dwelling
Spill Class:	Not reported
Cleanup Ceased:	1953-06-18
SWIS:	5630
Investigator:	DUNN
Referred To:	Not reported
Reported to Dept:	1991-07-22
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1991-07-24
Spill Record Last Update:	1992-07-30
Spiller Name:	Not reported
Spiller Company:	Not reported
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	207726
DEC Memo:	"Administratively closed due to file review and/or information received. If new information arises to contradict this determination DEC reserves the right to reopen this spill without prejudice. "
Remarks:	"WILL EIR VACUTEST FAILED"

All TTF:

Facility ID:	9104282
Spill Number:	9104282
Spill Tank Test:	1538787
Site ID:	253591
Tank Number:	Not reported
Tank Size:	0
Material:	0001
EPA UST:	Not reported

185 O'NEAL STREET (Continued) **S100153723**

UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	253591
Operable Unit ID:	955056
Operable Unit:	01
Material ID:	423362
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

97
SW
1/4-1/2
0.484 mi.
2553 ft.

STEWARTS ICE CREAM
GREENKILL AVE
KINGSTON, NY

NY LTANKS **S100164211**
NY Spills **N/A**

Relative:
Higher

Actual:
188 ft.

LTANKS:

Spill Number/Closed Date:	8801762 / 1988-06-02
Facility ID:	8801762
Site ID:	184060
Spill Date:	1988-05-26
Spill Cause:	Tank Failure
Spill Source:	Commercial/Industrial
Spill Class:	D3
Cleanup Ceased:	1988-06-02
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1988-05-26
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	True
Remediation Phase:	0
Date Entered In Computer:	1988-06-02
Spill Record Last Update:	1999-01-11
Spiller Name:	Not reported
Spiller Company:	SAME
Spiller Address:	Not reported

STEWARTS ICE CREAM (Continued) **S100164211**

Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	154055
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON "
Remarks:	"30 YRDS OF CONTAMINATED SOIL CLEANED UP BY N.E.MARINE NFA"

All Materials:

Site ID:	184060
Operable Unit ID:	918933
Operable Unit:	01
Material ID:	460889
Material Code:	0009
Material Name:	gasoline
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	L
Recovered:	.00
Oxygenate:	Not reported

SPILLS:

Spill Number/Closed Date:	0210361 / 2003-01-14
Facility ID:	0210361
Facility Type:	ER
DER Facility ID:	154055
Site ID:	184059
DEC Region:	3
Spill Cause:	Equipment Failure
Spill Class:	E5
SWIS:	5630
Spill Date:	2003-01-14
Investigator:	UNASSIGNED
Referred To:	Not reported
Reported to Dept:	2003-01-14
CID:	281
Water Affected:	Not reported
Spill Source:	Commercial Vehicle
Spill Notifier:	Responsible Party
Cleanup Ceased:	Not reported
Cleanup Meets Std:	True
Last Inspection:	Not reported
Recommended Penalty:	False
UST Trust:	False
Remediation Phase:	0
Date Entered In Computer:	2003-01-14
Spill Record Last Update:	2003-03-31
Spiller Name:	DAVE DAVENPORT
Spiller Company:	MOHONK OIL CO
Spiller Address:	96 STEVES LANE
Spiller Company:	001
Contact Name:	DAVE DAVENPORT
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was "

STEWARTS ICE CREAM (Continued) **S100164211**

Remarks: "MATERIAL SPILLED FROM VAPOR RECOVERY LINE AT ABOVE LOCATION. MATERIAL SPILLED TO ROADWAY. ALL MATERIAL REPORTED RECOVERED."

All Materials:

Site ID:	184059
Operable Unit ID:	861603
Operable Unit:	01
Material ID:	513748
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	5.00
Units:	G
Recovered:	5.00
Oxygenate:	Not reported

98
NNE
1/4-1/2
0.486 mi.
2566 ft.

VAN ALSTYNE RESIDENCE **NY LTANKS** **S102674126**
182 ELMENDORF STREET **N/A**
KINGSTON, NY

Relative:
Lower

Actual:
179 ft.

LTANKS:

Spill Number/Closed Date:	9311337 / 1994-01-10
Facility ID:	9311337
Site ID:	214349
Spill Date:	1993-12-20
Spill Cause:	Tank Overfill
Spill Source:	Tank Truck
Spill Class:	D3
Cleanup Ceased:	1994-01-10
SWIS:	5630
Investigator:	RICCI
Referred To:	Not reported
Reported to Dept:	1993-12-20
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Responsible Party
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	False
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	Not reported
Spill Record Last Update:	2003-12-02
Spiller Name:	Not reported
Spiller Company:	KINGSTON OIL
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	177597
DEC Memo:	""
Remarks:	"SPILL IN BASEMENT SERVICE DEPT. TO CHECK OUT SPILL UPDATE SPILLL OF

VAN ALSTYNE RESIDENCE (Continued) **S102674126**

2-5 GAL. CLEANED UP WITH SPEEDI-DRI"

All Materials:

Site ID:	214349
Operable Unit ID:	989969
Operable Unit:	01
Material ID:	390379
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

99
WSW
1/4-1/2
0.491 mi.
2591 ft.

KINGSTON CSD - GEORGE WASHINGTON ELEM
67 WALL ST
KINGSTON, NY 12401

NY LTANKS **1001961642**
RCRA NonGen / NLR **NYR000084558**
FINDS
ECHO
NY MANIFEST

Relative:
Higher

Actual:
184 ft.

LTANKS:

Spill Number/Closed Date:	0904615 / 2010-12-29
Facility ID:	0904615
Site ID:	416798
Spill Date:	2009-07-21
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	C3
Cleanup Ceased:	Not reported
SWIS:	5608
Investigator:	dxtraver
Referred To:	Not reported
Reported to Dept:	2009-07-21
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Local Agency
Last Inspection:	Not reported
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	2009-07-21
Spill Record Last Update:	2010-12-29
Spiller Name:	Not reported
Spiller Company:	KINGSTON CITY SCHOOL DISTRICT
Spiller Address:	Not reported
Spiller County:	999
Spiller Contact:	CALLER
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	365866
DEC Memo:	"7-21-09: V.Mc.^ DOUG PRIEST/ENTEC ENVIRO.: Removing 2 X 10K #2 USTs. TCR to follow. 7-21-09: V.Mc. Mess. on Voice Mail: Dough/Entec: Hit waterline during exc., exc. filled in w/20 to 30k gal. of water. To

KINGSTON CSD - GEORGE WASHINGTON ELEM (Continued) **1001961642**

dewater into frat tank befor proceeding w/repairs. 3/17/10- Call from Doug Priest, environmental consultant. Report is done and being reviewed by Entek. Should be forwarded to DEC shortly. DT Received TCR fron Entek on 11/10/10 during meeting. Some 106 tons of soil impacts removed and disposed. Excavation had to be dewatered due to water main break. Post ex soil samples indicate some low level SVOC's below cleanup guidance values. NFA DT 12/29/10 "

Remarks: "Contaminated soil found during tank removal-clean up in progress."

All Materials:

Site ID:	416798
Operable Unit ID:	1173079
Operable Unit:	01
Material ID:	2164966
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	Not reported
Units:	G
Recovered:	Not reported
Oxygenate:	Not reported

RCRA NonGen / NLR:

Date form received by agency:	01/01/2007
Facility name:	KINGSTON CSD - GEORGE WASHINGTON ELEM
Facility address:	67 WALL ST KINGSTON, NY 12401-4854
EPA ID:	NYR000084558
Mailing address:	WALL ST KINGSTON, NY 12401-4854
Contact:	WILLIAM SLADE
Contact address:	WALL ST KINGSTON, NY 12401-4854
Contact country:	US
Contact telephone:	914-681-6405
Contact email:	Not reported
EPA Region:	02
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	KINGSTON CITY SCHOOL DIST
Owner/operator address:	14 E CHESTER ST CIONI ADMIN KINGSTON, NY 12401
Owner/operator country:	US
Owner/operator telephone:	914-339-3000
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	District
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name: KINGSTON CITY SCHOOL DIST

KINGSTON CSD - GEORGE WASHINGTON ELEM (Continued) **1001961642**

Owner/operator address: 14 E CHESTER ST CIONI ADMIN
KINGSTON, NY 12401
Owner/operator country: US
Owner/operator telephone: 914-339-3000
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: District
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 01/01/2006
Site name: KINGSTON CSD - GEORGE WASHINGTON ELEM
Classification: Not a generator, verified

Date form received by agency: 02/10/2000
Site name: KINGSTON CSD - GEORGE WASHINGTON ELEM
Classification: Small Quantity Generator

. Waste code: D000
. Waste name: Not Defined

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

Violation Status: No violations found

FINDS:

Registry ID: 110004561251

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

KINGSTON CSD - GEORGE WASHINGTON ELEM (Continued) **1001961642**

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1001961642
Registry ID:	110004561251
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110004561251

NY MANIFEST:

Country:	USA
EPA ID:	NYR000084558
Facility Status:	Not reported
Location Address 1:	67 WALL ST
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	KINGSTON
Location State:	NY
Location Zip:	12401
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	NYR000084558
Mailing Name:	GEORGE WASHINGTON ELEMENTARY SCHOOL
Mailing Contact:	LINDA DELLA DONNA
Mailing Address 1:	123 MAIN ST
Mailing Address 2:	Not reported
Mailing City:	WHITE PLAINS
Mailing State:	NY
Mailing Zip:	10601
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9143393000

NY MANIFEST:

Document ID:	NYG1735326
Manifest Status:	Not reported
seq:	01
Year:	2000
Trans1 State ID:	AZ002
Trans2 State ID:	Not reported
Generator Ship Date:	03/02/2000
Trans1 Recv Date:	03/02/2000
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	03/07/2000
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	NYR000084558
Trans1 EPA ID:	AZD983473539
Trans2 EPA ID:	Not reported
TSDF ID 1:	AZ0000337360

KINGSTON CSD - GEORGE WASHINGTON ELEM (Continued) **1001961642**

TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D009 - MERCURY 0.2 MG/L TCLP
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	01200
Units:	P - Pounds
Number of Containers:	011
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	R Material recovery of more than 75 percent of the total material.
Specific Gravity:	01.00

Click this hyperlink while viewing on your computer to access
-1 additional NY MANIFEST: record(s) in the EDR Site Report.

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100 SE 1/4-1/2 0.498 mi. 2631 ft.

MJM
ANDREWS ST
KINGSTON, NY

NY LTANKS **S100139207** **N/A**

Relative: Higher

Actual: 221 ft.

LTANKS:

Spill Number/Closed Date:	8701866 / 1987-09-24
Facility ID:	8701866
Site ID:	257565
Spill Date:	1987-06-04
Spill Cause:	Tank Test Failure
Spill Source:	Institutional, Educational, Gov., Other
Spill Class:	Not reported
Cleanup Ceased:	1987-09-24
SWIS:	5630
Investigator:	jeokesso
Referred To:	Not reported
Reported to Dept:	1987-06-04
CID:	Not reported
Water Affected:	Not reported
Spill Notifier:	Tank Tester
Last Inspection:	1987-09-24
Recommended Penalty:	False
Meets Standard:	True
UST Involvement:	False
Remediation Phase:	0
Date Entered In Computer:	1987-06-08

MJM (Continued) **S100139207**

Spill Record Last Update:	1987-09-24
Spiller Name:	Not reported
Spiller Company:	KINGSTON SCHOOLS
Spiller Address:	Not reported
Spiller County:	001
Spiller Contact:	Not reported
Spiller Phone:	Not reported
Spiller Extention:	Not reported
DEC Region:	3
DER Facility ID:	210897
DEC Memo:	"Prior to Sept, 2004 data translation this spill Lead_DEC Field was OKESSON / / : REFERRED TO PBS. / / : REFERRED TO PBS. RETEST PASSED.NFA. "
Remarks:	"TTTF 10K -.0759GPH"

All TTF:

Facility ID:	8701866
Spill Number:	8701866
Spill Tank Test:	1530908
Site ID:	257565
Tank Number:	Not reported
Tank Size:	0
Material:	0001
EPA UST:	Not reported
UST:	Not reported
Cause:	Not reported
Source:	Not reported
Test Method:	00
Test Method 2:	Unknown
Leak Rate:	.00
Gross Fail:	Not reported
Modified By:	Spills
Last Modified Date:	Not reported

All Materials:

Site ID:	257565
Operable Unit ID:	908491
Operable Unit:	01
Material ID:	471758
Material Code:	0001A
Material Name:	#2 fuel oil
Case No.:	Not reported
Material FA:	Petroleum
Quantity:	.00
Units:	Not reported
Recovered:	.00
Oxygenate:	Not reported

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
KINGSTON	S113916669	ECONO-WASH AND DRY CLEANING CENTER	318 - 320 BROADWAY	12401	NY SHWS
KINGSTON	S113917115	CH - NORTH ST. KINGSTON MGP	NEAR EAST STRAND STREET (RIVER	12401	NY SHWS
KINGSTON	1003863836	CENTRAL HUDSON G & E /KINGSTON GAS	EAST STRAND	12401	SEMS-ARCHIVE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 07/31/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 07/31/2018
Date Data Arrived at EDR: 08/28/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 17

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/28/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/24/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: Inactive Hazardous Waste Disposal Sites in New York State

Referred to as the State Superfund Program, the Inactive Hazardous Waste Disposal Site Remedial Program is the cleanup program for inactive hazardous waste sites and now includes hazardous substance sites

Date of Government Version: 08/09/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/30/2018
Number of Days to Update: 20

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Facility Register

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 10/03/2018
Date Made Active in Reports: 11/07/2018
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-457-2051
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

LTANKS: Spills Information Database
Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills.

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 10/22/2018
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

HIST LTANKS: Listing of Leaking Storage Tanks

A listing of leaking underground and aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills. In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY LTANKS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Varies

UST: Petroleum Bulk Storage (PBS) Database

Facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons.

Date of Government Version: 09/25/2018
Date Data Arrived at EDR: 09/26/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 09/26/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: No Update Planned

CBS UST: Chemical Bulk Storage Database

Facilities that store regulated hazardous substances in underground tanks of any size

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 10/24/2005
Next Scheduled EDR Contact: 01/23/2006
Data Release Frequency: No Update Planned

MOSF UST: Major Oil Storage Facilities Database

Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF: Major Oil Storage Facility Site Listing

These facilities may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 09/25/2018
Date Data Arrived at EDR: 09/26/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 09/26/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CBS: Chemical Bulk Storage Site Listing

These facilities store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size

Date of Government Version: 09/25/2018
Date Data Arrived at EDR: 09/26/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 09/26/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

AST: Petroleum Bulk Storage

Registered Aboveground Storage Tanks.

Date of Government Version: 09/25/2018
Date Data Arrived at EDR: 09/26/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 09/26/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: No Update Planned

CBS AST: Chemical Bulk Storage Database

Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

MOSF AST: Major Oil Storage Facilities Database

Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 02/20/2002
Date Made Active in Reports: 03/22/2002
Number of Days to Update: 30

Source: NYSDEC
Telephone: 518-402-9549
Last EDR Contact: 07/25/2005
Next Scheduled EDR Contact: 10/24/2005
Data Release Frequency: No Update Planned

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

TANKS: Storage Tank Faciliy Listing

This database contains records of facilities that are or have been regulated under Bulk Storage Program. Tank information for these facilities may not be releasable by the state agency.

Date of Government Version: 09/25/2018
Date Data Arrived at EDR: 09/26/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 16

Source: Department of Environmental Conservation
Telephone: 518-402-9543
Last EDR Contact: 09/26/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

ENV RES DECL: Environmental Restrictive Declarations

The Environmental Restrictive Declarations (ERD) listed were recorded in connection with a zoning action against the noted Tax Blocks and Tax Lots, or portion thereof, and are available in the property records on file at the Office of the City Register for Bronx, Kings, New York and Queens counties or at the Richmond County Clerk's office. They contain environmental requirements with respect to hazardous materials, air quality and/or noise in accordance with Section 11-15 of this Resolution.

Date of Government Version: 05/15/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 08/07/2018
Number of Days to Update: 42

Source: New York City Department of City Planning
Telephone: 212-720-3300
Last EDR Contact: 09/18/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

RES DECL: Restrictive Declarations Listing

A restrictive declaration is a covenant running with the land which binds the present and future owners of the property. As a condition of certain special permits, the City Planning Commission may require an applicant to sign and record a restrictive declaration that places specified conditions on the future use and development of the property. Certain restrictive declarations are indicated by a D on zoning maps.

Date of Government Version: 11/18/2010
Date Data Arrived at EDR: 06/30/2014
Date Made Active in Reports: 07/21/2014
Number of Days to Update: 21

Source: NYC Department of City Planning
Telephone: 212-720-3401
Last EDR Contact: 09/21/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

ENG CONTROLS: Registry of Engineering Controls

Environmental Remediation sites that have engineering controls in place.

Date of Government Version: 08/09/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Quarterly

INST CONTROL: Registry of Institutional Controls

Environmental Remediation sites that have institutional controls in place.

Date of Government Version: 08/09/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-9553
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Agreements

New York established its Voluntary Cleanup Program (VCP) to address the environmental, legal and financial barriers that often hinder the redevelopment and reuse of contaminated properties. The Voluntary Cleanup Program was developed to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfield" sites.

Date of Government Version: 08/09/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-9711
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Semi-Annually

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP NYC: Voluntary Cleanup Program Listing NYC
New York City voluntary cleanup program sites.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/29/2018
Date Made Active in Reports: 05/14/2018
Number of Days to Update: 46

Source: New York City Office of Environmental Protection
Telephone: 212-788-8841
Last EDR Contact: 09/17/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/24/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Site List
A Brownfield is any real property where redevelopment or re-use may be complicated by the presence or potential presence of a hazardous waste, petroleum, pollutant, or contaminant.

Date of Government Version: 08/09/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/30/2018
Number of Days to Update: 20

Source: Department of Environmental Conservation
Telephone: 518-402-9764
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Semi-Annually

ERP: Environmental Restoration Program Listing
In an effort to spur the cleanup and redevelopment of brownfields, New Yorkers approved a $200 million Environmental Restoration or Brownfields Fund as part of the $1.75 billion Clean Water/Clean Air Bond Act of 1996 (1996 Bond Act). Enhancements to the program were enacted on October 7, 2003. Under the Environmental Restoration Program, the State provides grants to municipalities to reimburse up to 90 percent of on-site eligible costs and 100% of off-site eligible costs for site investigation and remediation activities. Once remediated, the property may then be reused for commercial, industrial, residential or public use.

Date of Government Version: 08/09/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/18/2018
Date Data Arrived at EDR: 09/18/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/18/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWTIRE: Registered Waste Tire Storage & Facility List

A listing of facilities registered to accept waste tires.

Date of Government Version: 02/27/2018
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 63

Source: Department of Environmental Conservation
Telephone: 518-402-8694
Last EDR Contact: 09/10/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: No Update Planned

SWRCY: Registered Recycling Facility List

A listing of recycling facilities.

Date of Government Version: 09/30/2018
Date Data Arrived at EDR: 10/03/2018
Date Made Active in Reports: 11/07/2018
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8705
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 11/02/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: No Update Planned

DEL SHWS: Delisted Registry Sites

A database listing of sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites.

Date of Government Version: 08/09/2018
Date Data Arrived at EDR: 08/10/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 21

Source: Department of Environmental Conservation
Telephone: 518-402-9622
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Quarterly

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/21/2018
Date Data Arrived at EDR: 09/21/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 49

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/26/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

HIST UST: Historical Petroleum Bulk Storage Database

These facilities have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. It is no longer updated due to the sensitive nature of the information involved. See UST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: Varies

HIST AST: Historical Petroleum Bulk Storage Database
These facilities have petroleum storage capabilities in excess of 1,100 gallons and less than 400,000 gallons. This database contains detailed information per site. No longer updated due to the sensitive nature of the information involved. See AST for more current data.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 07/20/2006
Number of Days to Update: 48
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 10/23/2006
Next Scheduled EDR Contact: 01/22/2007
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Spill Liens Information
Lien information from the Oil Spill Fund.

Date of Government Version: 08/08/2018
Date Data Arrived at EDR: 08/09/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 22
Source: Office of the State Comptroller
Telephone: 518-474-9034
Last EDR Contact: 11/05/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

SPILLS: Spills Information Database
Data collected on spills reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 10/16/2018
Date Made Active in Reports: 10/22/2018
Number of Days to Update: 6
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

HIST SPILLS: SPILLS Database
This database contains records of chemical and petroleum spill incidents. Under State law, petroleum and hazardous chemical spills that can impact the waters of the state must be reported by the spiller (and, in some cases, by anyone who has knowledge of the spills). In 2002, the Department of Environmental Conservation stopped providing updates to its original Spills Information Database. This database includes fields that are no longer available from the NYDEC as of January 1, 2002. Current information may be found in the NY SPILLS database. Department of Environmental Conservation.

Date of Government Version: 01/01/2002
Date Data Arrived at EDR: 07/08/2005
Date Made Active in Reports: 07/14/2005
Number of Days to Update: 6

Source: Department of Environmental Conservation
Telephone: 518-402-9549
Last EDR Contact: 07/07/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/14/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/12/2013
Number of Days to Update: 40

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 11/02/2010
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/07/2013
Number of Days to Update: 63

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (212) 637-3660
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/12/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/12/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 08/31/2018
Date Data Arrived at EDR: 09/25/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/25/2018
Next Scheduled EDR Contact: 01/07/2019
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/05/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 11/09/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/21/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/24/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/23/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 36

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/11/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 12/05/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 10/26/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2018
Date Data Arrived at EDR: 10/03/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/03/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/30/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/17/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 80

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/01/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/21/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 11/01/2018
Next Scheduled EDR Contact: 02/18/2019
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 08/13/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/16/2018
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 11/27/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/01/2018
Date Data Arrived at EDR: 08/29/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 37

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/10/2018
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/10/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/07/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 30

Source: EPA
Telephone: (212) 637-3000
Last EDR Contact: 12/05/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/30/2018
Next Scheduled EDR Contact: 03/11/2019
Data Release Frequency: Varies

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 06/19/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 87

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2018
Date Data Arrived at EDR: 09/05/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 9

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 12/31/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 08/22/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 44

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/19/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Quarterly

AIRS: Air Emissions Data

Point source emissions inventory data.

Date of Government Version: 07/23/2018
Date Data Arrived at EDR: 07/23/2018
Date Made Active in Reports: 08/07/2018
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8452
Last EDR Contact: 11/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: Annually

COAL ASH: Coal Ash Disposal Site Listing
A listing of coal ash disposal site locations.

Date of Government Version: 06/29/2018
Date Data Arrived at EDR: 07/03/2018
Date Made Active in Reports: 08/07/2018
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

DRYCLEANERS: Registered Drycleaners
A listing of all registered drycleaning facilities.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/30/2018
Date Made Active in Reports: 06/05/2018
Number of Days to Update: 67

Source: Department of Environmental Conservation
Telephone: 518-402-8403
Last EDR Contact: 09/10/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Annually

E DESIGNATION: E DESIGNATION SITE LISTING
The (E (Environmental)) designation would ensure that sampling and remediation take place on the subject properties, and would avoid any significant impacts related to hazardous materials at these locations. The (E) designations would require that the fee owner of the sites conduct a testing and sampling protocol, and remediation where appropriate, to the satisfaction of the NYCDEP before the issuance of a building permit by the Department of Buildings pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements). The (E) designations also include a mandatory construction-related health and safety plan which must be approved by NYCDEP.

Date of Government Version: 08/21/2018
Date Data Arrived at EDR: 09/20/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 22

Source: New York City Department of City Planning
Telephone: 718-595-6658
Last EDR Contact: 09/18/2018
Next Scheduled EDR Contact: 12/31/2018
Data Release Frequency: Semi-Annually

Financial Assurance 1: Financial Assurance Information Listing
Financial assurance information.

Date of Government Version: 12/01/2017
Date Data Arrived at EDR: 01/02/2018
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 29

Source: Department of Environmental Conservation
Telephone: 518-402-8660
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/14/2019
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/29/2017
Date Data Arrived at EDR: 04/06/2018
Date Made Active in Reports: 06/05/2018
Number of Days to Update: 60

Source: Department of Environmental Conservation
Telephone: 518-402-8712
Last EDR Contact: 09/10/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Varies

HSWDS: Hazardous Substance Waste Disposal Site Inventory
The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-Registry sites that U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared. Hazardous Substance Waste Disposal Sites are eligible to be Superfund sites now that the New York State Superfund has been refinanced and changed. This means that the study inventory has served its purpose and will no longer be maintained as a separate entity. The last version of the study inventory is frozen in time. The sites on the study will not automatically be made Superfund sites, rather each site will be further evaluated for listing on the Registry. So overtime they will be added to the registry or not.

Date of Government Version: 01/01/2003
Date Data Arrived at EDR: 10/20/2006
Date Made Active in Reports: 11/30/2006
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 518-402-9564
Last EDR Contact: 05/26/2009
Next Scheduled EDR Contact: 08/24/2009
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/01/2018
Date Data Arrived at EDR: 08/01/2018
Date Made Active in Reports: 08/31/2018
Number of Days to Update: 30

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/31/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Quarterly

SPDES: State Pollutant Discharge Elimination System

New York State has a state program which has been approved by the United States Environmental Protection Agency for the control of wastewater and stormwater discharges in accordance with the Clean Water Act. Under New York State law the program is known as the State Pollutant Discharge Elimination System (SPDES) and is broader in scope than that required by the Clean Water Act in that it controls point source discharges to groundwaters as well as surface waters.

Date of Government Version: 07/18/2018
Date Data Arrived at EDR: 07/31/2018
Date Made Active in Reports: 08/07/2018
Number of Days to Update: 7

Source: Department of Environmental Conservation
Telephone: 518-402-8233
Last EDR Contact: 10/22/2018
Next Scheduled EDR Contact: 02/04/2019
Data Release Frequency: No Update Planned

VAPOR REOPENED: Vapor Intrusion Legacy Site List

New York is currently re-evaluating previous assumptions and decisions regarding the potential for soil vapor intrusion exposures at sites. As a result, all past, current, and future contaminated sites will be evaluated to determine whether these sites have the potential for exposures related to soil vapor intrusion.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 02/15/2018
Date Made Active in Reports: 03/27/2018
Number of Days to Update: 40

Source: Department of Environmenal Conservation
Telephone: 518-402-9814
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: Varies

UIC: Underground Injection Control Wells

A listing of enhanced oil recovery underground injection wells.

Date of Government Version: 09/04/2018
Date Data Arrived at EDR: 09/06/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 36

Source: Department of Environmental Conservation
Telephone: 518-402-8056
Last EDR Contact: 09/06/2018
Next Scheduled EDR Contact: 12/17/2018
Data Release Frequency: Quarterly

COOLING TOWERS: Registered Cooling Towers

This data includes the location of cooling towers registered with New York State. The data is self-reported by owners/property managers of cooling towers in service in New York State. In August 2015, the New York State Department of Health released emergency regulations requiring the owners of cooling towers to register them with New York State.

Date of Government Version: 10/16/2018
Date Data Arrived at EDR: 10/17/2018
Date Made Active in Reports: 11/09/2018
Number of Days to Update: 23

Source: Department of Health
Telephone: 518-402-7650
Last EDR Contact: 10/17/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Conservation in New York.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Conservation in New York.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Environmental Conservation
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

CORTLAND COUNTY:

AST - CORTLAND: Cortland County Storage Tank Listing

A listing of aboveground storage tank sites located in Cortland County.

Date of Government Version: 07/11/2018
Date Data Arrived at EDR: 09/19/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 23

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Quarterly

UST - CORTLAND: Cortland County Storage Tank Listing

A listing of underground storage tank sites located in Cortland County.

Date of Government Version: 07/11/2018
Date Data Arrived at EDR: 09/19/2018
Date Made Active in Reports: 10/12/2018
Number of Days to Update: 23

Source: Cortland County Health Department
Telephone: 607-753-5035
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Quarterly

NASSAU COUNTY:

AST - NASSAU: Registered Tank Database

A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 02/15/2017
Number of Days to Update: 35

Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: No Update Planned

AST NCFM: Storage Tank Database

A listing of aboveground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34

Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

TANKS NASSAU: Registered Tank Database in Nassau County
A listing of facilities in Nassau County with storage tanks.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 02/15/2017
Number of Days to Update: 35
Source: Nassau County Department of Health
Telephone: 516-227-9691
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

UST - NASSAU: Registered Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 02/15/2017
Number of Days to Update: 35
Source: Nassau County Health Department
Telephone: 516-571-3314
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: No Update Planned

UST NCFM: Storage Tank Database
A listing of underground storage tank sites located in Nassau County.

Date of Government Version: 02/15/2011
Date Data Arrived at EDR: 02/23/2011
Date Made Active in Reports: 03/29/2011
Number of Days to Update: 34
Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000
Last EDR Contact: 10/25/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Varies

ROCKLAND COUNTY:

AST - ROCKLAND: Petroleum Bulk Storage Database
A listing of aboveground storage tank sites located in Rockland County. Rockland County?s Petroleum Bulk Storage (PBS) program is no longer in service. All related operations/duties are now wholly overseen by the New York State Dept. of Environmental Conservation (NYSDEC).

Date of Government Version: 02/02/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 09/22/2017
Number of Days to Update: 189
Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: No Update Planned

UST - ROCKLAND: Petroleum Bulk Storage Database
A listing of underground storage tank sites located in Rockland County. Rockland County?s Petroleum Bulk Storage (PBS) program is no longer in service. All related operations/duties are now wholly overseen by the New York State Dept. of Environmental Conservation (NYSDEC).

Date of Government Version: 02/02/2017
Date Data Arrived at EDR: 03/17/2017
Date Made Active in Reports: 09/22/2017
Number of Days to Update: 189
Source: Rockland County Health Department
Telephone: 914-364-2605
Last EDR Contact: 12/03/2018
Next Scheduled EDR Contact: 03/18/2019
Data Release Frequency: No Update Planned

SUFFOLK COUNTY:

AST - SUFFOLK: Storage Tank Database
A listing of aboveground storage tank sites located in Suffolk County.

Date of Government Version: 03/03/2015
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/23/2015
Number of Days to Update: 13
Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: No Update Planned

UST - SUFFOLK: Storage Tank Database
A listing of underground storage tank sites located in Suffolk County.

Date of Government Version: 03/03/2015
Date Data Arrived at EDR: 03/10/2015
Date Made Active in Reports: 03/23/2015
Number of Days to Update: 13

Source: Suffolk County Department of Health Services
Telephone: 631-854-2521
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: No Update Planned

WESTCHESTER COUNTY:

AST - WESTCHESTER: Listing of Storage Tanks
A listing of aboveground storage tank sites located in Westchester County.

Date of Government Version: 07/20/2018
Date Data Arrived at EDR: 08/21/2018
Date Made Active in Reports: 08/30/2018
Number of Days to Update: 9

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Semi-Annually

UST - WESTCHESTER: Listing of Storage Tanks
A listing of underground storage tank sites located in Westchester County.

Date of Government Version: 07/20/2018
Date Data Arrived at EDR: 08/21/2018
Date Made Active in Reports: 08/30/2018
Number of Days to Update: 9

Source: Westchester County Department of Health
Telephone: 914-813-5161
Last EDR Contact: 10/29/2018
Next Scheduled EDR Contact: 02/11/2019
Data Release Frequency: Semi-Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 11/12/2018
Date Data Arrived at EDR: 11/14/2018
Date Made Active in Reports: 12/04/2018
Number of Days to Update: 20

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/14/2018
Next Scheduled EDR Contact: 02/25/2019
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 07/13/2018
Date Made Active in Reports: 08/01/2018
Number of Days to Update: 19

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/09/2018
Next Scheduled EDR Contact: 01/21/2019
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 10/23/2018
Date Made Active in Reports: 11/27/2018
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 11/16/2018
Next Scheduled EDR Contact: 03/04/2019
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 08/23/2018
Date Data Arrived at EDR: 08/23/2018
Date Made Active in Reports: 09/18/2018
Number of Days to Update: 26

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 10/15/2018
Next Scheduled EDR Contact: 01/28/2019
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/06/2018
Next Scheduled EDR Contact: 12/24/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Providers
Source: Department of Health
Telephone: 212-676-2444

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

615 BROADWAY
615 BROADWAY
KINGSTON, NY 12401

TARGET PROPERTY COORDINATES

Latitude (North):	41.929499 - 41° 55' 46.20''
Longitude (West):	74.005292 - 74° 0' 19.05''
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	582472.9
UTM Y (Meters):	4642213.5
Elevation:	180 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5940395 KINGSTON WEST, NY
Version Date:	2013
East Map:	5939749 KINGSTON EAST, NY
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

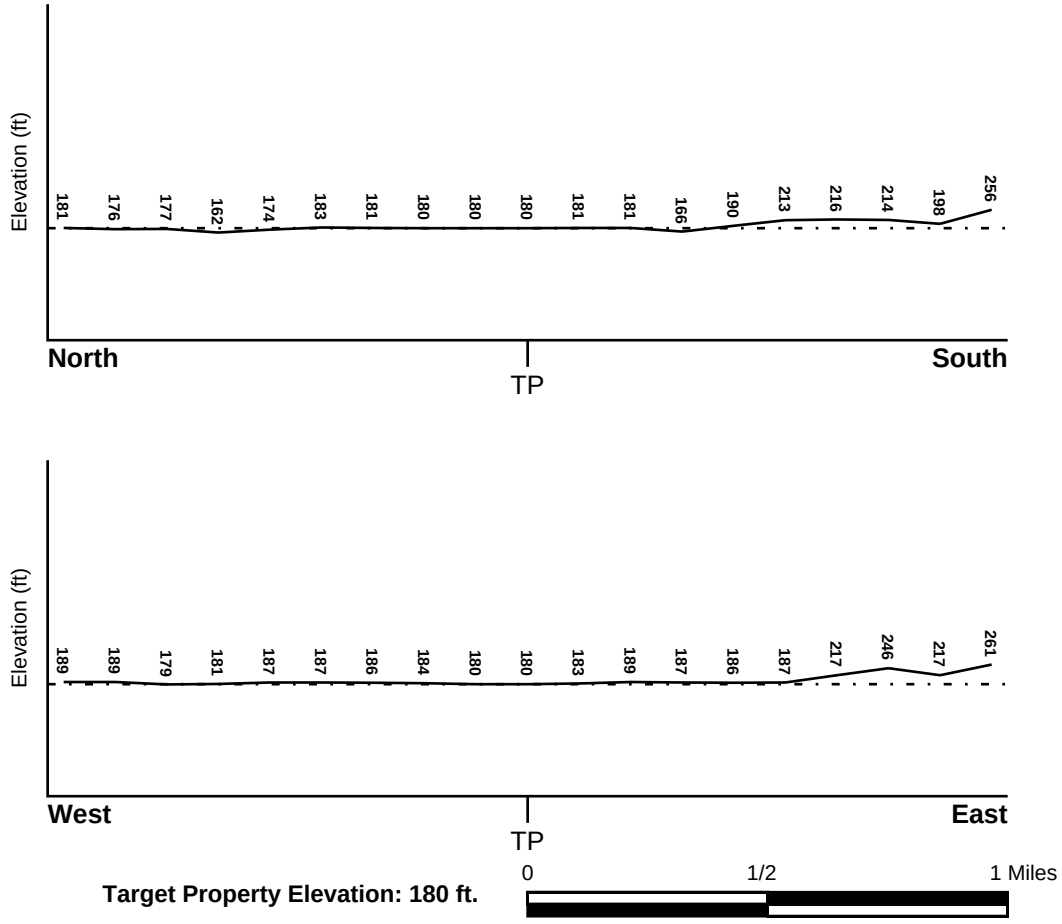
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
36111C0470E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
36111C0460E	FEMA FIRM Flood data
36111C0480E	FEMA FIRM Flood data
36111C0490E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
KINGSTON WEST	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Paleozoic
System:	Silurian
Series:	Silurian
Code:	S *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name: URBAN LAND

Soil Surface Texture: variable

Hydrologic Group: Not reported

Soil Drainage Class: Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 10 inches

Depth to Bedrock Max: > 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam
loam
loamy sand
silt loam
sand

Surficial Soil Types: fine sandy loam
loam
loamy sand
silt loam
sand

Shallow Soil Types: silt loam

Deeper Soil Types: sandy loam
gravelly - coarse sand
coarse sand

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
2	USGS40000848661	1/2 - 1 Mile West

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

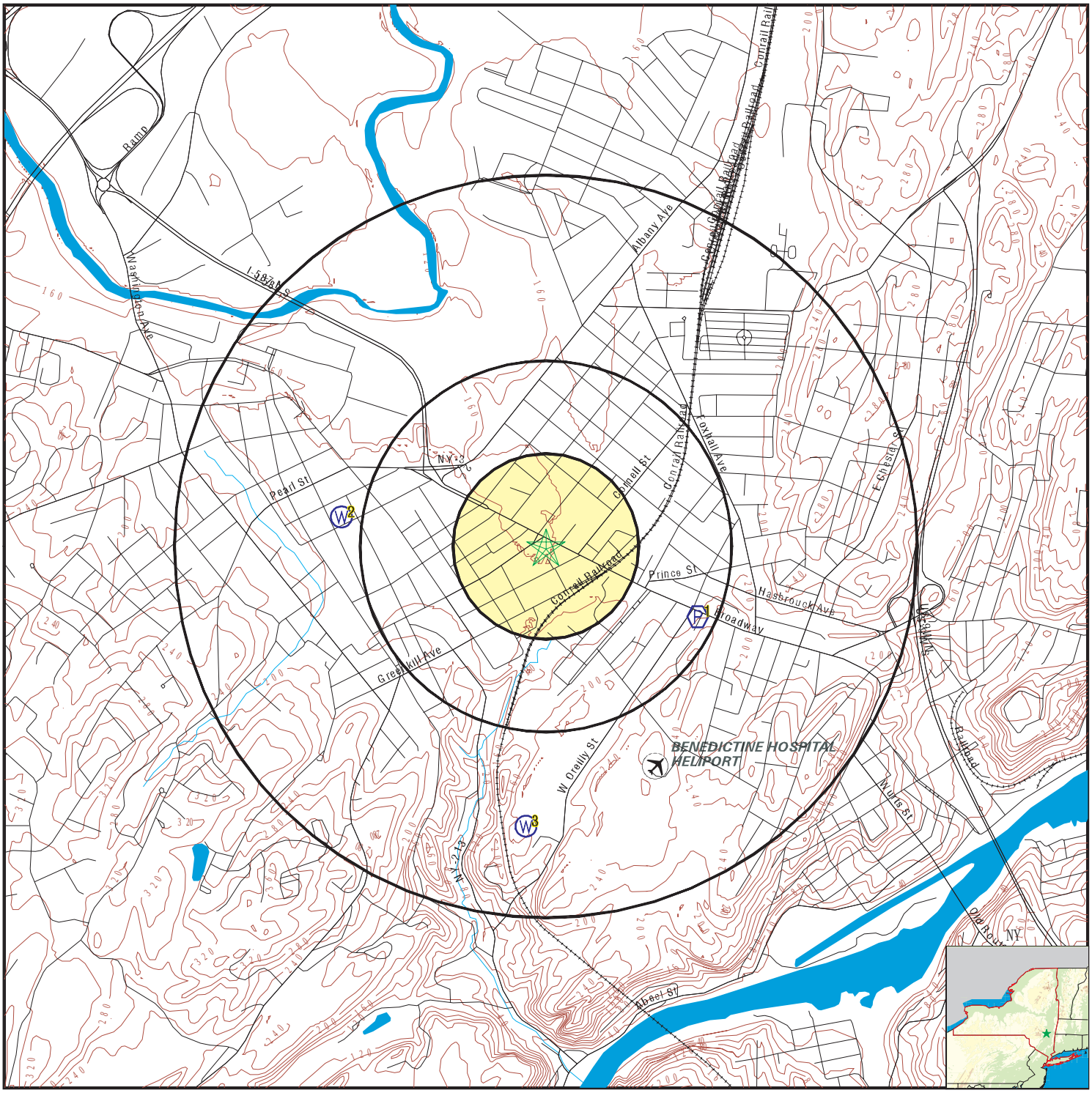
MAP ID	WELL ID	LOCATION FROM TP
1	NY0007219	1/4 - 1/2 Mile ESE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
3	NYWS30000021478	1/2 - 1 Mile South

PHYSICAL SETTING SOURCE MAP - 5504885.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	609 Broadway	CLIENT:	Weston & Sampson
ADDRESS:	609 Broadway Kingston NY 12401	CONTACT:	Rachelle Mcknight
		INQUIRY #:	5504885.2s
LAT/LONG:	41.929499 / 74.005292	DATE:	December 06, 2018 3:01 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
ESE
1/4 - 1/2 Mile
Higher

FRDS PWS **NY0007219**

PWS ID:	NY0007219	PWS type:	System Owner/Responsible Party
PWS name:	BHITIYAKULS SOMSAK A	PWS address:	3 SCUDDER AVE
PWS address:	BEAVER LAKE	PWS city:	KINGSTON
PWS state:	NY	PWS zip:	12401
PWS ID:	NY0007219	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00000035	System name:	BHITYAKULS BEAVER LAKE HOUSE
System address:	Not Reported	System address:	BRAVER LAKE ROAD
System city:	OLIVEBRIDGE	System state:	NY
System zip:	12461		
County FIPS:	055	City served:	OLIVE
Latitude:	415536	Longitude:	0735952

2
West
1/2 - 1 Mile
Higher

FED USGS **USGS40000848661**

Organization ID:	USGS-NY	Organization Name:	USGS New York Water Science Center
Monitor Location:	U1209	Type:	Well
Description:	Not Reported	HUC:	02020006
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Conneaut Group
Aquifer Type:	Not Reported	Construction Date:	1941
Well Depth:	40	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

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3
South
1/2 - 1 Mile
Higher

NY WELLS **NYWS30000021478**

DEC Well #:	U5232	Location Description:	N/A
Well Depth (ft):	373	Bedrock Depth (ft):	1
Groundwater Depth (ft):	Not Reported	Casing Depth(ft):	48.5
Screened Well:	N	Avg Dischg Rate (g/m):	60
Driller Registration #:	NYRD10178		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: NY Radon

Radon Test Results

County	Town	Num Tests	Avg Result	Geo Mean	Max Result
ULSTER	DENNING	6	13.02	6.92	45.4
ULSTER	ESOPUS	50	3.52	2.41	15.6
ULSTER	GARDINER	48	4.3	2.76	24.6
ULSTER	HARDENBURGH	3	3.33	2.22	7.6
ULSTER	HURLEY	75	5.05	3.41	30.2
ULSTER	KINGSTON	229	4.09	2.88	21.6
ULSTER	LLOYD	96	5.7	3.31	38.1
ULSTER	MARBLETOWN	65	5.96	3.15	99.5
ULSTER	MARLBOROUGH	44	5.41	3.79	17.1
ULSTER	NEW PALTZ	132	4.18	2.75	44.3
ULSTER	OLIVE	45	5.09	3.37	27.6
ULSTER	PLATTEKILL	29	3.23	2.15	14
ULSTER	ROCHESTER	38	4.27	2.63	21.3
ULSTER	ROSENDALE	39	3.08	2.3	10.3
ULSTER	SAUGERTIES	169	7.41	2.59	175.7
ULSTER	SHANDAKEN	13	6.82	3.71	24.2
ULSTER	SHAWANGUNK	82	7.22	3.78	56.1
ULSTER	ULSTER	52	3.44	2.48	11.4
ULSTER	WAWARSING	48	4.8	2.63	31.2
ULSTER	WOODSTOCK	105	5.12	2.71	114.3

Federal EPA Radon Zone for ULSTER County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for ULSTER COUNTY, NY

Number of sites tested: 95

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	1.190 pCi/L	95%	4%	1%
Basement	2.610 pCi/L	68%	29%	2%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Freshwater Wetlands
Source: Department of Environmental Conservation
Telephone: 518-402-8961

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

New York Public Water Wells
Source: New York Department of Health
Telephone: 518-458-6731

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Database
Department of Environmental Conservation
Telephone: 518-402-8072
These files contain records, in the database, of wells that have been drilled.

RADON

State Database: NY Radon
Source: Department of Health
Telephone: 518-402-7556
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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615 Broadway
615 Broadway
Kingston, NY 12401

Inquiry Number: 5504885.2s
February 4, 2019

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by EDR. The report was designed to assist parties seeking to meet the search requirements of the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

STANDARD ENVIRONMENTAL RECORDS	Default Area of Concern (Miles)*	property	1/10	> 1/10
Federal NPL site list	1.0	0	0	0
Federal Delisted NPL site list	1.0	0	0	0
Federal CERCLIS list	0.5	0	0	0
Federal CERCLIS NFRAP site list	0.5	0	0	0
Federal RCRA CORRACTS facilities list	1.0	0	0	0
Federal RCRA non-CORRACTS TSD facilities list	0.5	0	0	0
Federal RCRA generators list	0.25	0	0	0
Federal institutional controls / engineering controls registries	0.5	0	0	0
Federal ERNS list	property	0	-	-
State- and tribal - equivalent NPL	not searched	-	-	-
State- and tribal - equivalent CERCLIS	1.0	0	1	0
State and tribal landfill and/or solid waste disposal site lists	0.5	0	0	0
State and tribal leaking storage tank lists	0.5	0	2	0
State and tribal registered storage tank lists	0.5	0	0	0
State and tribal institutional control / engineering control registries	0.5	0	0	0
State and tribal voluntary cleanup sites	0.5	0	0	0
State and tribal Brownfields sites	0.5	0	0	0

ADDITIONAL ENVIRONMENTAL RECORDS				
Local Brownfield lists	0.5	0	0	0
Local Lists of Landfill / Solid Waste Disposal Sites	0.5	0	0	0
Local Lists of Hazardous waste / Contaminated Sites	1.0	0	0	0
Local Lists of Registered Storage Tanks	0.25	0	0	0
Local Land Records	property	0	-	-
Records of Emergency Release Reports	0.125	0	1	0
Other Ascertainable Records	1.0	0	0	0

EDR HIGH RISK HISTORICAL RECORDS				
EDR Exclusive Records	1.0	0	5	0
Exclusive Recovered Govt. Archives	property	0	-	-

EXECUTIVE SUMMARY

EDR RECOVERED GOVERNMENT ARCHIVES

EDR Exclusive Records	1.0	0	5	0
Exclusive Recovered Govt. Archives	property	0	-	-

*The Default Area of Concern may be adjusted by the environmental professional using experience and professional judgement. Each category may include several databases, and each database may have a different distance. A list of individual databases is provided at the back of this report.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

615 BROADWAY
615 BROADWAY
KINGSTON, NY 12401

COORDINATES

Latitude (North):	41.929499 - 41° 55′ 46.202087″
Longitude (West):	74.005292 - 74° 0′ 19.06128″
Elevation:	180 ft. above sea level

EXECUTIVE SUMMARY

SEARCH RESULTS

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
BOB PERRYS SERVICE STATION NY Spills: SPILLS LTANKS: LTANKS	625 BROADWAY	<1/10 W	▲ A3	8
CITY OF KINGSTON FIELD COURT LTANKS: LTANKS	10 FIELD COURT	<1/10 ENE	▲ C5	9
25 FIELD COURT SHWS: SHWS	25 FIELD COURT	<1/10 NE	▲ 7	10

ADDITIONAL ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
BOB PERRYS SERVICE STATION NY Spills: SPILLS LTANKS: LTANKS	625 BROADWAY	<1/10 W	▲ A3	8

EDR HIGH RISK HISTORICAL RECORDS

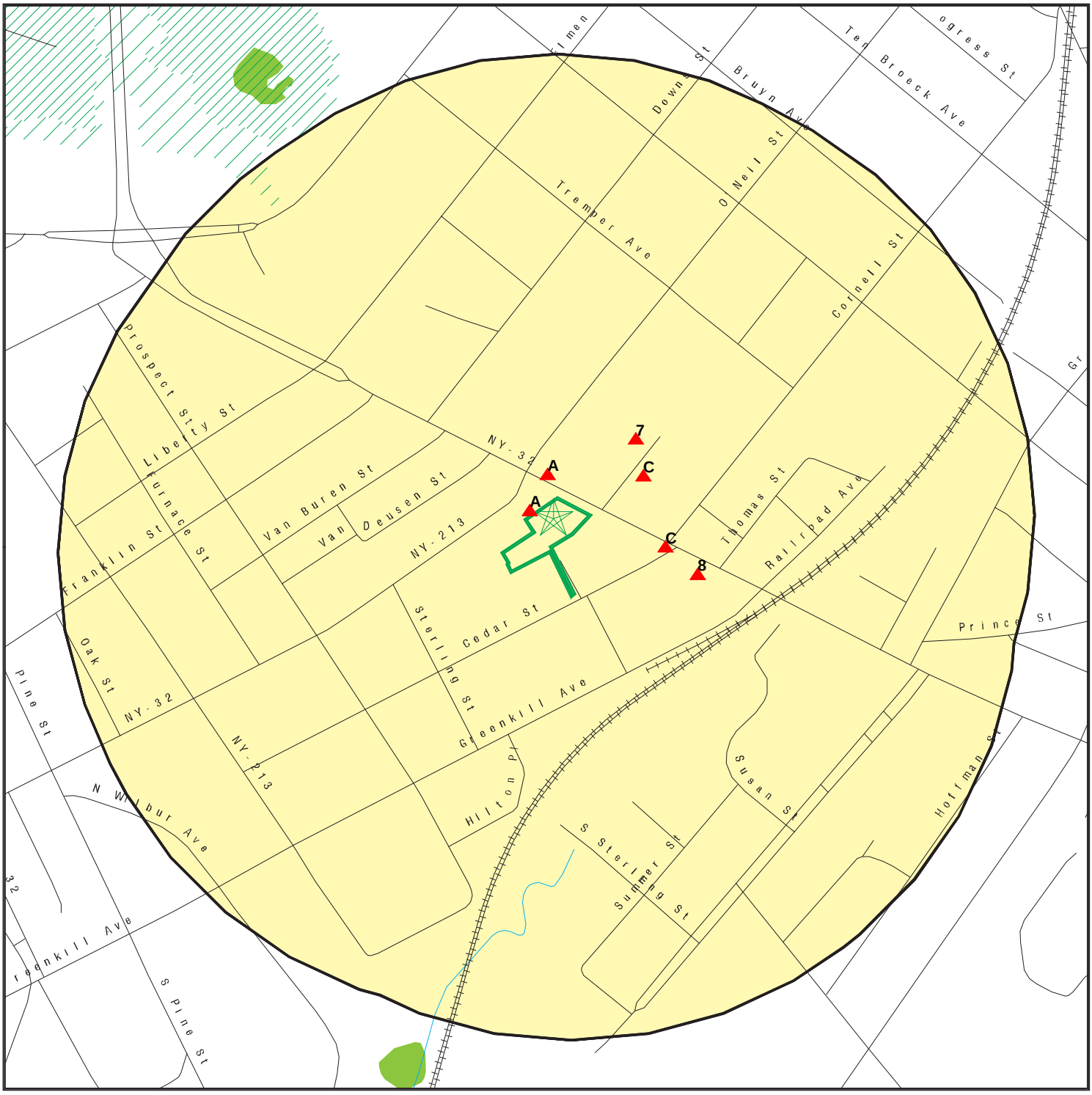
Name	Address	Dist/Dir	Map ID	Page
THOMPSON HARVEY L EDR Hist Auto: EDR Hist Auto	625 BROADWAY	<1/10 W	▲ A1	8
AMERICAN CLEANERS & DYERS CO EDR Hist Cleaner: EDR Hist Cleaner	625 BROADWAY	<1/10 W	▲ A2	8
AMERICAN CLEANERS & DYERS CO EDR Hist Cleaner: EDR Hist Cleaner	624 BROADWAY	<1/10 N	▲ A4	9
ECKERT WALTER EDR Hist Auto: EDR Hist Auto	3 CEDAR	<1/10 ESE	▲ C6	9
GUARANTEE AUTO RADIATOR WORKS EDR Hist Auto: EDR Hist Auto	571-575 BROADWAY	<1/10 ESE	▲ 8	10

EDR RECOVERED GOVERNMENT ARCHIVES

Name	Address	Dist/Dir	Map ID	Page

Not Reported

PRIMARY MAP - 5504885.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 300 1/3 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	609 Broadway	CLIENT:	Weston & Sampson
ADDRESS:	609 Broadway Kingston NY 12401	CONTACT:	Rachelle Mcknight
		INQUIRY #:	5504885.2s
LAT/LONG:	41.929499 / 74.005292	DATE:	December 06, 2018 3:00 pm

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SECONDARY MAP - 5504885.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 609 Broadway ADDRESS: 609 Broadway Kingston NY 12401 LAT/LONG: 41.929499 / 74.005292	CLIENT: Weston & Sampson CONTACT: Rachelle Mcknight INQUIRY #: 5504885.2s DATE: December 06, 2018 2:59 pm

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MAP FINDINGS

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**		EDR SITE ID NUMBER
◆ **MAP ID#**	Direction Distance Range (Distance feet / miles) Relative Elevation Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:
Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

THOMPSON HARVEY L 625 BROADWAY, KINGSTON, NY, 12401			1020888419
▲ A1	W <1/10	(16 ft. / 0.003 mi.)	EDR Exclusive Records
	Equal Elevation	180 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Exists
Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

AMERICAN CLEANERS & DYERS CO 625 BROADWAY, KINGSTON, NY, 12401			1019927394
▲ A2	W <1/10	(16 ft. / 0.003 mi.)	EDR Exclusive Records
	Equal Elevation	180 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Exists
Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

BOB PERRYS SERVICE STATION 625 BROADWAY, KINGSTON, NY, 12401			S110769436
▲ A3	W <1/10	(16 ft. / 0.003 mi.)	State and tribal leaking storage tank lists Records of Emergency Release Reports
	Equal Elevation	180 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Exists
Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

AMERICAN CLEANERS & DYERS CO 624 BROADWAY, KINGSTON, NY, 12401			1019927393
▲ A4	N <1/10	(96 ft. / 0.018 mi.)	EDR Exclusive Records
	Equal Elevation	180 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC does not exist
Groundwater Flow Gradient:

Downgradient: YES

Topographically: YES

CITY OF KINGSTON FIELD COURT 10 FIELD COURT, KINGSTON, NY,			S106972522
▲ C5	ENE <1/10	(258 ft. / 0.049 mi.)	State and tribal leaking storage tank lists
	2 ft. Higher Elevation	182 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Exists
Conditions:

Chemicals of Concern: YES

Groundwater Flow Gradient:

Topographically: YES

Crossgradient: YES

ECKERT WALTER 3 CEDAR, KINGSTON, NY, 12401			1020316505
▲ C6	ESE <1/10	(326 ft. / 0.062 mi.)	EDR Exclusive Records
	2 ft. Higher Elevation	182 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Exists
Conditions:

Both COC & PHC: YES

Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

Topographically: YES

25 FIELD COURT 25 FIELD COURT, KINGSTON, NY, 12401			S121933863
▲ 7	NE <1/10	(347 ft. / 0.066 mi.)	State- and tribal - equivalent CERCLIS
	1 ft. Higher Elevation	181 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Exists
Conditions:

Chemicals of Concern: YES
Groundwater Flow Gradient:

Topographically: YES

Crossgradient: YES

GUARANTEE AUTO RADIATOR WORKS 571-575 BROADWAY, KINGSTON, NY, 12401			1020903161
▲ 8	ESE <1/10	(489 ft. / 0.093 mi.)	EDR Exclusive Records
	3 ft. Higher Elevation	183 ft. Above Sea Level	

Worksheet:

Impact on Target Property: VEC Exists
Conditions:

Chemicals of Concern: YES
Groundwater Flow Gradient:

Upgradient or Indeterminate: YES

Topographically: YES

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
ENVIRONMENTAL RECORDS						
Federal NPL site list						
US	NPL	National Priority List	EPA	08/13/2018	10/04/2018	11/09/2018
US	Proposed NPL	Proposed National Priority List Sites	EPA	08/13/2018	10/04/2018	11/09/2018
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
Federal CERCLIS list						
US	SEMS	Superfund Enterprise Management System	EPA	08/13/2018	10/04/2018	11/16/2018
Federal RCRA CORRACTS facilities list						
US	CORRACTS	Corrective Action Report	EPA	03/01/2018	03/28/2018	06/22/2018
Federal RCRA TSD facilities list						
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
Federal RCRA generators list						
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
US	RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generators	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
Federal institutional controls / engineering controls registries						
US	LUCIS	Land Use Control Information System	Department of the Navy	05/14/2018	05/18/2018	07/20/2018
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	07/31/2018	08/28/2018	09/14/2018
US	US INST CONTROL	Sites with Institutional Controls	Environmental Protection Agency	07/31/2018	08/28/2018	09/14/2018
Federal ERNS list						
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	09/24/2018	09/25/2018	11/09/2018
State and tribal - equivalent CERCLIS						
NY	SHWS	Inactive Hazardous Waste Disposal Sites in New York State	Department of Environmental Conservation	08/09/2018	08/10/2018	08/30/2018
State and tribal landfill / solid waste disposal						
NY	SWF/LF	Facility Register	Department of Environmental Conservation	09/30/2018	10/03/2018	11/07/2018
State and tribal leaking storage tank lists						
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	04/25/2018	05/18/2018	07/20/2018
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	04/24/2018	05/18/2018	07/20/2018
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	04/12/2018	05/18/2018	07/20/2018
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	04/01/2018	05/18/2018	07/20/2018
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	04/12/2018	05/18/2018	07/20/2018
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	04/13/2018	05/18/2018	07/20/2018
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	05/08/2018	05/18/2018	07/20/2018
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	04/10/2018	05/18/2018	07/20/2018
NY	LTANKS	Spills Information Database	Department of Environmental Conservation	10/16/2018	10/16/2018	10/22/2018
NY	HIST LTANKS	Listing of Leaking Storage Tanks	Department of Environmental Conservation	01/01/2002	07/08/2005	07/14/2005

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
State and tribal registered storage tank lists						
NY	TANKS	Storage Tank Faciliy Listing	Department of Environmental Conservation	09/25/2018	09/26/2018	10/12/2018
NY	UST	Petroleum Bulk Storage (PBS) Database	Department of Environmental Conservation	09/25/2018	09/26/2018	10/12/2018
NY	CBS UST	Chemical Bulk Storage Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	MOSF UST	Major Oil Storage Facilities Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	AST	Petroleum Bulk Storage	Department of Environmental Conservation	09/25/2018	09/26/2018	10/12/2018
NY	CBS AST	Chemical Bulk Storage Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	MOSF AST	Major Oil Storage Facilities Database	NYSDEC	01/01/2002	02/20/2002	03/22/2002
NY	CBS	Chemical Bulk Storage Site Listing	Department of Environmental Conservation	09/25/2018	09/26/2018	10/12/2018
NY	MOSF	Major Oil Storage Facility Site Listing	Department of Environmental Conservation	09/25/2018	09/26/2018	10/12/2018
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	04/12/2018	05/18/2018	07/20/2018
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	04/10/2018	05/18/2018	07/20/2018
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	04/25/2018	05/18/2018	07/20/2018
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	04/24/2018	05/18/2018	07/20/2018
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	04/01/2018	05/18/2018	07/20/2018
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	04/12/2018	05/18/2018	07/20/2018
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	05/08/2018	05/18/2018	07/20/2018
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	04/13/2018	05/18/2018	07/20/2018
US	FEMA UST	Underground Storage Tank Listing	FEMA	05/15/2017	05/30/2017	10/13/2017
State and tribal institutional control / engineering control registries						
NY	RES DECL	Restrictive Declarations Listing	NYC Department of City Planning	11/18/2010	06/30/2014	07/21/2014
NY	ENV RES DECL	Environmental Restrictive Declarations	New York City Department of City Planning	05/15/2018	06/26/2018	08/07/2018
NY	ENG CONTROLS	Registry of Engineering Controls	Department of Environmental Conservation	08/09/2018	08/10/2018	08/31/2018
NY	INST CONTROL	Registry of Institutional Controls	Department of Environmental Conservation	08/09/2018	08/10/2018	08/31/2018
State and tribal voluntary cleanup sites						
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	07/27/2015	09/29/2015	02/18/2016
NY	VCP NYC	Voluntary Cleanup Program Listing NYC	New York City Office of Environmental Protect	03/26/2018	03/29/2018	05/14/2018
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
NY	VCP	Voluntary Cleanup Agreements	Department of Environmental Conservation	08/09/2018	08/10/2018	08/31/2018
State and tribal Brownfields sites						
NY	BROWNFIELDS	Brownfields Site List	Department of Environmental Conservation	08/09/2018	08/10/2018	08/30/2018
NY	ERP	Environmental Restoration Program Listing	Department of Environmental Conservation	08/09/2018	08/10/2018	08/31/2018
Other Records						
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	06/30/2018	07/17/2018	10/05/2018
US	ROD	Records Of Decision	EPA	08/13/2018	10/04/2018	11/16/2018
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	08/13/2018	10/04/2018	11/16/2018
NY	DEL SHWS	Delisted Registry Sites	Department of Environmental Conservation	08/09/2018	08/10/2018	08/31/2018
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
NY	SWRCY	Registered Recycling Facility List	Department of Environmental Conservation	09/30/2018	10/03/2018	11/07/2018
NY	SWTIRE	Registered Waste Tire Storage & Facility List	Department of Environmental Conservation	02/27/2018	04/06/2018	06/08/2018
NY	HIST UST	Historical Petroleum Bulk Storage Database	Department of Environmental Conservation	01/01/2002	06/02/2006	07/20/2006
NY	HIST AST	Historical Petroleum Bulk Storage Database	Department of Environmental Conservation	01/01/2002	06/02/2006	07/20/2006

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	US AIRS MINOR	Air Facility System Data	EPA	10/12/2016	10/26/2016	02/03/2017
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	08/31/2018	09/25/2018	11/09/2018
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	FUSRAP	Formerly Utilized Sites Remedial Action Program	Department of Energy	08/08/2017	09/11/2018	09/14/2018
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	05/24/2017	11/30/2017	12/15/2017
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	09/30/2017	05/08/2018	07/20/2018
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	08/13/2018	10/04/2018	11/16/2018
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	09/21/2018	09/21/2018	11/09/2018
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	01/01/2017	02/03/2017	04/07/2017
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	07/01/2014	09/10/2014	10/20/2014
US	COAL ASH DOE	Steam-Electric Plant Operation Data	Department of Energy	12/31/2005	08/07/2009	10/22/2009
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (	EPA	10/12/2016	10/26/2016	02/03/2017
US	Delisted NPL	National Priority List Deletions	EPA	08/13/2018	10/04/2018	11/09/2018
US	SEMS-ARCHIVE	Superfund Enterprise Management System Archive	EPA	08/13/2018	10/04/2018	11/16/2018
US	RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated	Environmental Protection Agency	03/01/2018	03/28/2018	06/22/2018
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	03/26/2018	03/27/2018	06/08/2018
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	07/31/2012	08/07/2012	09/18/2012
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	09/21/2018	09/21/2018	11/09/2018
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	09/18/2018	09/18/2018	11/09/2018
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	12/31/2005	02/06/2006	01/11/2007
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	01/31/2015	07/08/2015	10/13/2015
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	06/23/2017	10/11/2017	11/03/2017
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	08/01/2018	08/29/2018	10/05/2018
US	US MINES 2	Ferrous and Nonferrous Metal Mines Database Listing	USGS	12/05/2005	02/29/2008	04/18/2008
US	US MINES 3	Active Mines & Mineral Plants Database Listing	USGS	04/14/2011	06/08/2011	09/13/2011
US	PRP	Potentially Responsible Parties	EPA	08/13/2018	10/04/2018	11/09/2018
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2016	01/10/2018	01/12/2018
US	TSCA	Toxic Substances Control Act	EPA	12/31/2016	06/21/2017	01/05/2018
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	SSTS	Section 7 Tracking Systems	EPA	12/31/2009	12/10/2010	02/25/2011
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	11/18/2016	11/23/2016	02/10/2017
US	PADS	PCB Activity Database System	EPA	06/01/2017	06/09/2017	10/13/2017
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	08/30/2016	09/08/2016	10/21/2016
US	RADINFO	Radiation Information Database	Environmental Protection Agency	10/02/2018	10/03/2018	11/09/2018
US	FINDS	Facility Index System/Facility Registry System	EPA	08/07/2018	09/05/2018	10/05/2018
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RMP	Risk Management Plans	Environmental Protection Agency	08/01/2018	08/22/2018	10/05/2018
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2015	02/22/2017	09/28/2017
US	PWS	Public Water System Data	EPA	12/17/2013	01/09/2014	10/15/2014
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2014	07/14/2015	01/10/2017
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
NY	AIRS	Air Emissions Data	Department of Environmental Conservation	07/23/2018	07/23/2018	08/07/2018
NY	COAL ASH	Coal Ash Disposal Site Listing	Department of Environmental Conservation	06/29/2018	07/03/2018	08/07/2018
NY	DRYCLEANERS	Registered Drycleaners	Department of Environmental Conservation	03/07/2018	03/30/2018	06/05/2018
NY	E DESIGNATION	E DESIGNATION SITE LISTING	New York City Department of City Planning	08/21/2018	09/20/2018	10/12/2018
NY	Financial Assurance 1	Financial Assurance Information Listing	Department of Environmental Conservation	12/01/2017	01/02/2018	01/31/2018
NY	Financial Assurance 2	Financial Assurance Information Listing	Department of Environmental Conservation	12/29/2017	04/06/2018	06/05/2018
NY	HIST SPILLS	SPILLS Database	Department of Environmental Conservation	01/01/2002	07/08/2005	07/14/2005
NY	HSWDS	Hazardous Substance Waste Disposal Site Inventory	Department of Environmental Conservation	01/01/2003	10/20/2006	11/30/2006
NY	LIENS	Spill Liens Information	Office of the State Comptroller	08/08/2018	08/09/2018	08/31/2018
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	07/01/2018	08/01/2018	08/31/2018
NY	SPDES	State Pollutant Discharge Elimination System	Department of Environmental Conservation	07/18/2018	07/31/2018	08/07/2018
NY	SPILLS	Spills Information Database	Department of Environmental Conservation	10/16/2018	10/16/2018	10/22/2018
NY	SPILLS 80	SPILLS80 data from FirstSearch	FirstSearch	11/02/2010	01/03/2013	03/07/2013
NY	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	12/14/2012	01/03/2013	02/12/2013
NY	UIC	Underground Injection Control Wells	Department of Environmental Conservation	09/04/2018	09/06/2018	10/12/2018
NY	VAPOR REOPENED	Vapor Intrusion Legacy Site List	Department of Environmenal Conservation	01/01/2018	02/15/2018	03/27/2018
US	IHS OPEN DUMPS	Open Dumps on Indian Land	Department of Health & Human Serivces, Indian	04/01/2014	08/06/2014	01/29/2015
US	UXO	Unexploded Ordnance Sites	Department of Defense	09/30/2017	06/19/2018	09/14/2018
US	FUELS PROGRAM	EPA Fuels Program Registered Listing	EPA	08/22/2018	08/22/2018	10/05/2018
US	ABANDONED MINES	Abandoned Mines	Department of Interior	09/10/2018	09/11/2018	09/14/2018
US	DOCKET HWC	Hazardous Waste Compliance Docket Listing	Environmental Protection Agency	05/31/2018	07/26/2018	10/05/2018
US	ECHO	Enforcement & Compliance History Information	Environmental Protection Agency	09/02/2018	09/05/2018	09/14/2018
HISTORICAL USE RECORDS						
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR Hist Auto	EDR Exclusive Historical Auto Stations	EDR, Inc.			
US	EDR Hist Cleaner	EDR Exclusive Historical Cleaners	EDR, Inc.			
NY	RGA HWS	Recovered Government Archive State Hazardous Waste Facilitie	Department of Environmental Conservation		07/01/2013	12/30/2013
NY	RGA LF	Recovered Government Archive Solid Waste Facilities List	Department of Environmental Conservation		07/01/2013	01/10/2014
COUNTY RECORDS						
NY	AST - CORTLAND	Cortland County Storage Tank Listing	Cortland County Health Department	07/11/2018	09/19/2018	10/12/2018
NY	UST - CORTLAND	Cortland County Storage Tank Listing	Cortland County Health Department	07/11/2018	09/19/2018	10/12/2018
NY	AST - NASSAU	Registered Tank Database	Nassau County Health Department	01/09/2017	01/11/2017	02/15/2017
NY	AST NCFM	Storage Tank Database	Nassau County Office of the Fire Marshal	02/15/2011	02/23/2011	03/29/2011
NY	TANKS NASSAU	Registered Tank Database in Nassau County	Nassau County Department of Health	01/09/2017	01/11/2017	02/15/2017
NY	UST - NASSAU	Registered Tank Database	Nassau County Health Department	01/09/2017	01/11/2017	02/15/2017
NY	UST NCFM	Storage Tank Database	Nassau County Office of the Fire Marshal	02/15/2011	02/23/2011	03/29/2011
NY	AST - ROCKLAND	Petroleum Bulk Storage Database	Rockland County Health Department	02/02/2017	03/17/2017	09/22/2017
NY	UST - ROCKLAND	Petroleum Bulk Storage Database	Rockland County Health Department	02/02/2017	03/17/2017	09/22/2017
NY	AST - SUFFOLK	Storage Tank Database	Suffolk County Department of Health Services	03/03/2015	03/10/2015	03/23/2015
NY	UST - SUFFOLK	Storage Tank Database	Suffolk County Department of Health Services	03/03/2015	03/10/2015	03/23/2015
NY	AST - WESTCHESTER	Listing of Storage Tanks	Westchester County Department of Health	07/20/2018	08/21/2018	08/30/2018
NY	UST - WESTCHESTER	Listing of Storage Tanks	Westchester County Department of Health	07/20/2018	08/21/2018	08/30/2018

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date

STREET AND ADDRESS INFORMATION

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Appendix D:

Sanborn Fire Insurance Maps

615 Broadway

615 Broadway

Kingston, NY 12401

Inquiry Number: 5504885.3

December 06, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/06/18

Site Name:

615 Broadway
615 Broadway
Kingston, NY 12401
EDR Inquiry # 5504885.3

Client Name:

Weston & Sampson
1 Winners Circle, Suite 130
Albany, NY 12205
Contact: Rachelle Mcknight

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Certified Sanborn Results:

Certification # 2B3D-4FDC-B646

PO # N2180061

Project 609 Broadway

Maps Provided:

1987
1984
1972
1957
1950
1899
1887

Sanborn® Library search results

Certification #: 2B3D-4FDC-B646

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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Sanborn Sheet Key

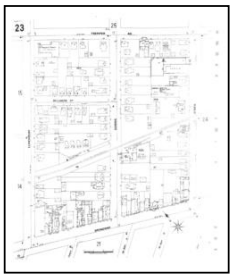
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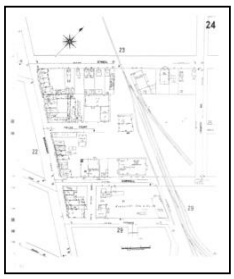

Volume 1, Sheet 24
1987

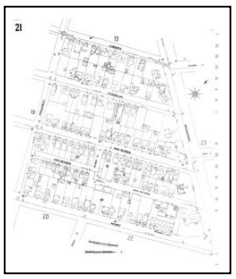

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1987


Volume 1, Sheet 22
1987

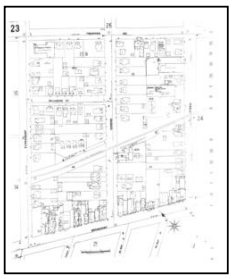

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1987

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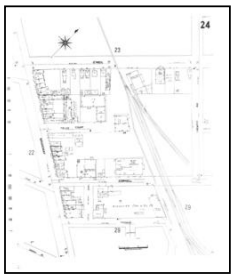

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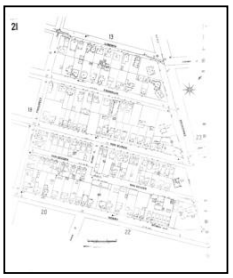

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1984


Volume 1, Sheet 22
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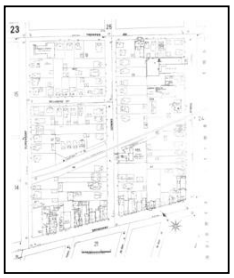

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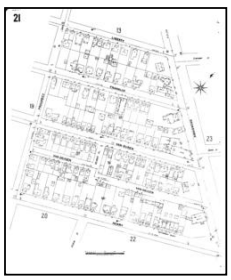

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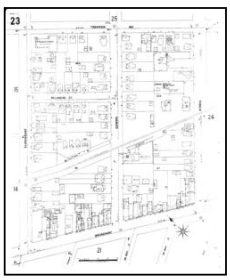

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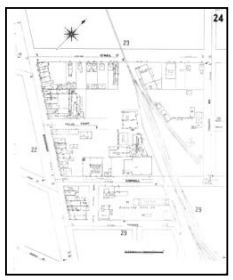

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1957 Source Sheets


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Volume 1, Sheet 22
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Volume 1, Sheet 23
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1957

Sanborn Sheet Key

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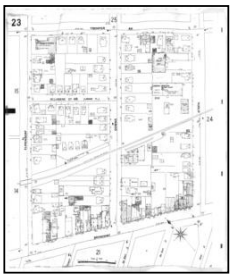
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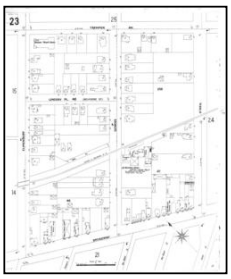


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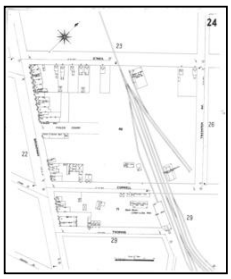
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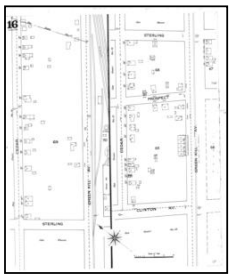


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1899



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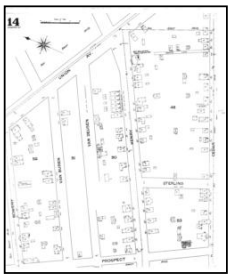
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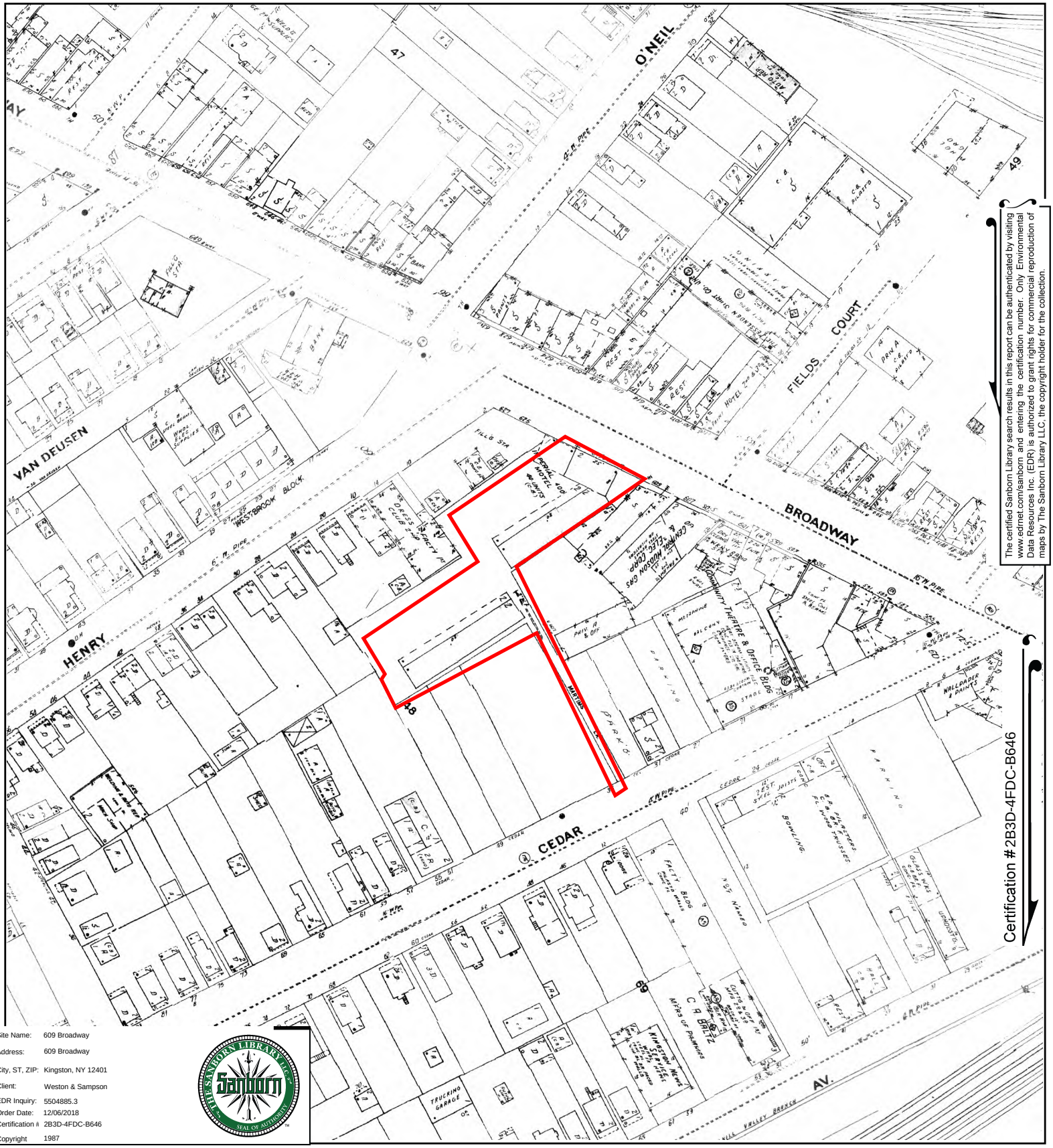
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1887



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1887



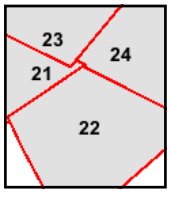
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Certification #2B3D-4FDC-B646

Site Name:	609 Broadway
Address:	609 Broadway
City, ST, ZIP:	Kingston, NY 12401
Client:	Weston & Sampson
EDR Inquiry:	5504885.3
Order Date:	12/06/2018
Certification #:	2B3D-4FDC-B646
Copyright	1987

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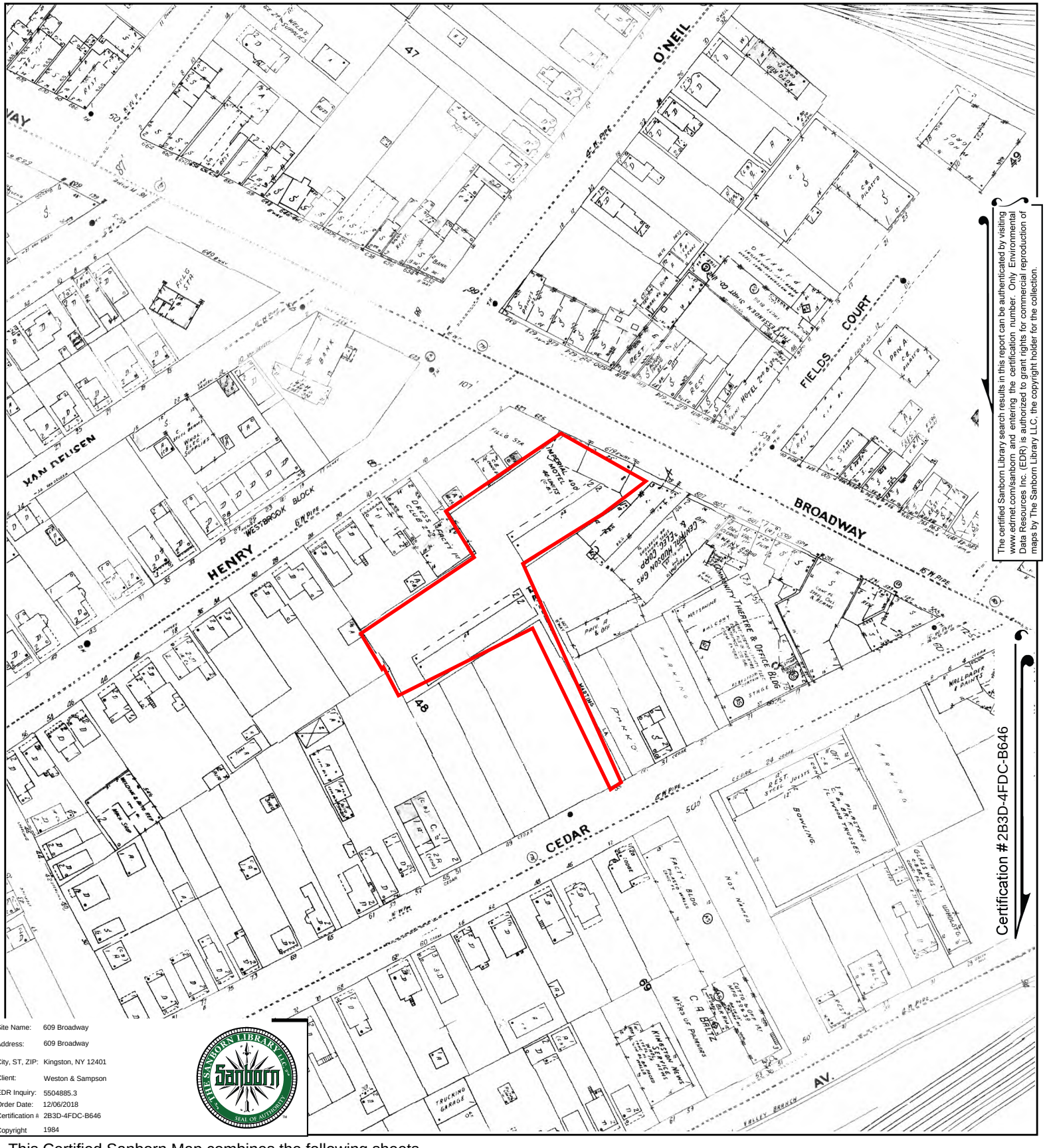




Volume 1, Sheet 23
Volume 1, Sheet 22
Volume 1, Sheet 21
Volume 1, Sheet 24

0 Feet 150 300 600

N



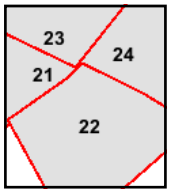
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Client:	Weston & Sampson
EDR Inquiry:	5504885.3
Order Date:	12/06/2018
Certification #	2B3D-4FDC-B646
Copyright	1984

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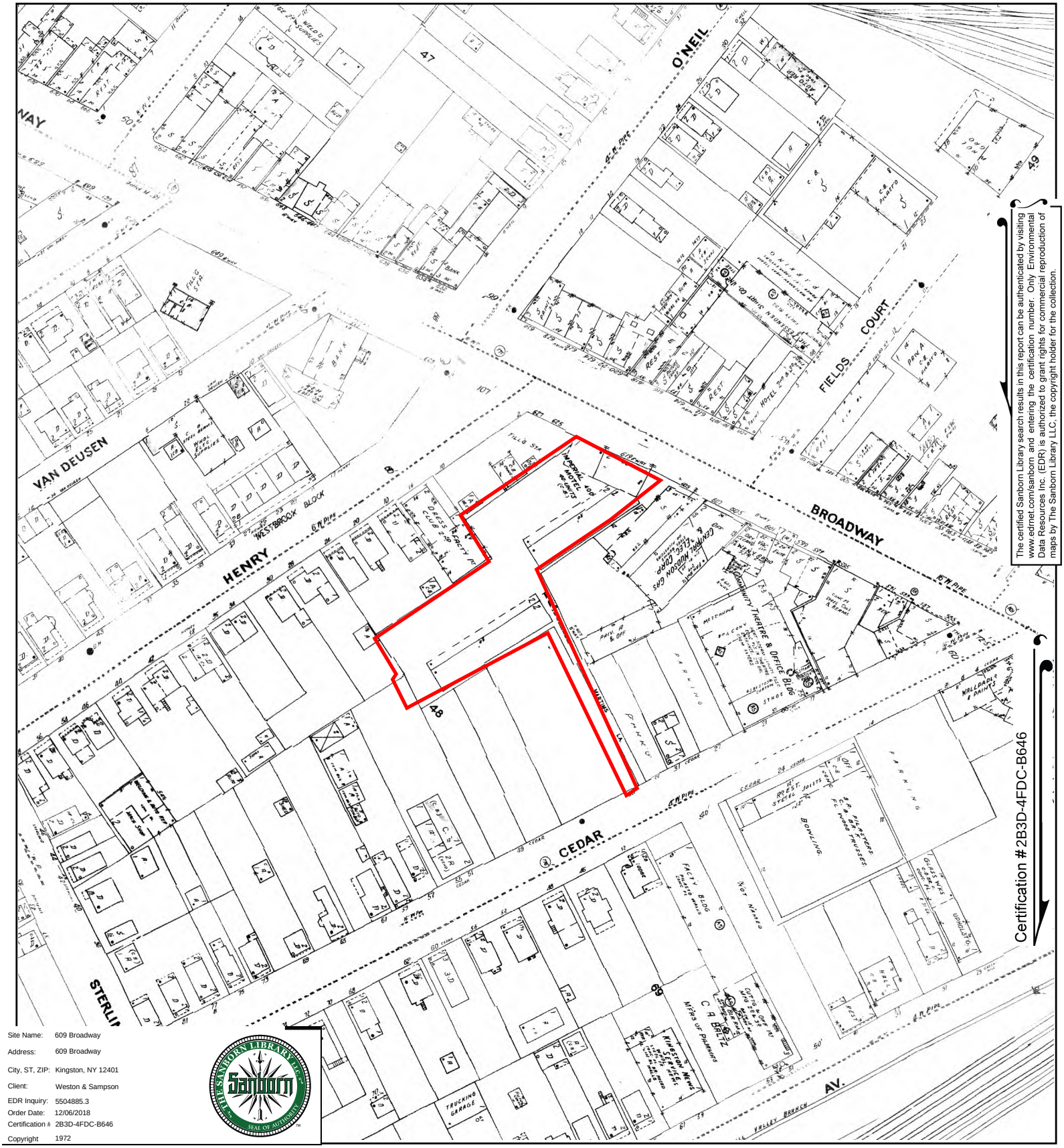




Volume 1, Sheet 23
Volume 1, Sheet 22
Volume 1, Sheet 21
Volume 1, Sheet 24

0 Feet 150 300 600

N



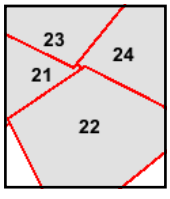
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Site Name:	609 Broadway
Address:	609 Broadway
City, ST, ZIP:	Kingston, NY 12401
Client:	Weston & Sampson
EDR Inquiry:	5504885.3
Order Date:	12/06/2018
Certification #	2B3D-4FDC-B646
Copyright	1972

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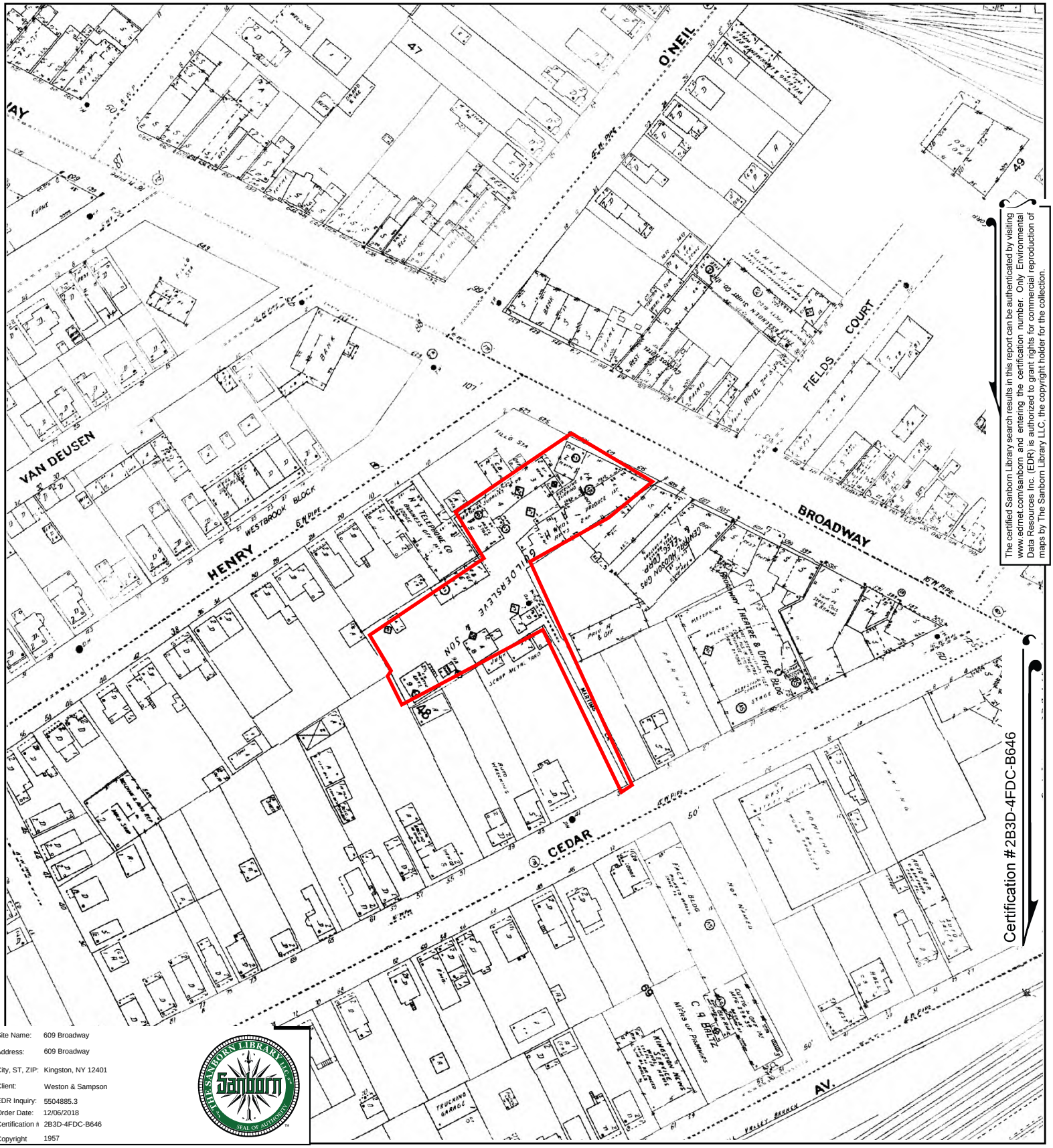




Volume 1, Sheet 23
Volume 1, Sheet 22
Volume 1, Sheet 21
Volume 1, Sheet 24

0 Feet 150 300 600

N

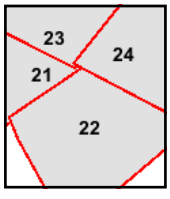


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Address:	609 Broadway
City, ST, ZIP:	Kingston, NY 12401
Client:	Weston & Sampson
EDR Inquiry:	5504885.3
Order Date:	12/06/2018
Certification #	2B3D-4FDC-B646
Copyright	1957

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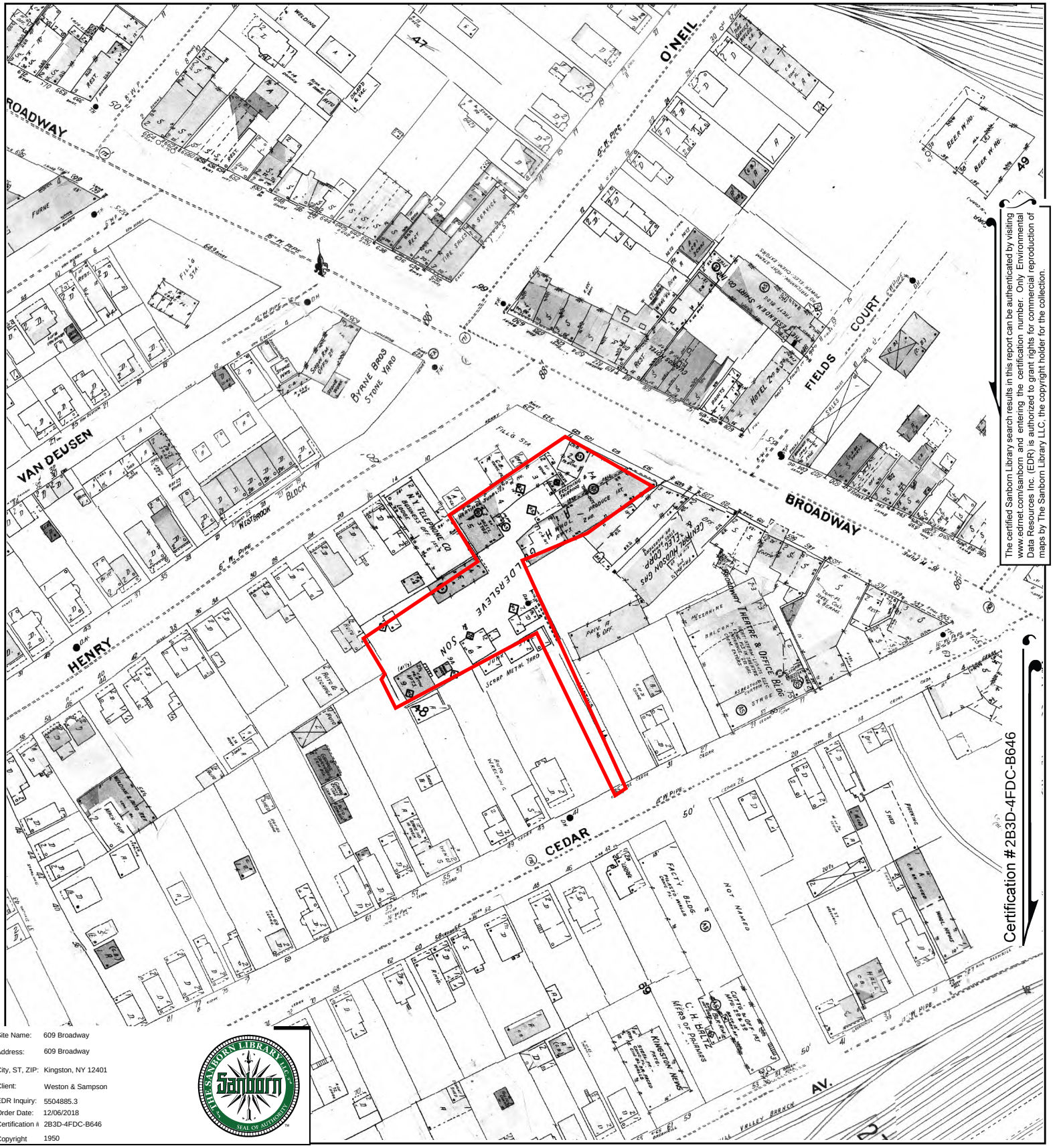
Volume 1, Sheet 24
Volume 1, Sheet 23
Volume 1, Sheet 22
Volume 1, Sheet 21

0 Feet 150 300 600

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Certified Sanborn® Map

1950

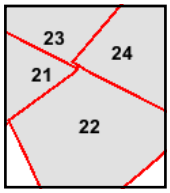


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Site Name:	609 Broadway
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City, ST, ZIP:	Kingston, NY 12401
Client:	Weston & Sampson
EDR Inquiry:	5504885.3
Order Date:	12/06/2018
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Copyright	1950

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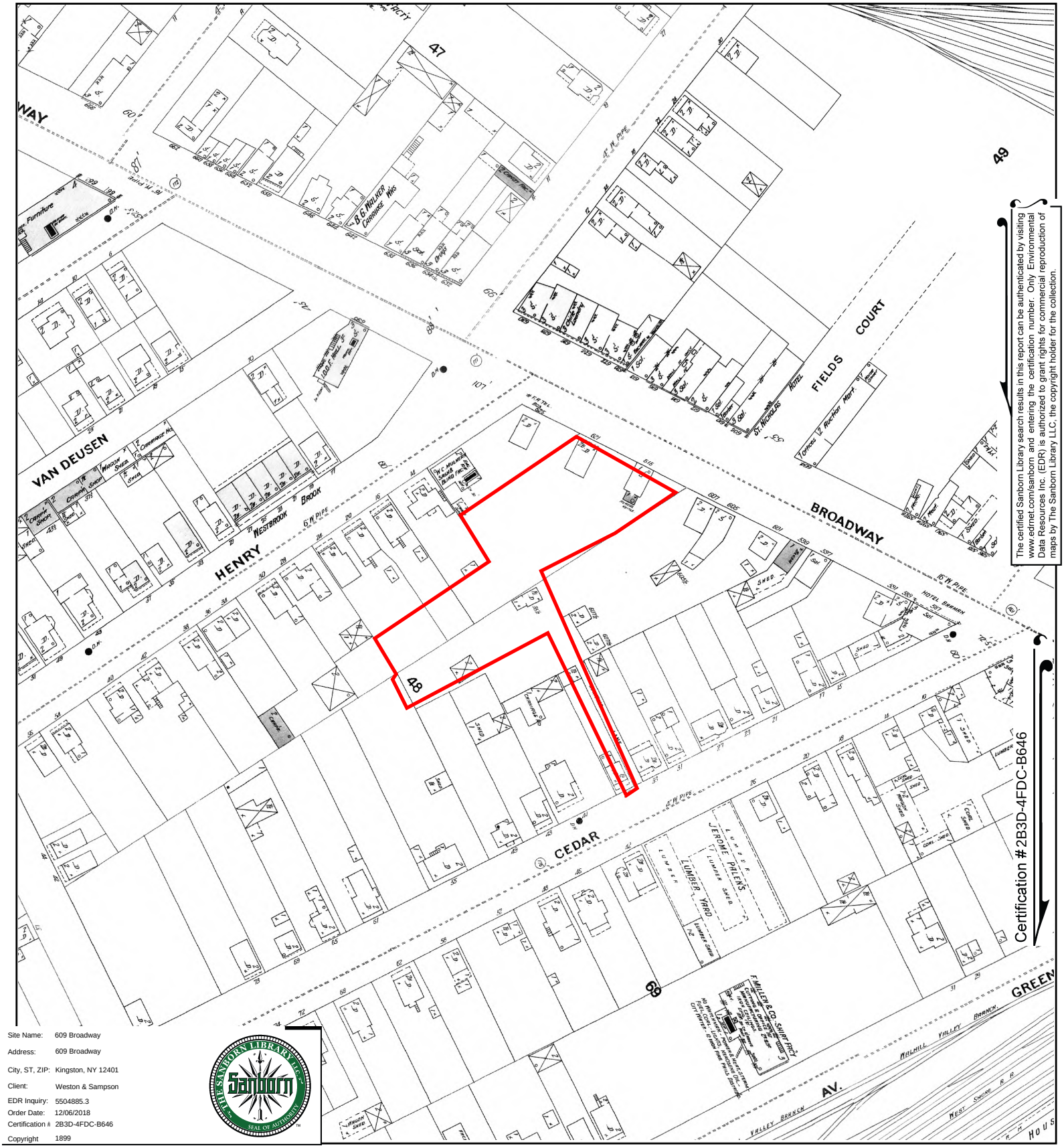




Volume 1, Sheet 24
Volume 1, Sheet 23
Volume 1, Sheet 22
Volume 1, Sheet 21

0 Feet 150 300 600

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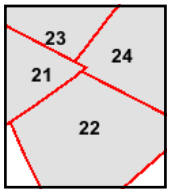


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Site Name:	609 Broadway
Address:	609 Broadway
City, ST, ZIP:	Kingston, NY 12401
Client:	Weston & Sampson
EDR Inquiry:	5504885.3
Order Date:	12/06/2018
Certification #:	2B3D-4FDC-B646
Copyright	1899

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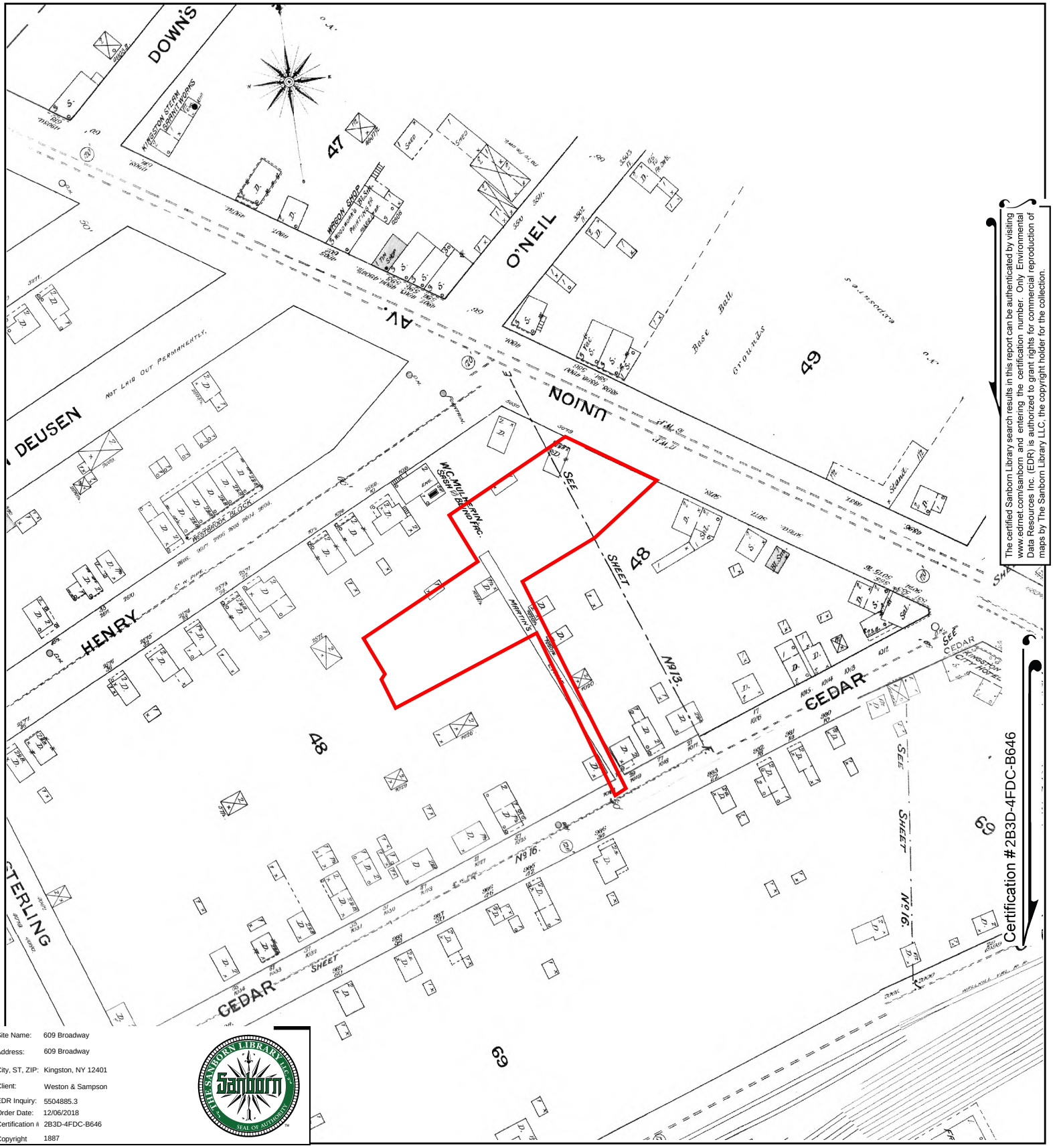




Volume 1, Sheet 21
Volume 1, Sheet 24
Volume 1, Sheet 23
Volume 1, Sheet 22

0 Feet 150 300 600

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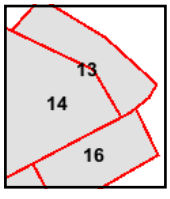
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Site Name:	609 Broadway
Address:	609 Broadway
City, ST, ZIP:	Kingston, NY 12401
Client:	Weston & Sampson
EDR Inquiry:	5504885.3
Order Date:	12/06/2018
Certification #	2B3D-4FDC-B646
Copyright	1887

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Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





Volume 1, Sheet 14
Volume 1, Sheet 13
Volume 1, Sheet 16

N

Appendix E:

Topographic Maps

615 Broadway

615 Broadway

Kingston, NY 12401

Inquiry Number: 5504885.4

December 06, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

12/06/18

Site Name:	Client Name:
615 Broadway	Weston & Sampson
615 Broadway	1 Winners Circle, Suite 130
Kingston, NY 12401	Albany, NY 12205
EDR Inquiry # 5504885.4	Contact: Rachelle Mcknight

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Weston & Sampson were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# N2180061

Project: 615 Broadway

Coordinates:

Latitude:	41.929499 41° 55' 46" North
Longitude:	-74.005292 -74° 0' 19" West
UTM Zone:	Zone 18 North
UTM X Meters:	582470.67
UTM Y Meters:	4642427.02
Elevation:	180.00' above sea level

Maps Provided:

2013	1934
1997	1924
1980	1917
1963, 1964	1903
1947	1898, 1901
1943	
1942	
1939	

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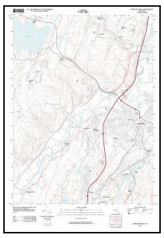
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets

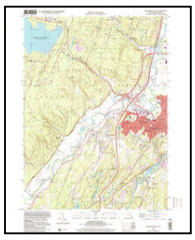


Kingston East
2013
7.5-minute, 24000



Kingston West
2013
7.5-minute, 24000

1997 Source Sheets

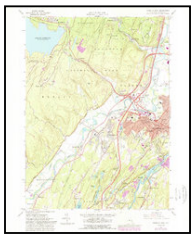


Kingston West
1997
7.5-minute, 24000
Aerial Photo Revised 1978

1980 Source Sheets



Kingston East
1980
7.5-minute, 24000
Aerial Photo Revised 1962



Kingston West
1980
7.5-minute, 24000
Aerial Photo Revised 1978

1963, 1964 Source Sheets



Kingston East
1963
7.5-minute, 24000
Aerial Photo Revised 1962



Kingston West
1964
7.5-minute, 24000
Aerial Photo Revised 1963

Topo Sheet Key

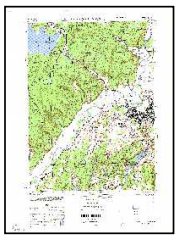
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947 Source Sheets



HYDE PARK
1947
15-minute, 50000

1943 Source Sheets



KINGSTON WEST
1943
7.5-minute, 25000

1942 Source Sheets



Kingston West
1942
7.5-minute, 24000
Aerial Photo Revised 1942

1939 Source Sheets



Rhinebeck
1939
15-minute, 62500

Topo Sheet Key

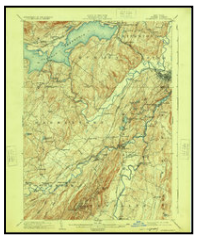
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1934 Source Sheets



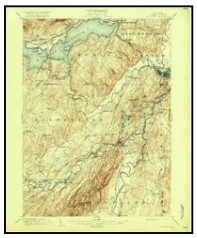
Rhinebeck
1934
15-minute, 48000

1924 Source Sheets



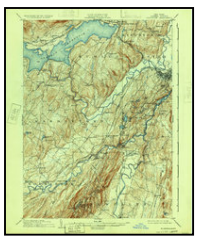
Rosendale
1924
15-minute, 62500

1917 Source Sheets



Rosendale
1917
15-minute, 62500

1903 Source Sheets



Rosendale
1903
15-minute, 62500

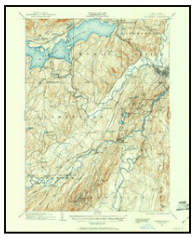
Topo Sheet Key

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1898, 1901 Source Sheets



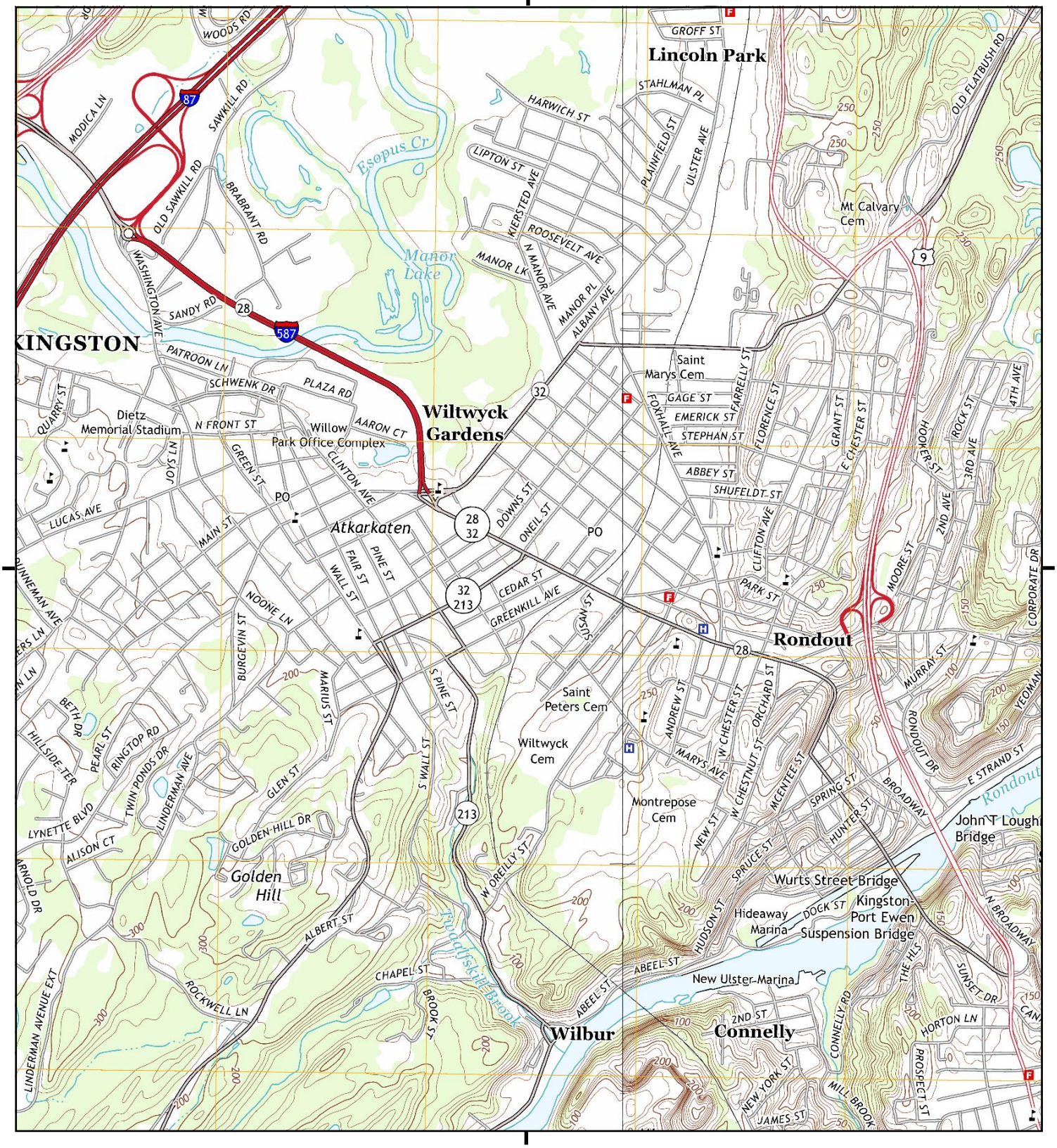
Rhinebeck
1898
15-minute, 62500



Rosendale
1901
15-minute, 62500

Historical Topo Map

2013



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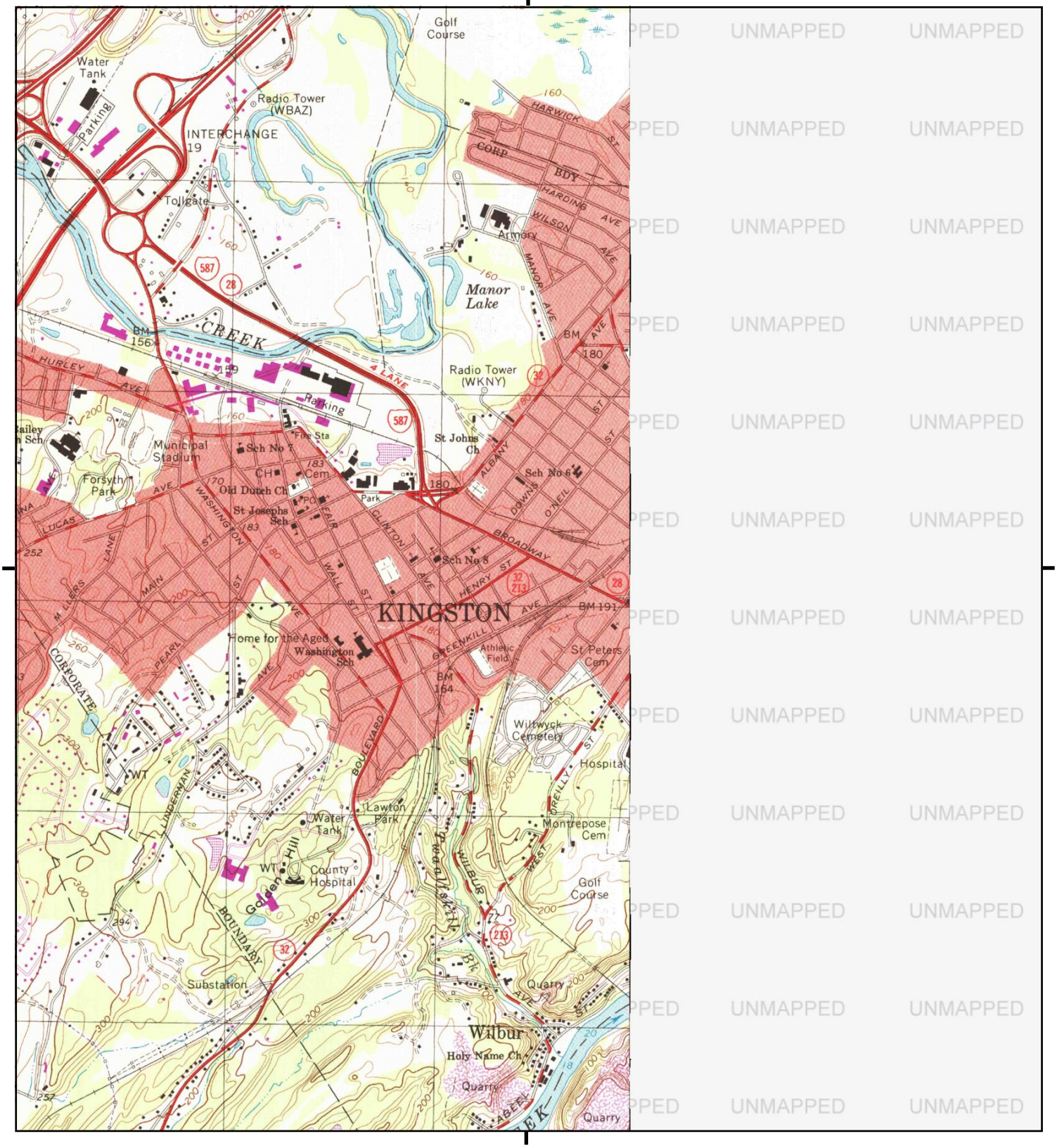
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NW N NE
W E
SW S SE

TP, Kingston West, 2013, 7.5-minute
E, Kingston East, 2013, 7.5-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



This report includes information from the following map sheet(s).

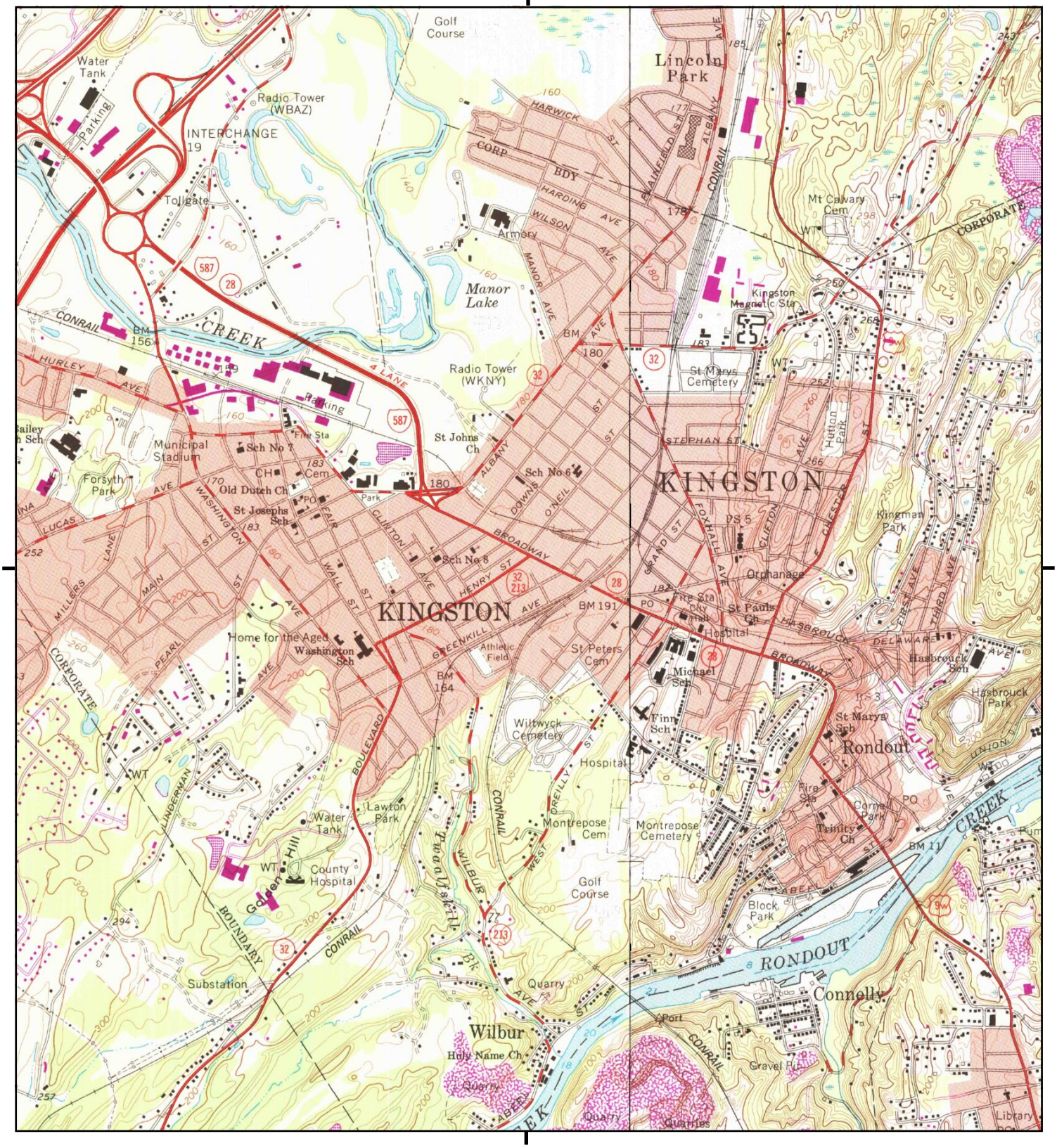
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NW N NE
W E
SW S SE

TP, Kingston West, 1997, 7.5-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

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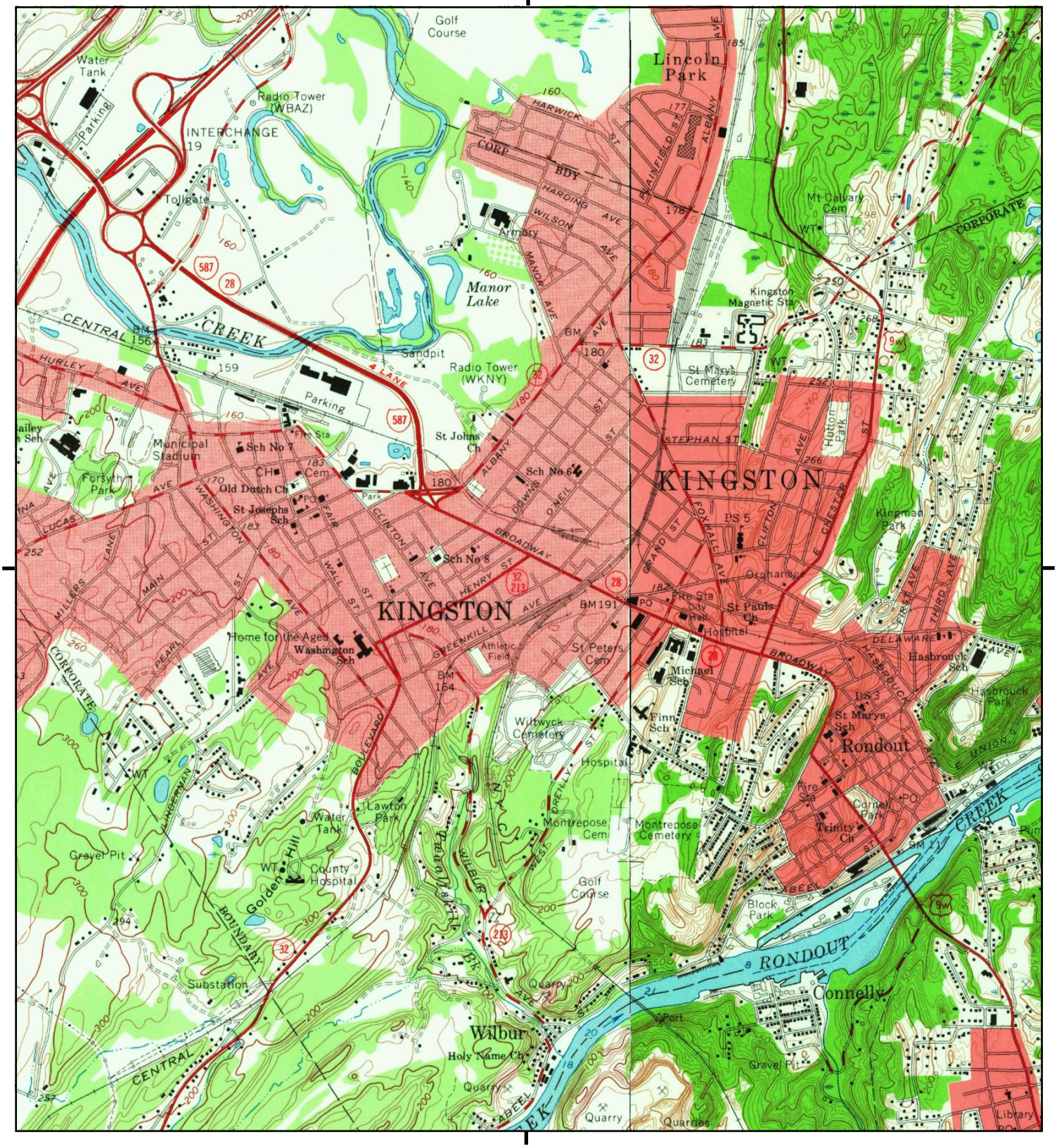
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NW N NE
W E
SW S SE

TP, Kingston West, 1980, 7.5-minute
E, Kingston East, 1980, 7.5-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.56

NW N NE
W E
SW S SE

TP, Kingston West, 1964, 7.5-minute
E, Kingston East, 1963, 7.5-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

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UNMAPPED

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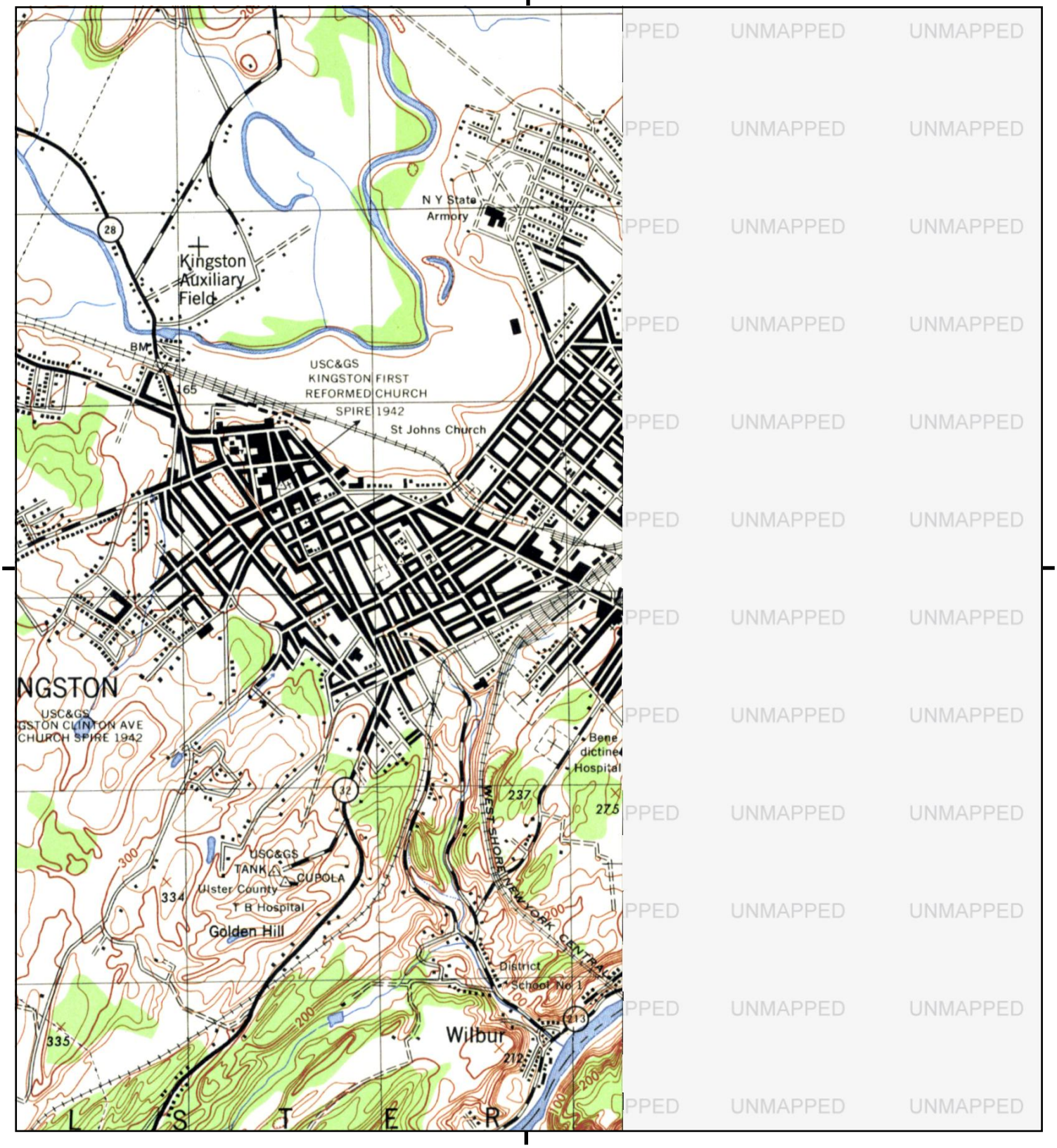
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NW N NE
W E
SW S SE

SE, HYDE PARK, 1947, 15-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



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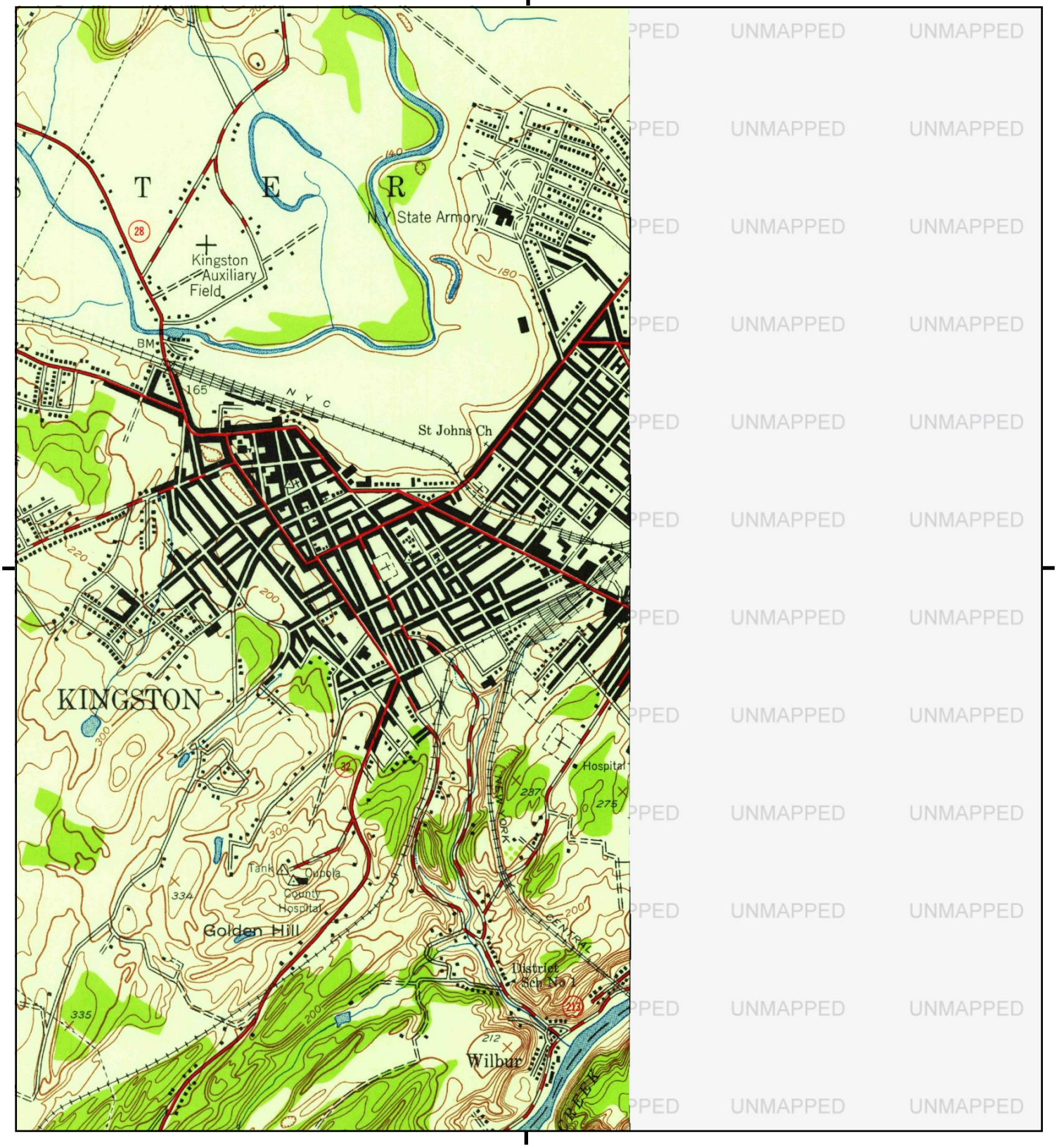
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NW N NE
W E
SW S SE

TP, KINGSTON WEST, 1943, 7.5-minute

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ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



UNMAPPED

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NW N NE
W E
SW S SE

TP, Kingston West, 1942, 7.5-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



UNMAPPED

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NW N NE
W E
SW S SE

SE, Rhinebeck, 1939, 15-minute

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ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



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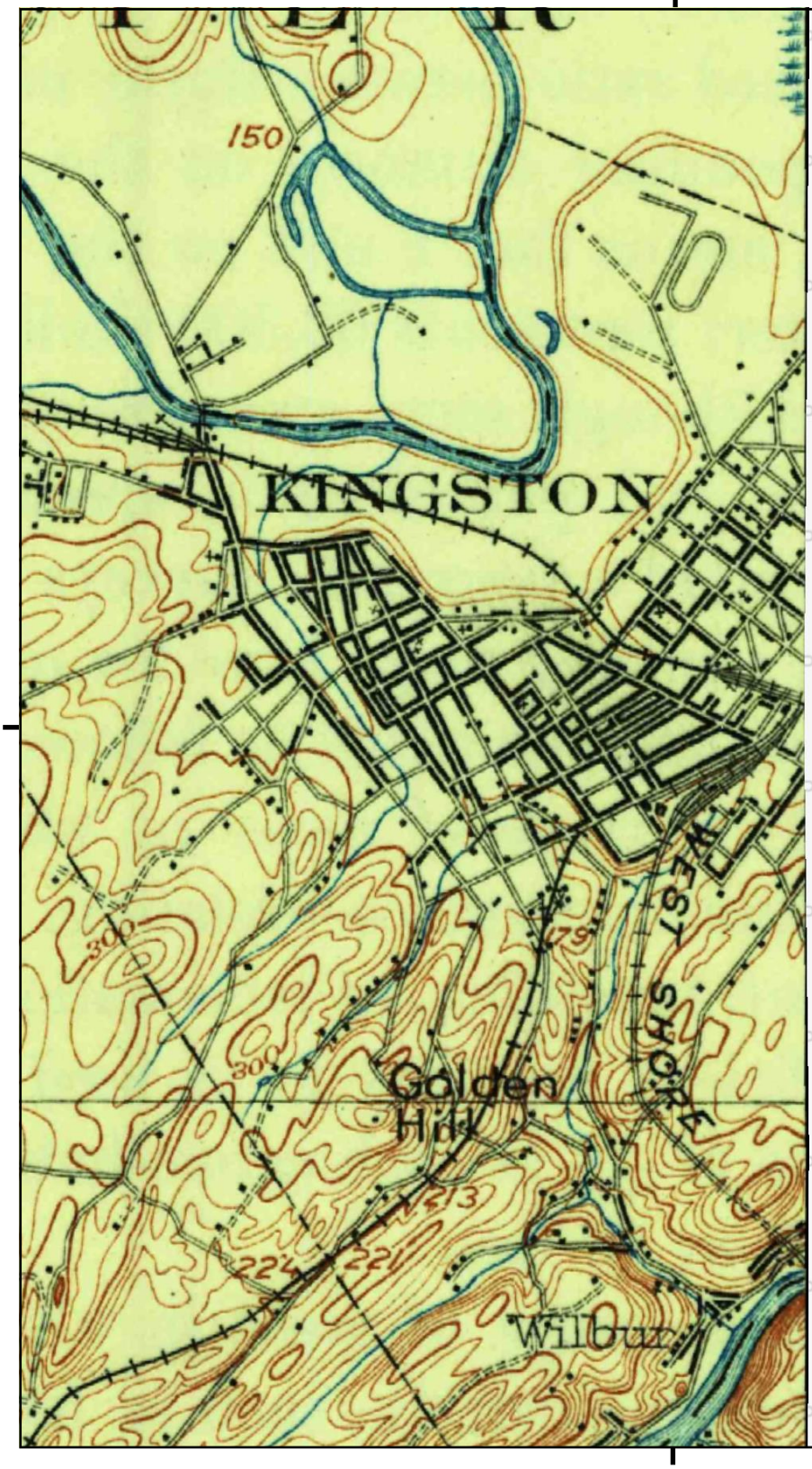
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NW N NE
W E
SW S SE

SE, Rhinebeck, 1934, 15-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



UNMAPPED

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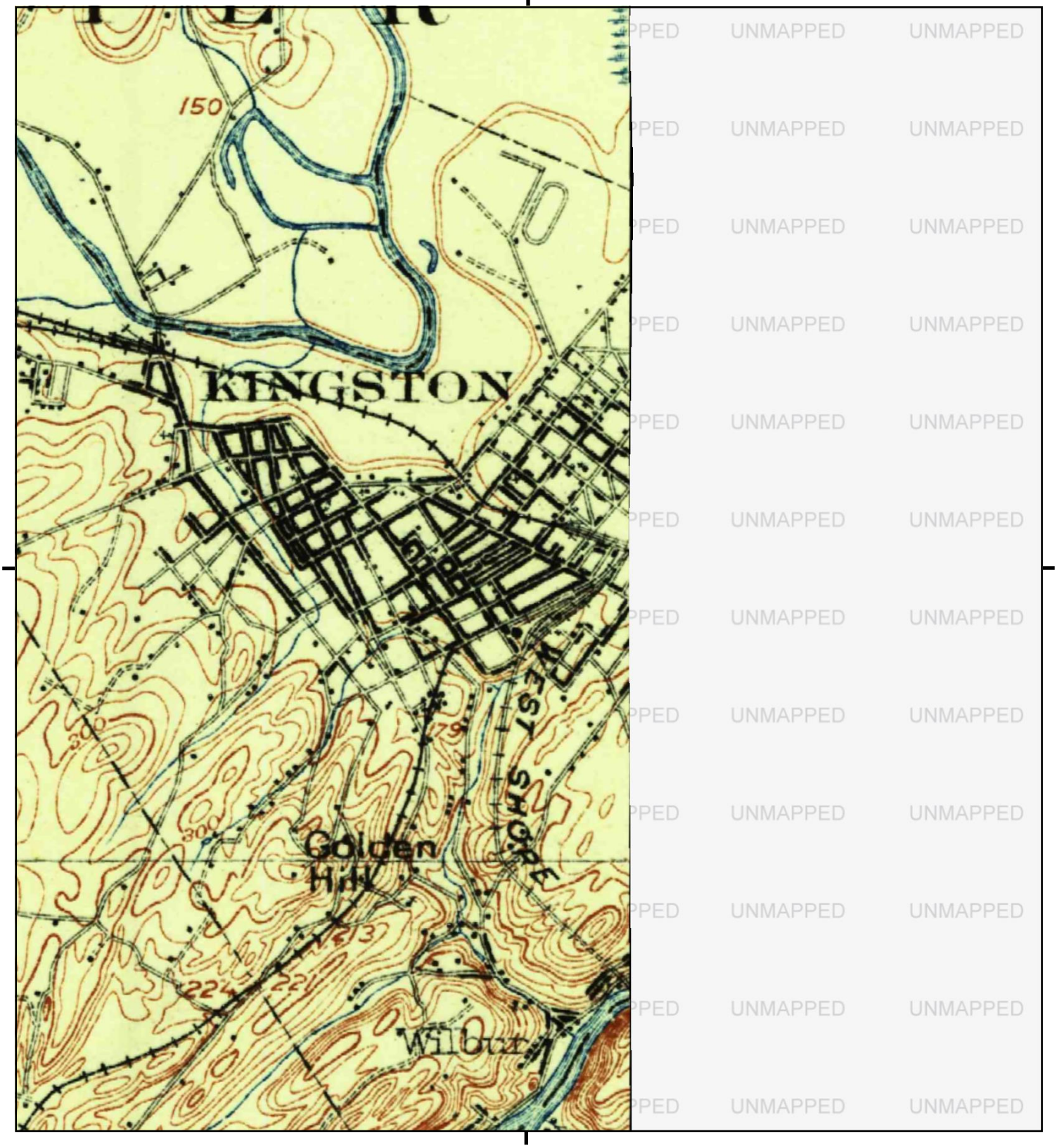
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NW N NE
W E
SW S SE

TP, Rosendale, 1924, 15-minute

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ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

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UNMAPPED

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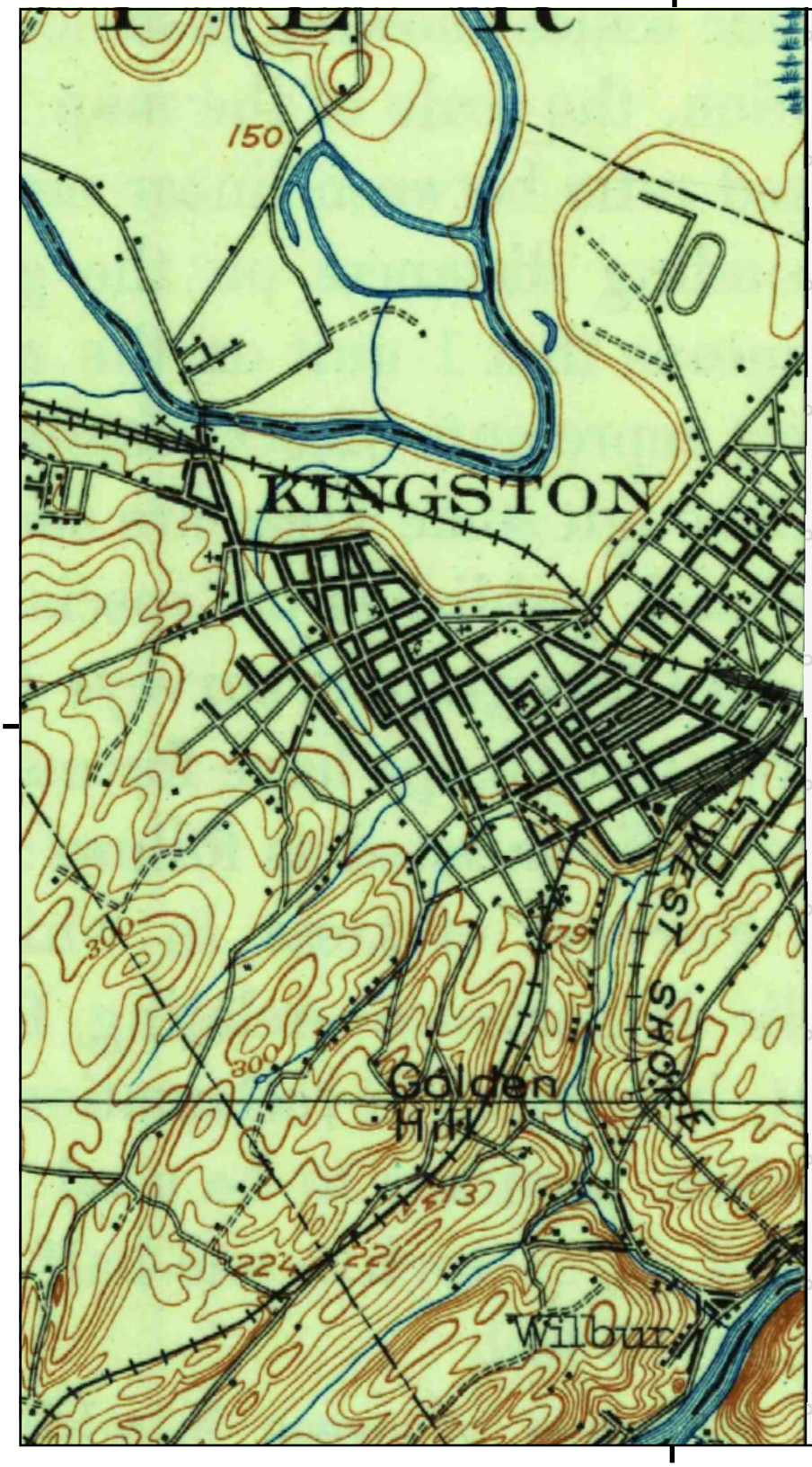
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NW N NE
W E
SW S SE

TP, Rosendale, 1917, 15-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



UNMAPPED

This report includes information from the following map sheet(s).

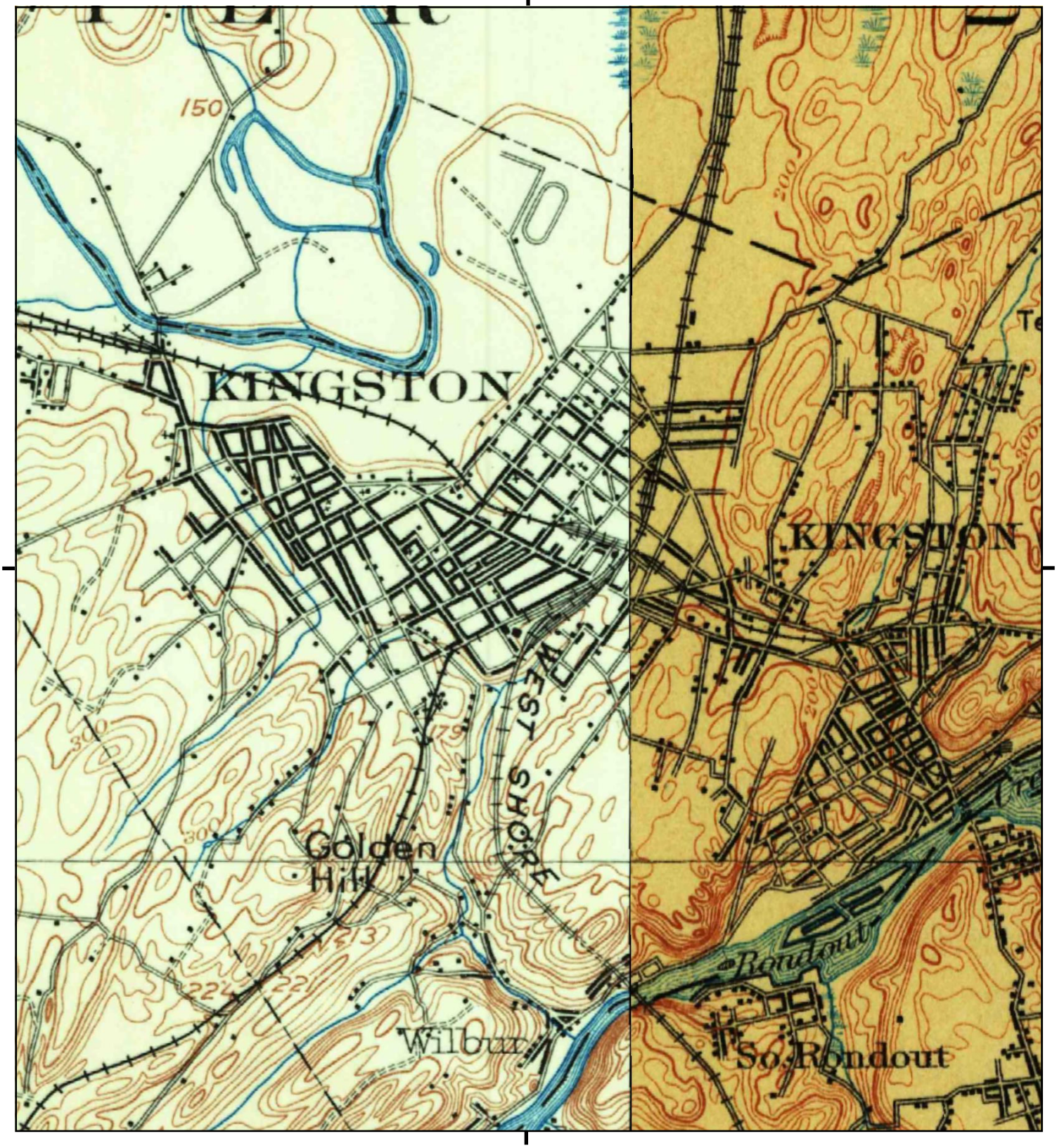
0 Miles 0.25 0.5 1 1.56

NW N NE
W E
SW S SE

TP, Rosendale, 1903, 15-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.56

NW N NE
W E
SW S SE

TP, Rosendale, 1901, 15-minute
SE, Rhinebeck, 1898, 15-minute

SITE NAME: Broadway
ADDRESS: Broadway
Kingston, NY 12401
CLIENT: Weston & Sampson

N

Appendix F:

Aerial Photographs

615 Broadway

615 Broadway

Kingston, NY 12401

Inquiry Number: 5504885.8

December 07, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

12/07/18

Site Name:

615 Broadway
615 Broadway
Kingston, NY 12401
EDR Inquiry # 5504885.8

Client Name:

Weston & Sampson
1 Winners Circle, Suite 130
Albany, NY 12205
Contact: Rachelle Mcknight

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2017	1"=500'	Flight Year: 2017	USDA/NAIP
2013	1"=500'	Flight Year: 2013	USDA/NAIP
2009	1"=500'	Flight Year: 2009	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: March 27, 1995	USGS/DOQQ
1986	1"=500'	Flight Date: March 31, 1986	USDA
1984	1"=500'	Flight Date: March 26, 1984	USDA
1978	1"=1000'	Flight Date: April 23, 1978	USGS
1963	1"=500'	Flight Date: April 16, 1963	USGS

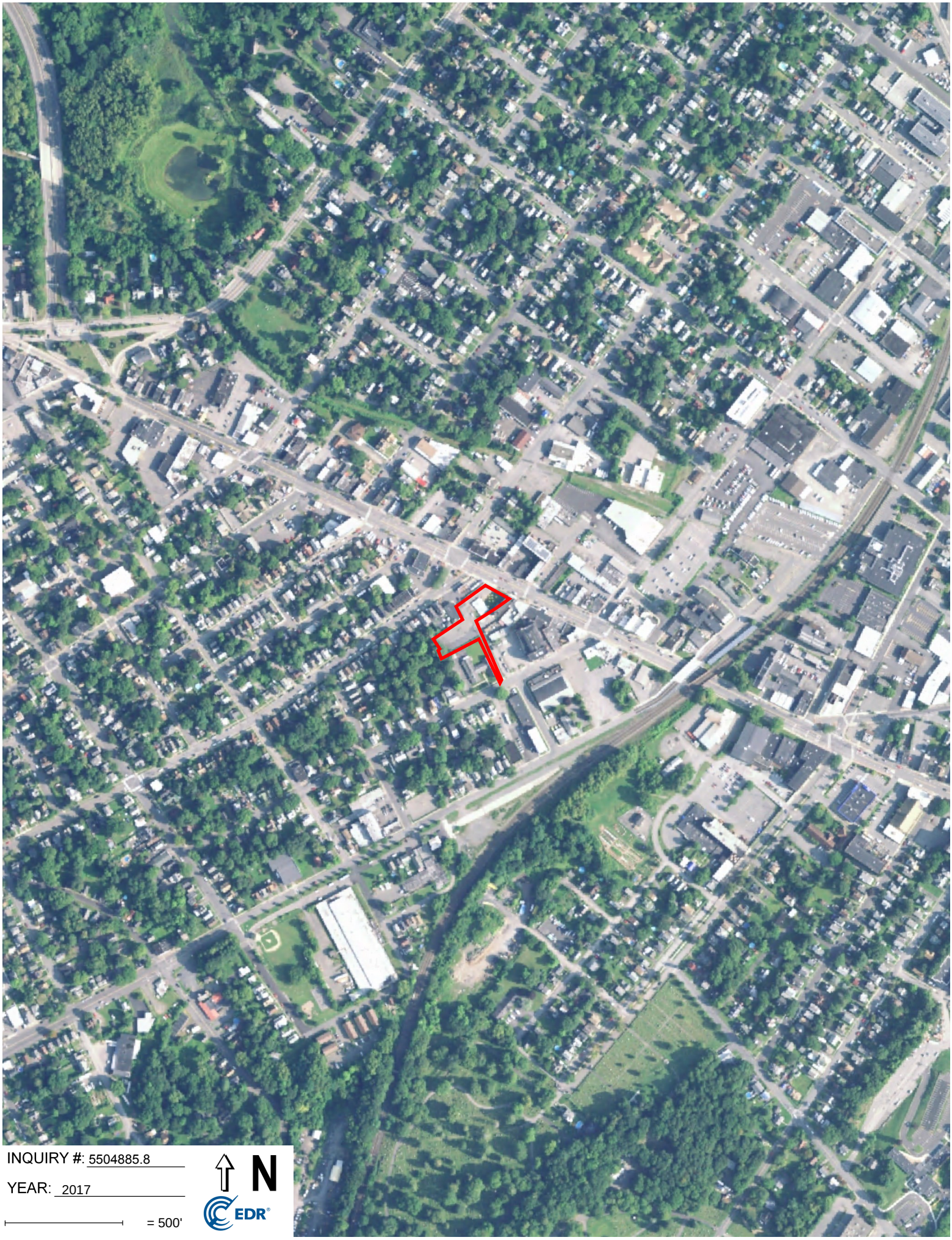
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

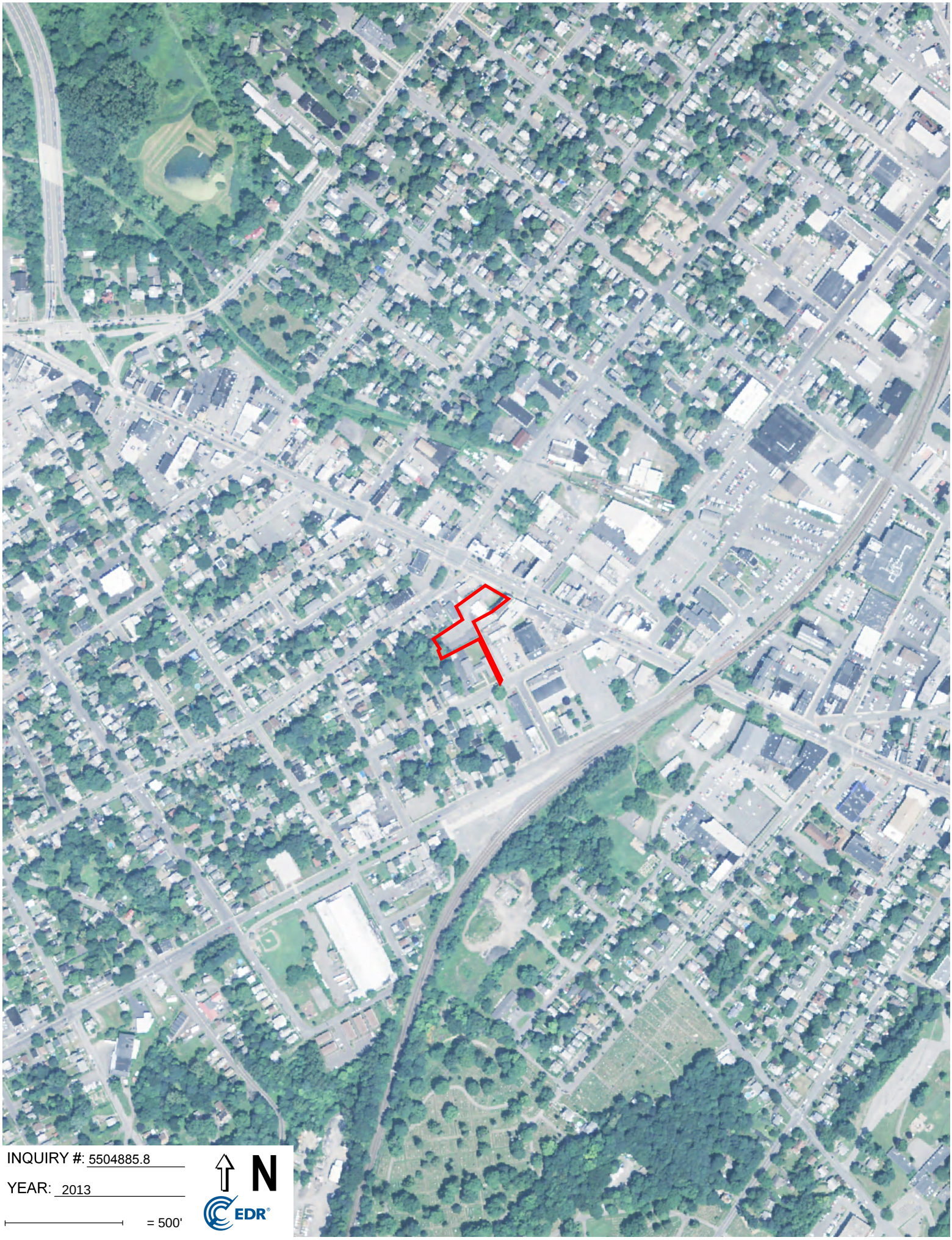
Disclaimer - Copyright and Trademark Notice

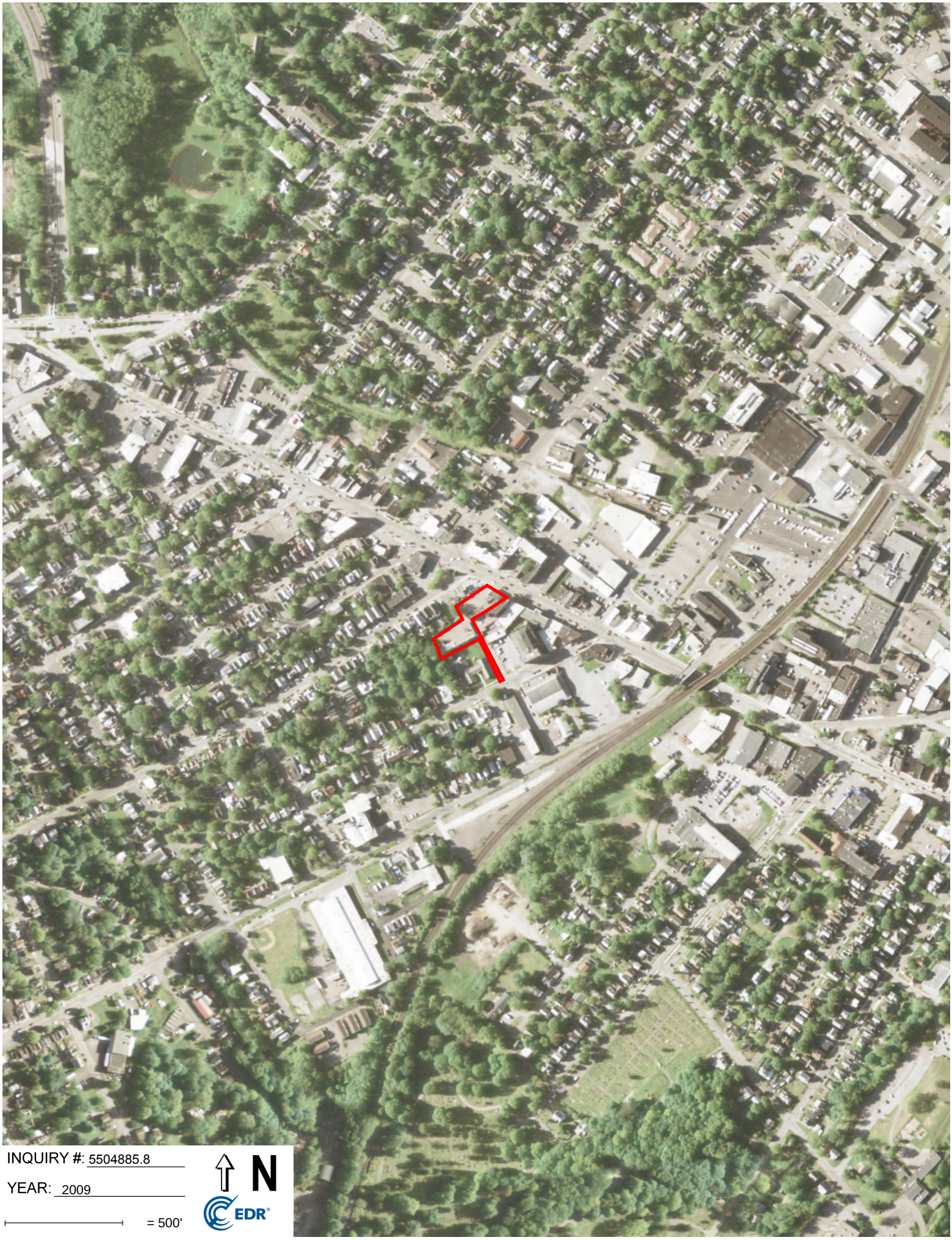
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INQUIRY #: 5504885.8
YEAR: 2017
= 500'
N
EDR


INQUIRY #: 5504885.8
YEAR: 2013
= 500'
N
EDR



INQUIRY #: 5504885.8

YEAR: 2009

= 500'

N

EDR


INQUIRY #: 5504885.8
YEAR: 2006
= 500'
N
EDR



INQUIRY #: 5504885.8

YEAR: 1995

= 500'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.



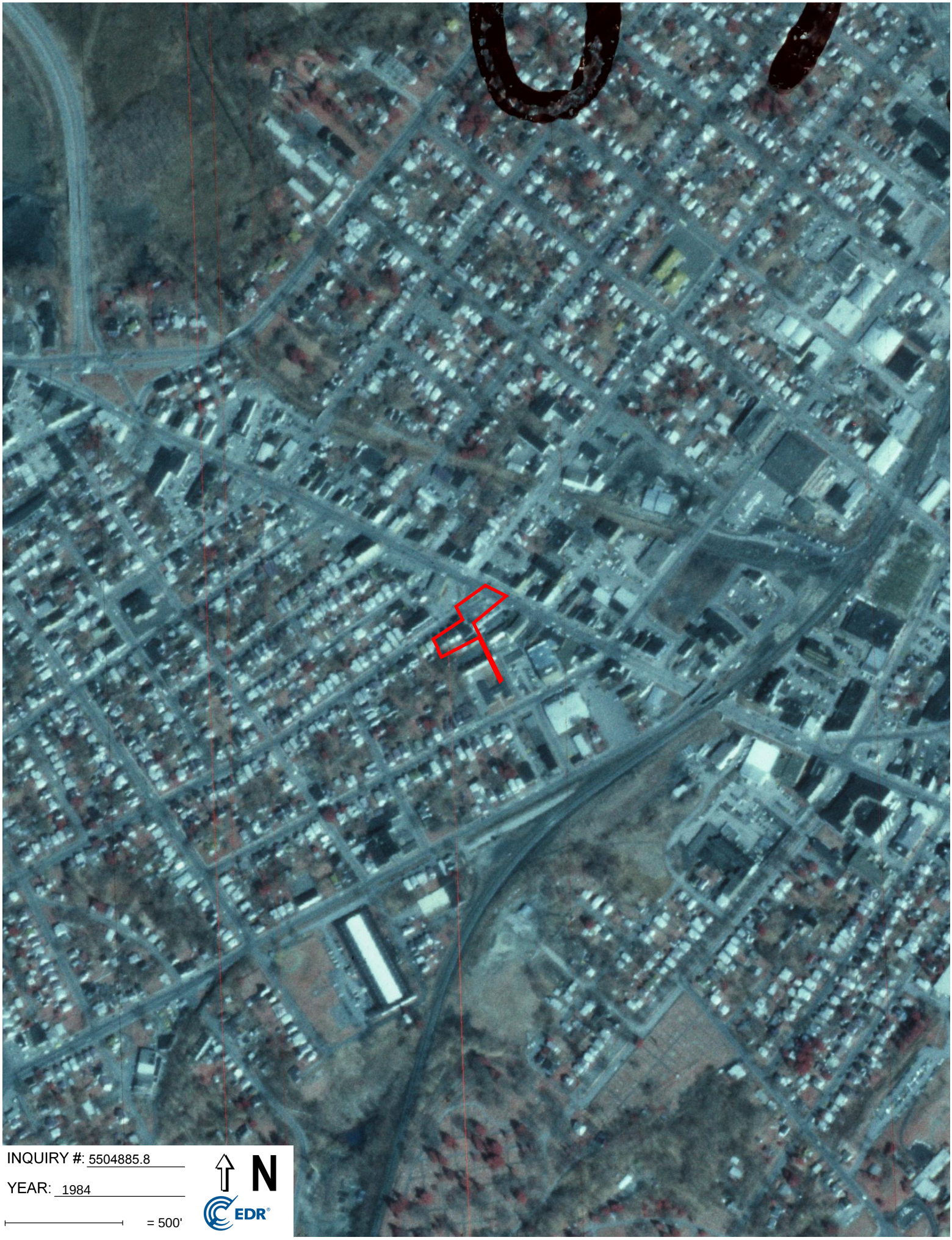
INQUIRY #: 5504885.8

YEAR: 1986

= 500'

N

EDR



INQUIRY #: 5504885.8

YEAR: 1984

= 500'

N

EDR



INQUIRY #: 5504885.8

YEAR: 1978

= 1000'

N

EDR

Subject boundary not shown because it exceeds image extent or image is not georeferenced.


INQUIRY #: 5504885.8
YEAR: 1963
= 500'
N
EDR

Appendix G:

City Directories

615 Broadway
615 Broadway
Kingston, NY 12401

Inquiry Number: 5504885.5
December 10, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

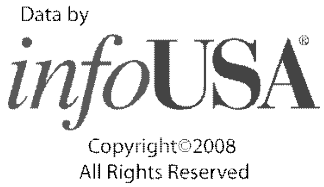
DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☑	EDR Digital Archive
2010	☑	☑	EDR Digital Archive
2005	☑	☑	EDR Digital Archive
2000	☑	☑	EDR Digital Archive
1995	☑	☑	EDR Digital Archive
1992	☑	☑	EDR Digital Archive
1985	☑	☑	Johnson's City Directory
1979	☑	☑	Price & Lee's City Directory
1973	☑	☑	Price & Lee's City Directory
1968	☑	☐	Price and Lee Co
1964	☑	☐	Price and Lee Co
1955	☑	☐	Price and Lee Co

FINDINGS

TARGET PROPERTY STREET

615 Broadway
Kingston, NY 12401

Year	*CD Image*	*Source*
BROADWAY		
2014	pg A1	EDR Digital Archive
2010	pg A3	EDR Digital Archive
2005	pg A5	EDR Digital Archive
2000	pg A7	EDR Digital Archive
1995	pg A9	EDR Digital Archive
1992	pg A11	EDR Digital Archive
1985	pg A13	Johnson's City Directory
1985	pg A14	Johnson's City Directory
1979	pg A16	Price & Lee's City Directory
1979	pg A17	Price & Lee's City Directory
1973	pg A19	Price & Lee's City Directory
1973	pg A20	Price & Lee's City Directory
1968	pg A22	Price and Lee Co
1964	pg A24	Price and Lee Co
1964	pg A25	Price and Lee Co
1955	pg A28	Price and Lee Co
1955	pg A29	Price and Lee Co

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
HENRY ST		
2014	pg. A2	EDR Digital Archive
2010	pg. A4	EDR Digital Archive
2005	pg. A6	EDR Digital Archive
2000	pg. A8	EDR Digital Archive
1995	pg. A10	EDR Digital Archive
1992	pg. A12	EDR Digital Archive
1985	pg. A15	Johnson's City Directory
1979	pg. A18	Price & Lee's City Directory
1973	pg. A21	Price & Lee's City Directory
1968	pg. A23	Price and Lee Co
1964	pg. A26	Price and Lee Co
1964	pg. A27	Price and Lee Co
1955	pg. A30	Price and Lee Co
1955	pg. A31	Price and Lee Co

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BROADWAY 2014

611	ROCA FLORAL
612	YE OLDE BOOK SHOPPE
614	PUSUSERLA RESTAURANT MI R
617	HAVIR, PAUL D
618	GARCIA, MANUEL C
620	BETH-EL OF GOD IN
622	BLUE OCEAN SPA INC
	EMPIRE DENTAL
625	CHEEKAM MART INC
	MOBIL SNACK SHOP
628	LOVE THAT STING
630	KINGSTON DELI
632	AGUSTIN, ERIZEL
	RIVER CITY MKT INC
	THRIFTY CHECK CASHING
636	SOPHIAS KITCHEN
642	SAFECO ALARM SYSTEMS INC
649	PERRYS MOBIL SERVICE STATION

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

HENRY ST 2014

21	MENTAL HEALTH ASSOCIATION IN U
43	ECTOR SHIRLEY A
76	EAGLE PRODUCTS LLC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BROADWAY 2010

589	BINNEY, JAY
592	AHMED, WAHEED
	COGSWELL, ANGELA
	MENDOLIN, STACEY
611	LA OAXAQUENA
612	YE OLDE BOOK SHOPPE
614	PUSUSERLA RESTAURANT MI R
617	HAVIR, PAUL D
618	DELGADO, YURY
	GARCIA, MANUEL C
	LEGASPE, SANTA
625	CHEEKAM MART INC
	MOBIL SNACK SHOP
628	CHENG KUEN LING
	K L BEAUTY SPA INCORPORATED
	MARKSMAN HOT DOG
630	KINGSTON DELI
	KINGUS & DARLING
632	RIVER CITY MKT INC
	THRIFTY CHECK CASHING
636	SOPHIAS KITCHEN
638	A B C SERV-ALL TAXI
642	FLYBOYS OF THE HUDSON VALLEY
	SAFECO ALARM SYSTEMS INC
	THOMPSON JEFFREY M CPA
649	PERRYS MOBIL SERVICE STATION

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

HENRY ST 2010

21	MENTAL HEALTH ASSOCIATION IN U
43	ECTOR SHIRLEY A
76	EAGLE PRODUCTS LLC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BROADWAY 2005

589	BINNEY, JAY
607	HEAD, TRIP
609	BRODHEAD KIM
	DIMPLES
610	GLENNON LOCKSMITH
611	LA OAXAQUENA
612	YE OLDE BOOK SHOPPE
614	PUSUSERLA RESTAURANT MI R
615	KINGS INN
618	ACOSTA, MIKE
	GARCIA, MANUEL
	ROSMARY, MAZARIEGO
	ZELAYA, HUMBERTO
620	KINGSTON SELF-HELP CENTER
630	KINGSTON DELI
	KINGUS & DARLING
632	RIVER CITY MARKET INC
634	SMOKE 4 LESS
	SUKENIK BORIS
	URBAN IMAGE
635	BANK OF AMERICA
	ULSTER LITERACY ASSOCIATION
636	SOPHIAS KITCHEN
638	LA MEXICAMA GROCERY
642	FLYBOYS OF THE HUDSON VALLEY
	SAFECO ALARM SYSTEMS INC
	THOMPSON J M CPA
	THOMPSON JEFFREY M CPA
649	PERRYS MOBIL SERVICE STATION

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

HENRY ST 2005

16	ZIEGLER-HORTON JOAN
21	MENTAL HEALTH ASSOCIATION IN U
66	66 HENRY ST CORP
76	EAGLE PRODUCTS LLC
99	CEM CORPORATION
112	PRECIOUS MOMENT CARE

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BROADWAY 2000

585	JANJUA, JAVED
610	GLENNON LOCKSMITH
612	YE OLDE BOOK SHOPPE
614	PUSUSERLA RESTAURANT MI R
615	KINGS INN
618	BELLES, A
	PACHECO, B
	STUMER, RICHARD
620	KINGSTON SELF-HELP CENTER
630	KINGSTON DELI
	KINGUS & DARLING
635	FLEET NATIONAL BANK
636	SOPHIAS KITCHEN
642	SAFECO ALARM SYSTEMS INC
	THOMPSON J M CPA
649	PERRYS MOBIL SERVICE STATION

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

HENRY ST 2000

16	ANDRIKOS MANUEL PAINTING
21	MENTAL HEALTH ASSOCIATION IN U
76	EAGLE PRODUCTS LLC
99	C E M CORPORATION
104	DOWNING FAMILY CARE HOME

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BROADWAY 1995

609	IDEAL NEW YORK PROPERTIES INC
	JAMIES WINDOW CLEANING
610	GLENNON JAMES
614	JAKE & PEPPERS STEAK HOUSE
615	OSGOLD INTERNATIONAL (USA)
620	KINGSTON SELF-HELP CENTER INC
630	NEIGHBORHOOD DELI OF ULSTER
635	FLEET BANK
638	A B C SERV-ALL TAXI
642	SAFECO ALARM SYSTEMS INC
	THOMPSON J M CPA
649	PERRYS MOBIL SERVICE STATION

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

HENRY ST 1995

14	FANTASY VIDEO
27	MENTAL HLTH ASSC ULSTR CTY INC
37	WILTYCK REALTY INC
99	SERVICE EMPLOYEES LOCAL 200D

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

BROADWAY 1992

592	RAVAL, KIRID
596	DE VOLL, DAVID
598	TAYLOR, GLENDA
609	IDEAL NEW YORK PROPERTIES INC
	JAMIES RAINBOW FRAGRANCES
	JAMIES WINDOW CLEANING
	KINGSTON CAMERA
610	DELAMATER BERTON E
	GLENNON LOCKSMITH
612	PAUL & DORIS LUNCHEONETTE INC
615	CHEN TOM
618	GORDON, JEAN
	HOFFAY, THOMAS R
	WALSH, ROBERT
622	BROADWAY TAXI
624	WHITRITCH ENTERPRISES INC
630	KINGS DELI PLUS INC
635	FLEET BANK OF NEW YORK
	FLEET TRUST CO INC
638	A B C SERV-ALL TAXI
642	SAFECO ALARM SYSTEMS INC
	VAN VALKENBURGH-FITZ GERALD

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

HENRY ST 1992

14	FANTASY VIDEO
16	MARTINO PAUL J INC
37	WILTYCK REALTY INC
99	C E M CORPORATION
	SERVICE EMPLOYEES LOCAL 200D

Target Street	Cross Street	Source
✓	-	Johnson's City Directory

BROADWAY 1985

562 BOYCE Henry 331-7490

CEDAR ST BEGINS

584 KETTERER'S BAKERY INC 338-1580

CORNELL ST BEGINS

585 GOFFREDI A ANTIQUES 331-3020
585 GOFFREDI PROPERTIES 331-3020
586 FRANK'S 338-7685
588 No Information
590 STUDIO GRAPHICS 331-1616
593 SAV-ON STORES INC 331-1007
594 BEN ORKOFF'S FLOOR & WINDOW CLEANING SERVICE 331-0952
594 SPADA'S SPORTSMANS HARDWARE INC SHOP 338-7724
596 JAY'S GOLD SHOP 338-1834
596 ELTU Ann 331-2922
596 HELDNIAL CASH 77
597 REGISTER CO 338-2181
600 No Information
601 HUDSON VALLEY PHILHARMONIC 338-4100
601 ULSTER PERFORMING ARTS CENTER INC 339-6088
601 ULSTER PERFORMING ARTS CENTER INC 331-1613
602 KINGSTON ALTERATIONS CENTER 331-9490
603 No Information

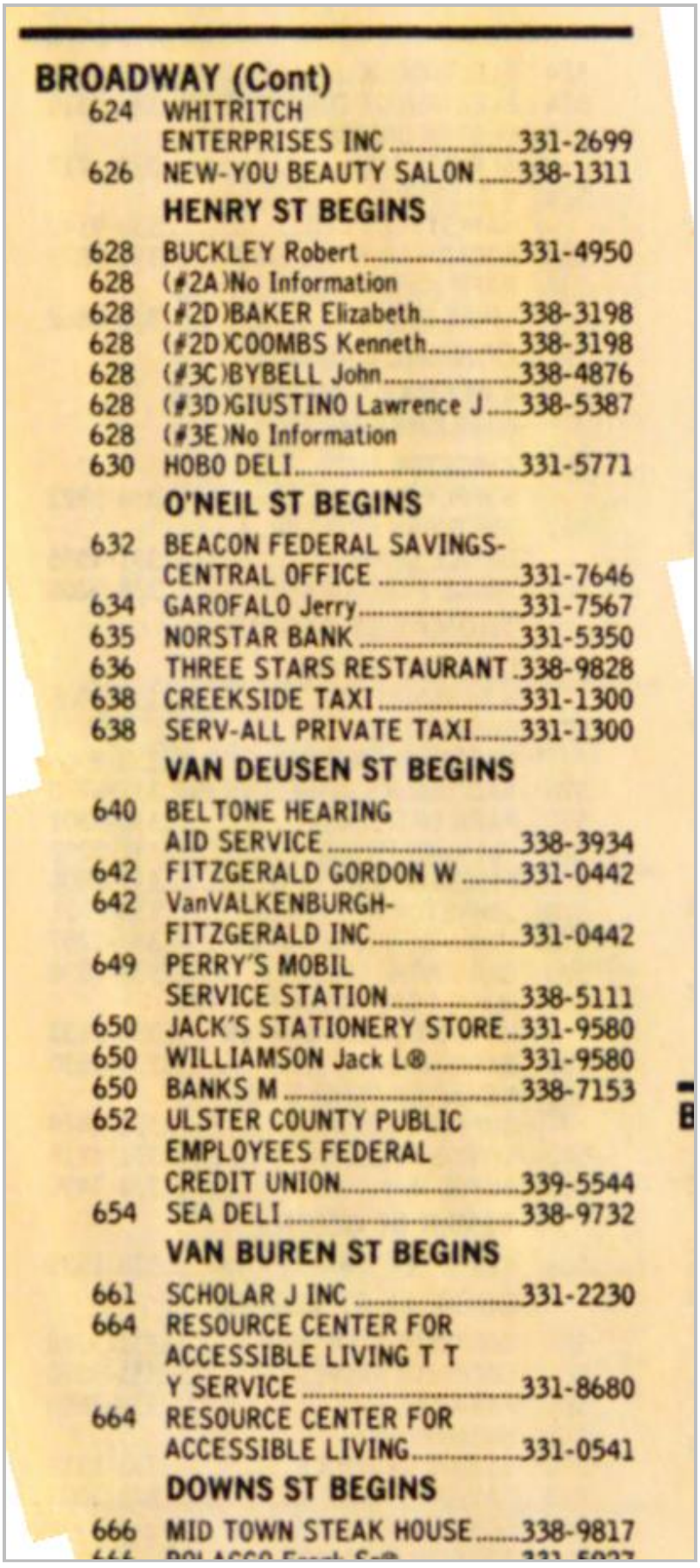
FIELD CT BEGINS

607 ULSTER COUNTY AUDITOR 331-9300
607 ULSTER COUNTY CIVIL SERV DEPT 331-9300
607 ULSTER COUNTY OF 331-9300
607 ULSTER COUNTY PERSONNEL 331-9300
607 ULSTER COUNTY PUBLIC INFO 331-9300
607 ULSTER COUNTY SOCIAL SERVS DEPT STOP DWI CO-ORD 331-9300
607 ULSTER COUNTY WEIGHTS & MEASURES 331-9300
608 COPYLAND 331-7581
608 TRI STATE COPYLAND INC 331-7581
609 DICK'S CARPET CLEANING 338-5812
609 ECONO CAR SERVICE 331-0277
609 IDEAL APARTMENTS 338-3553
610 ACCREDITED SAFE & LOCK 331-0332
610 GLENNON JIM LOCKSMITH 331-0332
610½ STATE FARM INSURANCE CO 338-5615
610½ (ofc)DELAMATER BERTON E 338-5615
611 IDEAL COIN OPERATED LAUNDRY 331-9831
611 IDEAL LAUNDROMAT 338-3553
612 PAUL & DORIS LUNCHEONETTE INC 331-2774
612 SEYFARTH Paul K 331-2774
615 KING'S INN 331-4360
618 MORENO Lillian 339-5075
618 MURPHY T 338-2943
622 BANKS Deborah A 331-0487

(Cont)

Target Street	Cross Street	Source
✓	-	Johnson's City Directory

BROADWAY 1985



BROADWAY (Cont)

624 WHITRITCH ENTERPRISES INC 331-2699
626 NEW-YOU BEAUTY SALON 338-1311

HENRY ST BEGINS

628 BUCKLEY Robert 331-4950
628 (#2A)No Information
628 (#2D)BAKER Elizabeth 338-3198
628 (#2D)COOMBS Kenneth 338-3198
628 (#3C)BYBELL John 338-4876
628 (#3D)GIUSTINO Lawrence J 338-5387
628 (#3E)No Information
630 HOBO DELI 331-5771

O'NEIL ST BEGINS

632 BEACON FEDERAL SAVINGS-CENTRAL OFFICE 331-7646
634 GAROFALO Jerry 331-7567
635 NORSTAR BANK 331-5350
636 THREE STARS RESTAURANT 338-9828
638 CREEKSIDE TAXI 331-1300
638 SERV-ALL PRIVATE TAXI 331-1300

VAN DEUSEN ST BEGINS

640 BELTONE HEARING AID SERVICE 338-3934
642 FITZGERALD GORDON W 331-0442
642 VanVALKENBURGH-FITZGERALD INC 331-0442
649 PERRY'S MOBIL SERVICE STATION 338-5111
650 JACK'S STATIONERY STORE 331-9580
650 WILLIAMSON Jack L® 331-9580
650 BANKS M 338-7153
652 ULSTER COUNTY PUBLIC EMPLOYEES FEDERAL CREDIT UNION 339-5544
654 SEA DELI 338-9732

VAN BUREN ST BEGINS

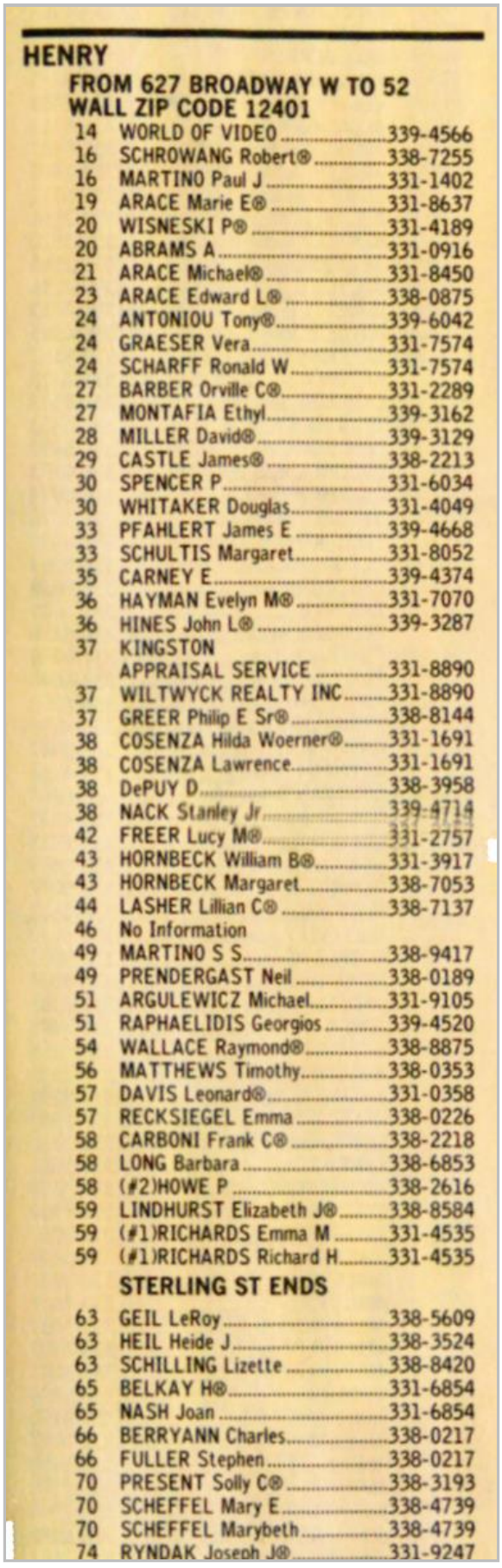
661 SCHOLAR J INC 331-2230
664 RESOURCE CENTER FOR ACCESSIBLE LIVING T T Y SERVICE 331-8680
664 RESOURCE CENTER FOR ACCESSIBLE LIVING 331-0541

DOWNS ST BEGINS

666 MID TOWN STEAK HOUSE 338-9817

Target Street	Cross Street	Source
-	✓	Johnson's City Directory

HENRY ST 1985



HENRY

FROM 627 BROADWAY W TO 52
WALL ZIP CODE 12401

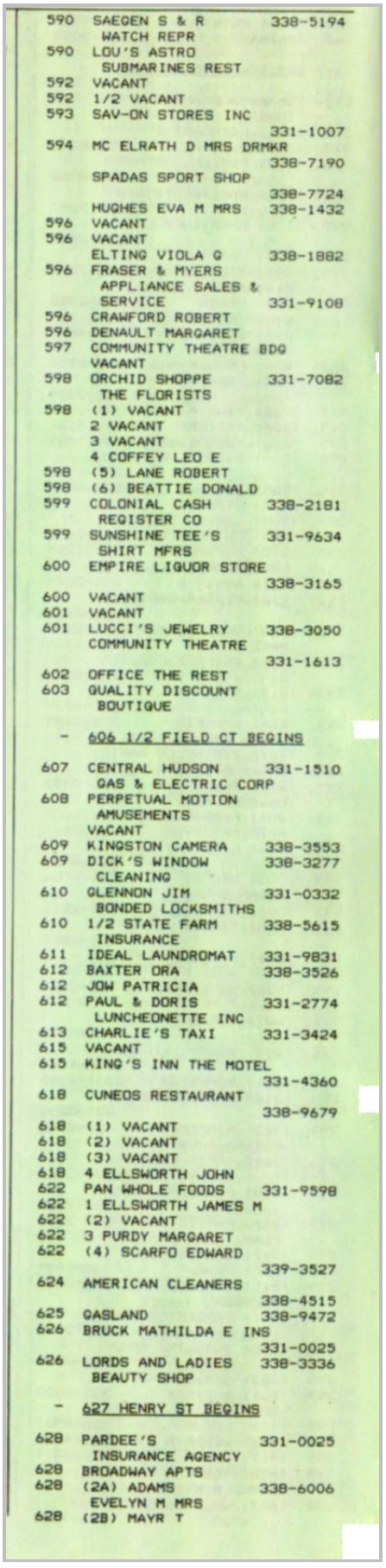
14	WORLD OF VIDEO	339-4566
16	SCHROWANG Robert®	338-7255
16	MARTINO Paul J	331-1402
19	ARACE Marie E®	331-8637
20	WISNESKI P®	331-4189
20	ABRAMS A	331-0916
21	ARACE Michael®	331-8450
23	ARACE Edward L®	338-0875
24	ANTONIOU Tony®	339-6042
24	GRAESER Vera	331-7574
24	SCHARFF Ronald W	331-7574
27	BARBER Orville C®	331-2289
27	MONTAFIA Ethyl	339-3162
28	MILLER David®	339-3129
29	CASTLE James®	338-2213
30	SPENCER P	331-6034
30	WHITAKER Douglas	331-4049
33	PFAHLERT James E	339-4668
33	SCHULTIS Margaret	331-8052
35	CARNEY E	339-4374
36	HAYMAN Evelyn M®	331-7070
36	HINES John L®	339-3287
37	KINGSTON APPRAISAL SERVICE	331-8890
37	WILTWYCK REALTY INC	331-8890
37	GREER Philip E Sr®	338-8144
38	COSENZA Hilda Woerner®	331-1691
38	COSENZA Lawrence	331-1691
38	DePUY D	338-3958
38	NACK Stanley Jr	339-4714
42	FREER Lucy M®	331-2757
43	HORNBECK William B®	331-3917
43	HORNBECK Margaret	338-7053
44	LASHER Lillian C®	338-7137
46	No Information	
49	MARTINO S S	338-9417
49	PRENDERGAST Neil	338-0189
51	ARGULEWICZ Michael	331-9105
51	RAPHAELIDIS Georgios	339-4520
54	WALLACE Raymond®	338-8875
56	MATTHEWS Timothy	338-0353
57	DAVIS Leonard®	331-0358
57	RECKSIEGEL Emma	338-0226
58	CARBONI Frank C®	338-2218
58	LONG Barbara	338-6853
58	(#2)HOWE P	338-2616
59	LINDHURST Elizabeth J®	338-8584
59	(#1)RICHARDS Emma M	331-4535
59	(#1)RICHARDS Richard H	331-4535

STERLING ST ENDS

63	GEIL LeRoy	338-5609
63	HEIL Heide J	338-3524
63	SCHILLING Lizette	338-8420
65	BELKAY H®	331-6854
65	NASH Joan	331-6854
66	BERRYANN Charles	338-0217
66	FULLER Stephen	338-0217
70	PRESENT Solly C®	338-3193
70	SCHEFFEL Mary E	338-4739
70	SCHEFFEL Marybeth	338-4739
74	RYNDAK Joseph J®	331-9247

Target Street	Cross Street	Source
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BROADWAY 1979



590 SAEGEN S & R 338-5194
WATCH REPR
590 LOU'S ASTRO
SUBMARINES REST
592 VACANT
592 1/2 VACANT
593 SAV-ON STORES INC
331-1007
594 MC ELRATH D MRS DRMKR
338-7190
SPADAS SPORT SHOP
338-7724
HUGHES EVA M MRS 338-1432
596 VACANT
596 VACANT
ELTING VIOLA G 338-1882
596 FRASER & MYERS
APPLIANCE SALES &
SERVICE 331-9108
596 CRAWFORD ROBERT
596 DENAULT MARGARET
597 COMMUNITY THEATRE BDG
VACANT
598 ORCHID SHOPPE 331-7082
THE FLORISTS
598 (1) VACANT
2 VACANT
3 VACANT
4 COFFEY LEO E
598 (5) LANE ROBERT
598 (6) BEATTIE DONALD
599 COLONIAL CASH 338-2181
REGISTER CO
599 SUNSHINE TEE'S 331-9634
SHIRT MFRS
600 EMPIRE LIQUOR STORE
338-3165
600 VACANT
601 VACANT
601 LUCCI'S JEWELRY 338-3050
COMMUNITY THEATRE
331-1613
602 OFFICE THE REST
603 QUALITY DISCOUNT
BOUTIQUE

\- 606 1/2 FIELD CT BEGINS

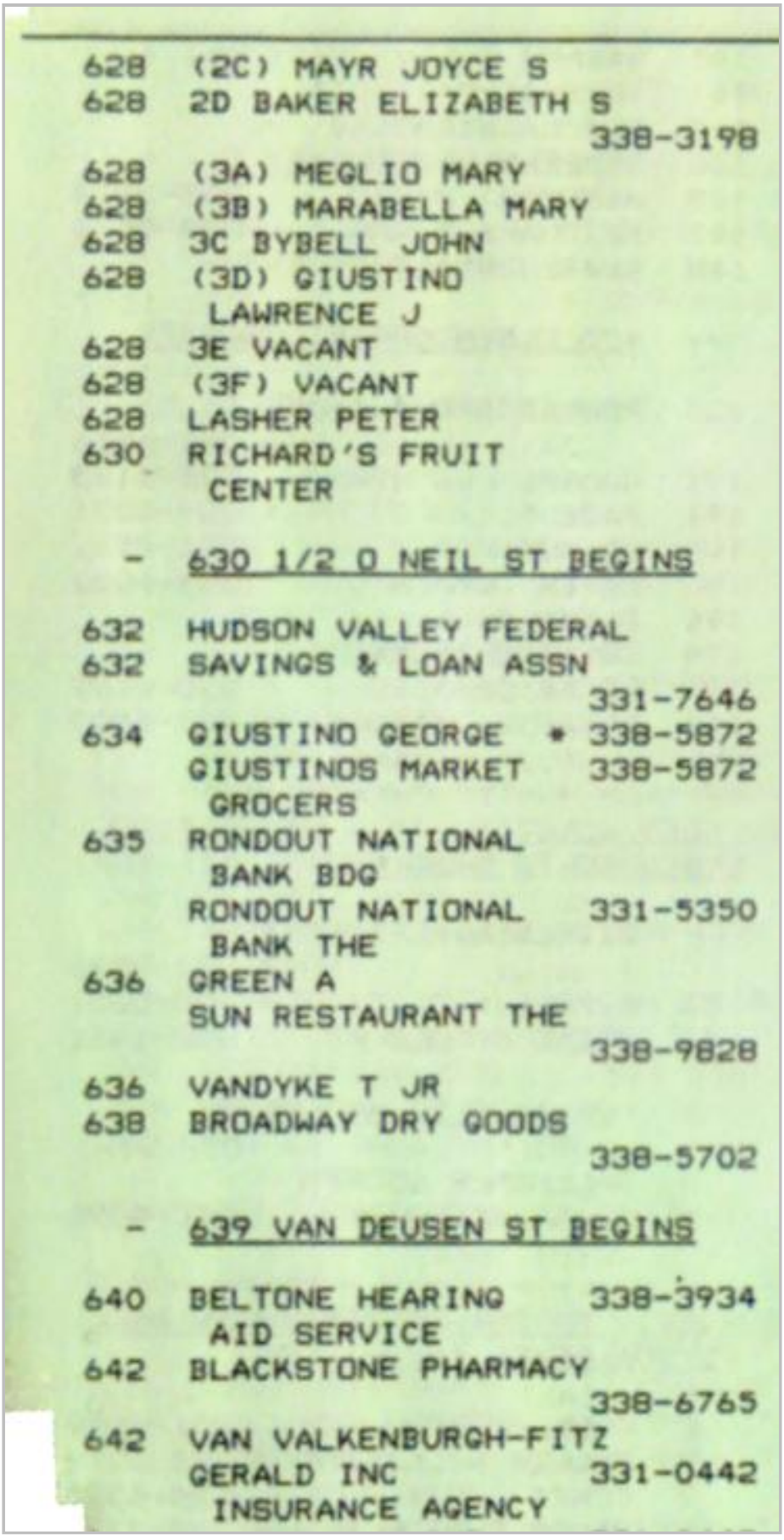
607 CENTRAL HUDSON 331-1510
GAS & ELECTRIC CORP
608 PERPETUAL MOTION
AMUSEMENTS
VACANT
609 KINGSTON CAMERA 338-3553
609 DICK'S WINDOW 338-3277
CLEANING
610 GLENNON JIM 331-0332
BONDED LOCKSMITHS
610 1/2 STATE FARM 338-5615
INSURANCE
611 IDEAL LAUNDROMAT 331-9831
612 BAXTER ORA 338-3526
612 JOW PATRICIA
612 PAUL & DORIS 331-2774
LUNCHEONETTE INC
613 CHARLIE'S TAXI 331-3424
615 VACANT
615 KING'S INN THE MOTEL
331-4360
618 CUNEOS RESTAURANT
338-9679
618 (1) VACANT
618 (2) VACANT
618 (3) VACANT
618 4 ELLSWORTH JOHN
622 PAN WHOLE FOODS 331-9598
622 1 ELLSWORTH JAMES M
622 (2) VACANT
622 3 PURDY MARGARET
622 (4) SCARFO EDWARD
339-3527
624 AMERICAN CLEANERS
338-4515
625 GASLAND 338-9472
626 BRUCK MATHILDA E INS
331-0025
626 LORDS AND LADIES 338-3336
BEAUTY SHOP

\- 627 HENRY ST BEGINS

628 PARDEE'S 331-0025
INSURANCE AGENCY
628 BROADWAY APTS
628 (2A) ADAMS 338-6006
EVELYN M MRS
628 (2B) MAYR T

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628 (2C) MAYR JOYCE S
628 2D BAKER ELIZABETH S
338-3198
628 (3A) MEGLIO MARY
628 (3B) MARABELLA MARY
628 3C BYBELL JOHN
628 (3D) GIUSTINO
LAWRENCE J
628 3E VACANT
628 (3F) VACANT
628 LASHER PETER
630 RICHARD'S FRUIT
CENTER

\- 630 1/2 O NEIL ST BEGINS

632 HUDSON VALLEY FEDERAL
632 SAVINGS & LOAN ASSN
331-7646
634 GIUSTINO GEORGE * 338-5872
GIUSTINOS MARKET 338-5872
GROCERS
635 RONDOUT NATIONAL
BANK BDG
RONDOUT NATIONAL 331-5350
BANK THE
636 GREEN A
SUN RESTAURANT THE
338-9828
636 VANDYKE T JR
638 BROADWAY DRY GOODS
338-5702

\- 639 VAN DEUSEN ST BEGINS

640 BELTONE HEARING 338-3934
AID SERVICE
642 BLACKSTONE PHARMACY
338-6765
642 VAN VALKENBURGH-FITZ
GERALD INC 331-0442
INSURANCE AGENCY

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HENRY ST 1979

HEMLOCK AV (CONT)

- 19 TUDBY ST CROSSES

21 SULLIVAN PHILIP A * 331-0409
23 NICKERSON WILLIAM J *
27 BRUCK JOSEPH G * 331-6988
35 ROEDELL FRANK T * 331-5471
25 COMARATA LENA M MRS * 331-6423

- 35 1/2 VAN GAASBECK ST
- BEGINS

37 DYMOND GEORGE W * 339-3812
41 VACANT
41 DE CICCO THOMAS EXCAVATING CONTR 331-5752
45 FATUM DENISE 338-8821
45 NORTHROP ROSE E MRS * 331-7153

- 49 E CHESTER ST CROSSES

MC COUBREY SAMUEL C * 338-2696
61 VACANT

HEMLOCK AV EXT FR 114 E CHESTER SE AND NE TO DEAD END

- MCCOUBREY SAMUEL C * 338-2696

- MILLONIG CAROL MRS

- LARSON

HENRY FR 627 BROADWAY W TO 52 WALL (RIGHT ODD)

14 SHISH-KA-BAB FASHIONS 338-2334
14 GRAND MFG CORP DRESS MFR 338-2334
16 MARTINO PAUL J 331-1402
16 LANZAFAME CARMELA MRS 331-3015
18 VACANT
19 ARACE LOUIS A * 331-8637
20 WISNESKI JOHN F * 331-4189
21 ARACE MICHAEL J * 331-8450
23 NOLAN MARIE P 338-7852
24 VACANT
24 VACANT
25 VACANT
ARACE EDWARD 338-0875
27 KUHN FLORENCE
BARBER ORVILLE C 331-2289
28 LOCKWOOD BELLE D MRS 331-2621
EGLI EDWIN
29 RICH GEORGE R * 338-6256
29 NETTI PAULINE 338-2232
30 MILLARD KATHERINE D * 331-1622
33 PETERSON NELLIE
MATSON ELIZABETH B MRS 331-1063
34 HINES JOHN 339-3287
35 GEORGIOIO GUS
36 HAYMAN WILLIAM J * 331-7070
37 GREER PHILIP E * 338-8144
37 WILTWYCK REALTY 331-8890
38 COSENZA HILDA M MRS * 331-1691
38 MCCUTCHEON KATHY 331-4330

42 FREER LUCY M MRS * 331-2757
42 KAROL WAYNE H 338-5466
43 HORNBECK MARGARET 338-7053
43 HORNBECK WILLIAM 331-3917
44 LASHER SHERWOOD F 338-7137
46 MARIAKIS GEORGE
49 MARTINO SANTA MRS 338-9417
49 PECK BRADFORD
51 RAFAILIDIS GEORGE 339-4520
51 VACANT
54 WALLACE RAYMOND 338-8875
56 CONSTANTINOU EDDY 338-1927
57 TOFFEL JOE 331-7080
57 OLSEN JAN 331-7136
58 CARBONI FRANK C * 338-2218
BROWN BETTY MRS 331-7778
59 CHAMBERLAIN DONALD
59 LINDHURST EDWIN E 338-8584

- 60 STERLING ST ENDS

ASHLEY WELDING MACHINE AND IRON CO INC 331-1652
63 VACANT
63 GEIL LECOY 338-5609
63 VACANT
65 DU BOIS CHRISTINE A MRS 331-8991
65 WILLIAMS ARTHUR L *
66 VACANT
69 STORY MINNIE C 339-5572
69 SIMMONS ROSE MRS 331-2146
70 PRESENT SOLLY C * 338-3193
DUNN ELLEN
70 AMAROSI MARTHA S MRS 331-2991
74 RYNDAK JOSEPH J * 331-9247
75 NARDI CATHERINE T MRS * 331-4557
75 NARDI VINCENT
76 VACANT
76 HUNT CHARLES 339-3484
78 VACANT
78 VACANT
79 HARTMAN JOHN J * 331-5082
82 VACANT
82 VACANT
83 VACANT
83 VACANT
86 DOUGHERTY WALTER * 331-4048
86 HYATT LAWRENCE 331-7960
88 VACANT
88 MAHONEY EDWARD P 338-7973
89 RALIS THRACIS 331-4072
89 AHO DOUGLAS 339-3105

- 89 1/2 PROSPECT ST CROSSES

90 HOUGHTALING ELTING E 339-5699
90 HOUGHTALING RAYMOND 338-2415
93 VACANT
93 ELLESWORTH ARTHUR G 339-4724
94 SMITH GERALD 338-5652
98 VACANT
98 VACANT
99 UNITARIAN FELLOWSHIP OF ULSTER COUNTY 331-2884
100 TORNATORE NADA 331-0813
102 VACANT
103 DEEGAN KATHERINE R * 331-0698
104 VACANT
106 PERRY L A 331-5440
107 MATTHEWS H E FURN RMS 331-9078
108 NESTELL CHARLES W *
110 NESTELL HERBERT W * 331-7931
112 BRANDT RONALD A 331-4026
112 VACANT

- 113 FURNACE ST BEGINS

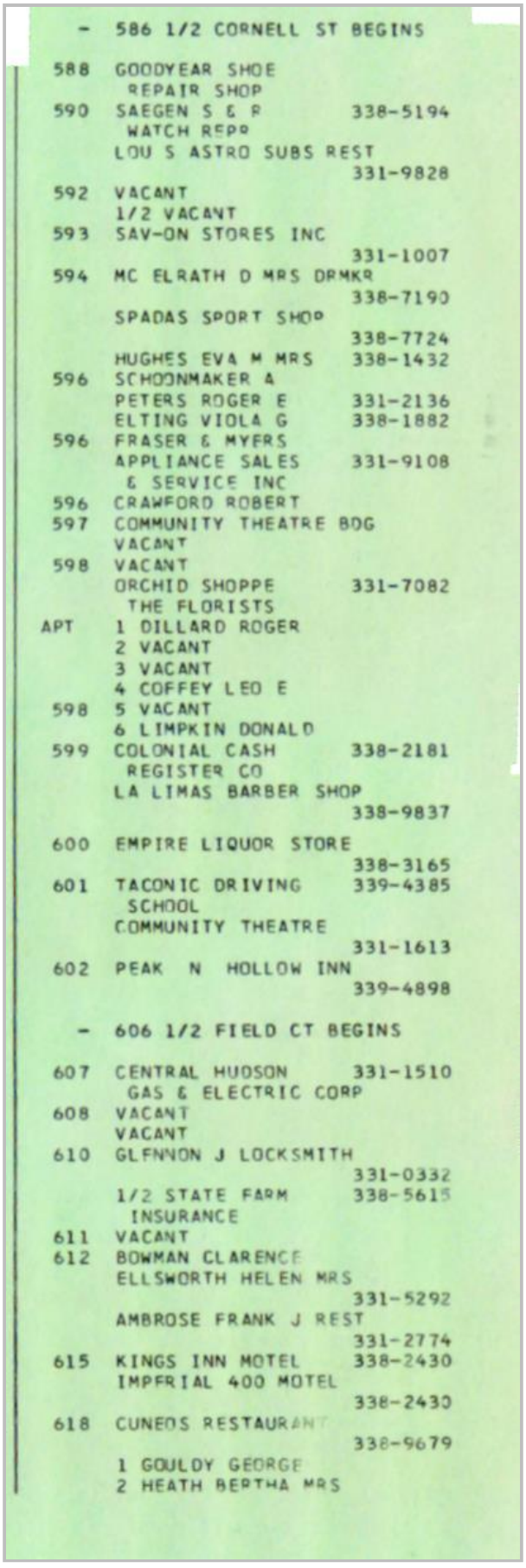
115 JONES HERBERT P 331-3873
116 ELTING ARTHUR 331-6178
117 ELTING MYRON 338-8835
120 ORLOVA TIMOTHY * 338-5582
123 MARTINO ANTHONY F 338-7796

- 133 CLINTON AV CROSSES

140 FLEMING EDWARD J * 338-8692
143 ZOLLER EDMUND G * 331-1461
144 DENNISON ROBERT F * 338-0873
147 STAUBER HANS *
147 ANKELE KLAUS * 338-3162

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  -  586 1/2 CORNELL ST BEGINS

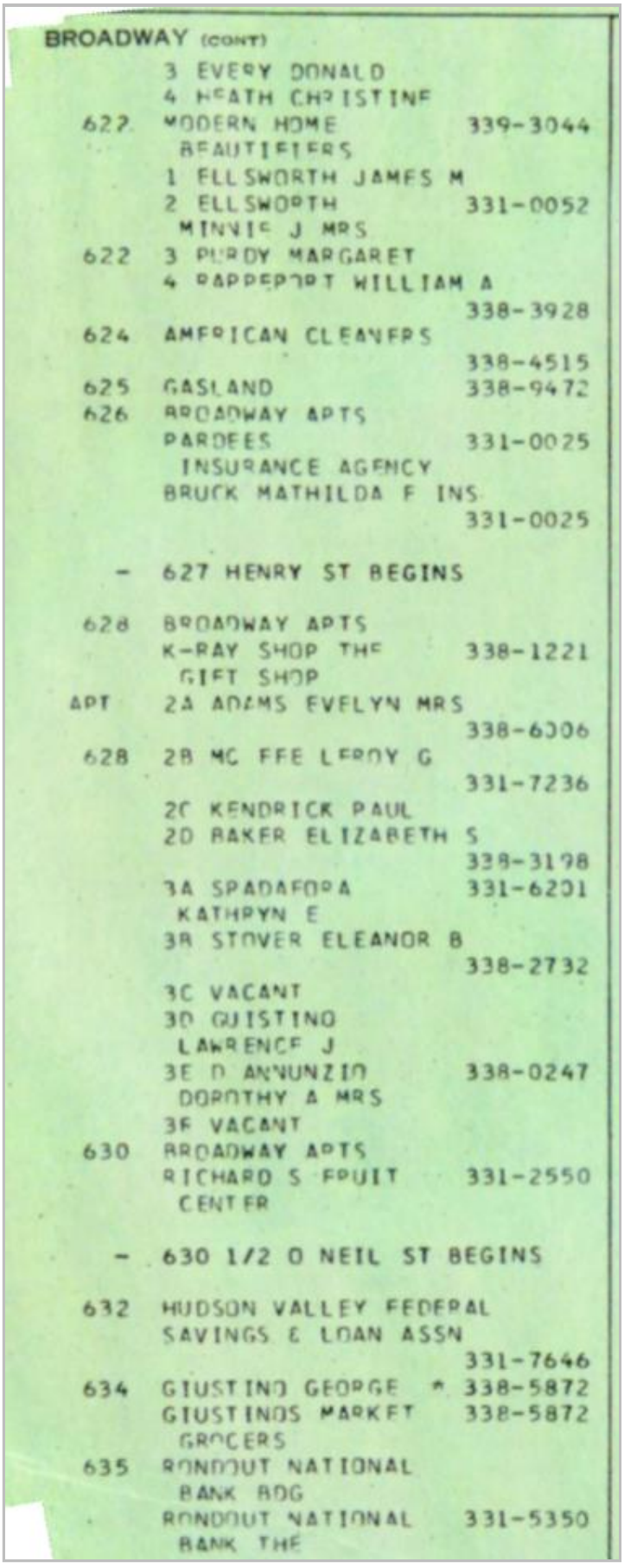
588  GOODYEAR SHOE
      REPAIR SHOP
590  SAEGEN S & R          338-5194
      WATCH REPR
     LOU S ASTRO SUBS REST
                           331-9828
592  VACANT
     1/2 VACANT
593  SAV-ON STORES INC
                           331-1007
594  MC ELRATH D MRS DRMKR
                           338-7190
     SPADAS SPORT SHOP
                           338-7724
     HUGHES EVA M MRS      338-1432
596  SCHOONMAKER A
     PETERS ROGER E        331-2136
     ELTING VIOLA G        338-1882
596  FRASER & MYERS
     APPLIANCE SALES       331-9108
      & SERVICE INC
596  CRAWFORD ROBERT
597  COMMUNITY THEATRE BDG
     VACANT
598  VACANT
     ORCHID SHOPPE         331-7082
      THE FLORISTS
APT  1 DILLARD ROGER
     2 VACANT
     3 VACANT
     4 COFFEY LEO E
598  5 VACANT
     6 LIMPKIN DONALD
599  COLONIAL CASH         338-2181
      REGISTER CO
     LA LIMAS BARBER SHOP
                           338-9837
600  EMPIRE LIQUOR STORE
                           338-3165
601  TACONIC DRIVING       339-4385
      SCHOOL
     COMMUNITY THEATRE
                           331-1613
602  PEAK  N  HOLLOW INN
                           339-4898

  -  606 1/2 FIELD CT BEGINS

607  CENTRAL HUDSON        331-1510
      GAS & ELECTRIC CORP
608  VACANT
     VACANT
610  GLENNON J LOCKSMITH
                           331-0332
     1/2 STATE FARM        338-5615
      INSURANCE
611  VACANT
612  BOWMAN CLARENCE
     ELLSWORTH HELEN MRS
                           331-5292
     AMBROSE FRANK J REST
                           331-2774
615  KINGS INN MOTEL       338-2430
     IMPERIAL 400 MOTEL
                           338-2430
618  CUNEOS RESTAURANT
                           338-9679
     1 GOULDY GEORGE
     2 HEATH BERTHA MRS
```

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BROADWAY 1973



BROADWAY (CONT)

3 EVERY DONALD
4 HEATH CHRISTINE
622 MODERN HOME 339-3044
BEAUTIFIERS
1 ELLSWORTH JAMES M
2 ELLSWORTH 331-0052
MINNIE J MRS
622 3 PURDY MARGARET
4 RAPPEPORT WILLIAM A
338-3928
624 AMERICAN CLEANERS
338-4515
625 GASLAND 338-9472
626 BROADWAY APTS
PARDEES 331-0025
INSURANCE AGENCY
BRUCK MATHILDA F INS
331-0025

\- 627 HENRY ST BEGINS

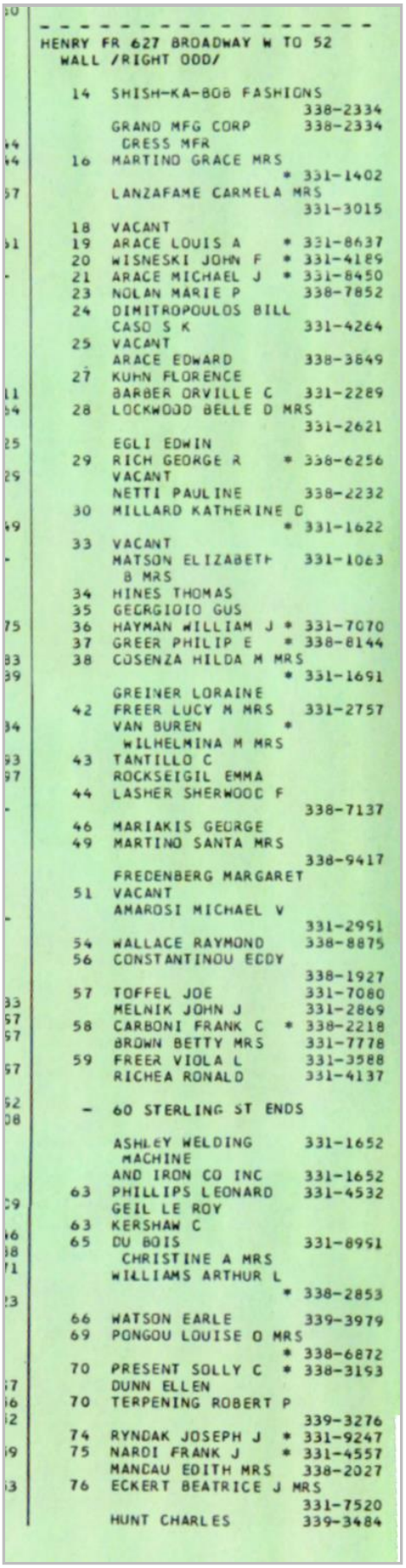
628 BROADWAY APTS
X-RAY SHOP THE 338-1221
GIFT SHOP
APT 2A ADAMS EVELYN MRS
338-6006
628 2B MC FEE LEROY G
331-7236
2C KENDRICK PAUL
2D BAKER ELIZABETH S
338-3198
3A SPADAFORA 331-6201
KATHRYN E
3B STOVER ELEANOR B
338-2732
3C VACANT
3D GIUSTINO
LAWRENCE J
3E D ANNUNZIO 338-0247
DOROTHY A MRS
3F VACANT
630 BROADWAY APTS
RICHARD S FRUIT 331-2550
CENTER

\- 630 1/2 O NEIL ST BEGINS

632 HUDSON VALLEY FEDERAL
SAVINGS & LOAN ASSN
331-7646
634 GIUSTINO GEORGE * 338-5872
GIUSTINOS MARKET 338-5872
GROCERS
635 RONDOUT NATIONAL
BANK BDG
RONDOUT NATIONAL 331-5350
BANK THE

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HENRY ST 1973



HENRY FR 627 BROADWAY W TO 52
WALL /RIGHT ODD/

14 SHISH-KA-BOB FASHIONS 338-2334
GRAND MFG CORP 338-2334
DRESS MFR
16 MARTINO GRACE MRS * 331-1402
LANZAFAME CARMELA MRS 331-3015
18 VACANT
19 ARACE LOUIS A * 331-8637
20 WISNESKI JOHN F * 331-4189
21 ARACE MICHAEL J * 331-8450
23 NOLAN MARIE P 338-7852
24 DIMITROPOULOS BILL
CASO S K 331-4264
25 VACANT
ARACE EDWARD 338-3849
27 KUHN FLORENCE
BARBER ORVILLE C 331-2289
28 LOCKWOOD BELLE D MRS 331-2621
EGLI EDWIN
29 RICH GEORGE R * 338-6256
VACANT
NETTI PAULINE 338-2232
30 MILLARD KATHERINE D * 331-1622
33 VACANT
MATSON ELIZABETH B MRS 331-1063
34 HINES THOMAS
35 GEORGIOIO GUS
36 HAYMAN WILLIAM J * 331-7070
37 GREER PHILIP E * 338-8144
38 COSENZA HILDA M MRS * 331-1691
GREINER LORAINE
42 FREER LUCY M MRS 331-2757
VAN BUREN * WILHELMINA M MRS
43 TANTILLO C
ROCKSEIGIL EMMA
44 LASHER SHERWOOD F 338-7137
46 MARIAKIS GEORGE
49 MARTINO SANTA MRS 338-9417
FREDENBERG MARGARET
51 VACANT
AMAROSI MICHAEL V 331-2991
54 WALLACE RAYMOND 338-8875
56 CONSTANTINOU EDDY 338-1927
57 TOFFEL JOE 331-7080
MELNIK JOHN J 331-2869
58 CARBONI FRANK C * 338-2218
BROWN BETTY MRS 331-7778
59 FREER VIOLA L 331-3588
RICHEA RONALD 331-4137

\- 60 STERLING ST ENDS

ASHLEY WELDING MACHINE 331-1652
AND IRON CO INC 331-1652
63 PHILLIPS LEONARD 331-4532
GEIL LE ROY
63 KERSHAW C
65 DU BOIS CHRISTINE A MRS 331-8951
WILLIAMS ARTHUR L * 338-2853
66 WATSON EARLE 339-3979
69 PONGOU LOUISE O MRS * 338-6872
70 PRESENT SOLLY C * 338-3193
DUNN ELLEN
70 TERPENING ROBERT P 339-3276
74 RYNDAK JOSEPH J * 331-9247
75 NARDI FRANK J * 331-4557
MANCAU EDITH MRS 338-2027
76 ECKERT BEATRICE J MRS 331-7520
HUNT CHARLES 339-3484

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BROADWAY 1968

BROADWAY (Continued)

528 BROADWAY NEWS SHOP 331-9829
537 RAPP JOHN M VAN LINES INC STORAGE 338-4862
541 KINGSTON MODEL RAILROAD CLUB

543 PC RR CROSSES

545R GROVES JOHN T GENERAL TRUCKING CO INC 338-2972
KINGSTON TERMINAL WAREHOUSE 338-2972
VACANT

547 GREENKILL AV BEGINS
550 RAILROAD AV BEGINS

562 ARACE APPLIANCES 331-0569

564 1/2 THOMAS ST BEGINS

572 VACANT
572-574 ULSTER ELECTRIC SUPPLY CO INC 331-5653
575 GOLDFARB GEORGE GASOLINE 338-3905
GUARANTEE RADIATOR WORKS 338-3905
VACANT
576 SACCOMANS JEWELERS INC 331-6770
VACANT
578 BERINATO CHARLOTTE 338-3759
MARTIN ALEXANDER J
KUGE GEORGE T 331-3466
VACANT
FISCHANG KATHRYN W MRS 331-8906
ELLSWORTH FRANCES MRS 331-2194
OLSEN GEORGE O 338-1257
580 JOHNSON PAUL OPTOMETRIST 331-0870
IDEAL TONSORIAL PARLOR 338-1190
581 JACKSON LOUIS 331-2943
JACKSON EMMETT C 331-2889
SANFORD JOHN
JACKSON ROSA B MRS 331-7112
KINGSTON CHINA AND BAR SUPPLY CO 331-0824
582 BOYCE HENRY 331-7490
TONYS PIZZERIA REST 331-3918
583 VAN TASSELL WALLPAPER PAINTS INC 331-2778
VACANT

583 1/2 CEDAR ST BEGINS

584 KETTERERS BAKERY 338-1580
585 VACANT
586 FRANKS RESTAURANT 331-9210

586 1/2 CORNELL ST BEGINS

588 GOODYEAR SHOE REPAIR SHOP
589 BONNIES RESTAURANT 331-9839
590 SAEGEN S & R WATCH REPR 338-5194
592 PICCADILY RESTAURANT 338-9856
VACANT
592 1/2 VACANT
593-595 VACANT
594 MC ELWORTH D MRS DRMKR 338-7190
SPADAS SPORTS SHOP 338-7724
BECHTOLD ALFRED N 338-2668
596 GRAY RADERICK S
PETERS ROGER E 331-2136
ELTING VIOLA G 338-1882
FRASER & MYERS APPLIANCE SALES & SERVICE INC 331-9108
597 COMMUNITY THEATRE BDG
VACANT
598 SACCOMAN ANTHONY P F BARBER
BROADWAY FLORIST 338-6270
COLDER CALVIN
599 VACANT
600 EMPIRE LIQUOR STORE 338-3165
601 KINGSTON BROADCASTERS INC 331-1496
WKNY BROADCASTING STUDIO 331-1490
COMMUNITY THEATRE 331-1613
APT 1 VACANT
2-3 VACANT
4 VACANT
6 VACANT
7 VACANT
9 VACANT
602 CASABLANCA RESTAURANT 338-2518
603 VACANT
605 VACANT

606 1/2 FIELD CT BEGINS

607 CENTRAL HUDSON GAS & ELECTRIC CORP 331-1510
608 DWYER BROS SHIP CHANDLERS 331-0154
NEW HOTEL
VACANT
610 GLENNON J LOCKSMITH 331-0332
610 1/2 STATE FARM INSURANCE 338-5615
611 O REILLY WILLIAM INC OFFICE SUPPLIES 331-1500
612 O RIELLEY THOMAS P 338-4921
AMBROSE FRANK J REST 338-8470
614 FARRELL J JOSEPH CIGARS 338-9837
VACANT
615 LAWRENCE MAX 338-2430
IMPERIAL 400 MOTEL 338-2430
616 PHOTO WORKSHOP PHOTOGRAPHERS 338-5208
618 CUNEOS RESTAURANT 338-9679
VACANT
APT 1 DECKER MARGARET 331-1979
3 WEIKS MARY MRS
4 VACANT
622 CITY TV AND APPLIANCES 331-4230
APT 1 BRENNAN WILLIAM C 331-3677
2 COLLINS IRENE K MRS
3 REDDEN HELEN M MRS 338-9374
4 OSTERHOUDT ALICE I 331-6627
624 AMERICAN CLEANERS & DYERS 338-4515
625 THOMPSON HARVEY L GASOLINE 338-3366
626-630 BROADWAY APTS
626 BUDDENHAGEN CLARENCE H INS 331-0025
PARDEES INSURANCE AGENCY 331-0025
BRUCK MATHILDA E INS 331-0025
VACANT

627 HENRY ST BEGINS

628 BROADWAY APTS
VACANT
APT 2A ADAMS EVELYN MRS 338-6006
2B WADE HELEN T MRS 331-3225
2C AUCLAIR SADIE MRS 338-3475
2D DECKER LAWRENCE
3A CHILDS BARBARA J MRS
3B FAGAN BLONDINE
3C ALAGNA KATHLEEN 331-4072
3D D AQUILA DARLENE
3E PATEL HARESH C
3F WOLERSHEIM CATHERINE
630 BROADWAY APTS
MARY CARTER PAINTS 331-0860

630 1/2 O NEIL ST BEGINS

632 DECKER AGNES V MRS 331-4491
DECKER JAMES K
FIRST FEDERAL SAVINGS LOAN ASSN OF KINGSTON 331-0254
634 GIUSTINO GEORGE ◻ 338-5872
GIUSTINOS MARKET GROCERS 338-5872
635 RONDOUT NATIONAL BANK BDG
RONDOUT NATIONAL BANK THE 331-5350
PRUDENTIAL INSURANCE CO OF AMERICA 338-6640
636 KILMER CHESTER G 338-7311
RAUERETO RAFFAETE 331-1428
SUN RESTAURANT THE 338-9828
KILMER MAUDE S MRS 338-7311
VACANT
638 BROADWAY DRY GOODS 338-5709

639 VAN DEUSEN ST BEGINS

640 VACANT
642 BLACKSTONE PHARMACY 338-6765
VACANT
644 VACANT
644 1/2 VACANT
646 VAN ETTEN CATHERINE MRS 331-8875
CENTRAL BARBER SHOP
648 ARMSTRONG R ANTIQUES
649 LEWISS TEXACO STATION 331-7194
650 SMITH LUCY MRS
BUSHEY EILEEN MRS
OTTO ALFRED E CONF 338-9877
652 DAVIDE THEODORE
MC CUE JAMES P 338-4841
RIENZOS DELICATESSEN 338-9685
654 AIM TO PLEASE RESTAURANT 338-9637
656 MARKLE ARTHUR E CIGARS TOBACCOS

657 VAN BUREN ST BEGINS

658 VACANT
661 SCHOLAR J INC ELEC EQUIPMENT 331-2230
2D FL VACANT
662 VACANT
VAN VALKENBURGH-FITZ GERALD INC INSURANCE AGENCY 331-0442
BECKS BROADWAY MARKET MEATS GROCERS 338-4300
MAURER EDGAR M INS BROKER 331-0442
BAYNARD LINA MRS
664 VACANT

654 1/2 DOWNS ST BEGINS

666 BACKMAN DOROTHY M MRS
WESTFALL EDNA MAE MRS
VACANT
WEST EDITH A MRS
ALEXANDER RICHARD A 331-3240
NO LISTING
BALASH EDNA MAE MRS
666-668 MID-TOWN CHOP HOUSE RESTAURANT 338-9817
669 VACANT

Target Street	Cross Street	Source
-	✓	Price and Lee Co

HENRY ST 1968

HEMLOCK AV FR 60 CLIFTON AV SE BEY E CHESTER TO 5 WOODLAND AV /RIGHT EVEN/

10 BLISS CHESTER S 338-7500
11 RIEKER G M ◻ 338-5297
RIEKER E M MRS REAL EST 338-5297
RIEKER GEORGE M & SONS INC BUILDERS 338-5297
12 EDE CLARK 331-2992
15 SWEENEY J J TCHR MUSIC ◻ 338-5543

19 TUBBY ST CROSSES

21 SULLIVAN PHILIP A ◻ 331-0409
23 NICKERSON WILLIAM J ◻ 338-4246
27 RAMBAZIS CHRISTOS A ◻ 338-3610
35 ROEDELL FRANK T ◻ 331-5471
25 COMARATA LENA M MRS ◻ 331-6423

35 1/2 VAN GAASBECK ST BEGINS

37 DYMOND GEORGE W 331-5397
41 KNETSCH THEODORE F ◻ 338-3298
HAINES MARTHA W MRS
45 SICKLER MICHAEL R
NORTHROP FREDERICK H ◻ 331-7153

49 E CHESTER ST CROSSES

61 MILLONIG HENRY F ◻ 331-0672

89 WOODLAND AV BEGINS

HENRY FR 627 BROADWAY W TO 52 WALL /RIGHT ODD/

14 FIL JON MFG CO CLOTHING 338-2334
16 MARTINO GRACE MRS ◻ 331-1402
LANZAFAME JESS F P 331-3015
19 ARACE LOUIS A ◻ 331-8637
20 WISNESKI JOHN F ◻ 331-4189
VACANT
21 ARACE MICHAEL J ◻ 331-8450
23 ARACE EDWARD 338-3849
24 KOLTS FRANCES MRS 331-5381
NICOLOSI VINCENT 338-4651
25 KAKOWELI NICOS
VACANT
27 KUHN FLORENCE
BARBER ORVILLE C 331-2289
28 LOCKWOOD BELLE D MRS NURSE 331-2621
EGLI EDWIN
VACANT
29 RICH GEORGE R ◻ 338-6256
CASTIGLIONE ROSA MRS
30 MILLARD KATHERINE D ◻ 331-1622
O BRIEN ANNA B MRS
33 KAROL RUTH MRS 338-5466
MATSON ELIZABETH B MRS 331-1063
34 VACANT
35 GEORGOU COSTAS 331-5297
VACANT
36 HAYMAN WILLIAM J ◻ 331-7070
37 GREER PHILIP E ◻ 338-8144
38 COSENZA HILDA M MRS ◻ 331-1691
GREINER LORAINE
42 FREER J ADDISON ◻ 331-2757
VAN BUREN WILHELMINA M MRS ◻
43 MEASTER LOUISE E ◻ 338-8504
JONES ETHEL M MRS 331-0761
44 LASHER SHERWOOD F 338-7137
46 GOLGOSKI PETER J ◻ 331-3682
49 MARTINO ANTONIO ◻ 338-9417
TRANKER EDWARD 331-4057
51 VOGEL FLORENCE ◻ 331-0056
AMAROSI MICHAEL V 331-2991
54 WALLACE RAYMOND 338-8875
56 VACANT
57 TOFFEL JOE 331-7080
VACANT
58 CARBONI FRANK C ◻ 338-2218
WHITAKER ROBERT L 338-4768
59 FREER VIOLA L 331-3588
VACANT

60 STERLING ST ENDS

ASHLEY WELDING MACHINE AND IRON CO INC 331-1652
63 MARTINI JULIUS W 331-7175
VACANT
65 DU BOIS CHRISTINE A MRS 331-8991
WILLIAMS ARTHUR L 338-2853
66 SAMPLY JOHN W
69 PANAGOU LOUISE MRS ◻ 338-6872
70 PRESENT SOLLY C ◻ 338-3193
MERIKLE GRACE H MRS
BURR BERTRAND S
74 RYNDAK JOSEPH J ◻ 331-9247
75 NARDI F J HEATING OILS ◻ 331-4557
MANDAU EDITH MRS 338-2027
76 MASON CHARLES W 338-9281
78 DREISER PHILIP A 338-9225
RIKER GUSSIE MRS 331-8942
79 HARTMAN JOHN J ◻ 331-5082
82 ATKINS ALBERT H 338-3109
VAN AKEN VICTORIA MRS 331-1912
83 HARTMANN GEORGE M ◻ 331-4872
FEENEY DORIS A 331-1130
86 DOUGHERTY WALTER 331-4048
LOCKE LESTER E 338-1423
88 BOENIGER JOHN J ◻ 331-0135
STRAUD WARA E MRS
89 THORN HAROLD V ◻ 338-6001

89 1/2 PROSPECT ST CROSSES

90 RELYEA LENVILLE 338-7850
93 MYERS JESS W
ELLESWORTH ARTHUR G 331-4744
98 KORNEMANN HERBERT H 331-7964
VIZDOS KENNETH 331-2294
99 MC CARDLE F J FUNERAL DIR ◻ 331-3272
100 DEMAND K WATCH REPR 331-0675
102 HAGGINS HELEN C MRS 331-1831
103 DEEGAN KATHERINE R ◻ 331-0698
104 FULLER JENNIE B 338-5897
106 WELSH JAMES
107 MATTHEWS R E MRS FURN RMS ◻ 331-9078
MATTHEWS HILTON E 331-9078
MILLER JAMES J 338-4463
108 NESTELL CHARLES W ◻ 331-3540
110 NESTELL HERBERT W ◻ 331-2812
TEL-RAD CO TV SETS 331-2812
112 WOLFERSHEIM ALTANA MRS ◻ 338-2824
WEBER CAROLINE 338-5686

113 FURNACE ST BEGINS

115 JONES HERBERT P 331-3873
116 ELTING ARTHUR 331-6178
117 ELTING MYRON 338-8835
120 SHULTIS A H REV ARTIST ◻ 338-2869
123 MANFRO CHARLES V ◻ 338-2632

133 CLINTON AV CROSSES

140 FLEMING EDWARD J ◻ 338-8692
143 ZOLLER EDMUND G ◻ 331-1461
144 WYNKOOP ELLEN ◻ 331-4767
147 STAUBER HANS
ANKELE KLAUS 338-3162
DEYO ELLA
MELLERT LEO J 331-8114
FIELDS MARY E 331-0117
148 BURNS JOHN F 3D 338-0817
152 HAZENBUSH ARTHUR C ◻ 331-0096
153 VAN BUREN JOSEPH 338-2809
OPPENHEIMER MYRON A 338-5484
154 STRUBER LE ROY ◻

155 OAK ST BEGINS

157 CARLE JASON E ◻ 331-5055
CONSTABLE FRANKIE E MRS 338-3253
158 WU CHANG YU 338-4746
161 SCHULTZ BERNARD J ◻ 331-8127
163 BITTNER JOHN R 331-7928
164 WILLIAMS ASA E ◻ 338-6687
166 BARRINGER GEORGE B JR
167 VAN VLIET ELIZABETH C NURSE ◻ 331-9055
169 METCALF HAROLD D ◻ 338-4372
170 VACANT
171 BURGESS ETHEL N
THOMPSON KATHRYN MRS
VACANT
173 FREER HELEN M MRS 331-0077
WILSON FLORENCE MRS 338-6264
METCALF RICHARD B 331-7920

173 1/2 PINE ST CROSSES

175 MARTINI HENRY G ◻
177 CHRISEY E PLUMBER ◻ 338-6199
VACANT
179 CLAIR JACK H 338-2780
KLAVA LISA MRS 331-6117
180 VACANT
184 ECKERT WALTER L
187 TOMSHAW TIBER ◻ 331-1236
188 DAVIS ALFRED A 331-7636

192 SCHRYVER CT ENDS

196 MAUTNER JOSEPH P ◻ 338-4824
200 VACANT
202 SHEELEY JACK H

203 FAIR ST CROSSES

206 MC NALLY JOHN ◻ 331-1469
BESSIES BEAUTY SHOP 331-1469

HEWITT PL FR 62 1/2 LINDERMAN AV SE TO CONWAY PL /RIGHT ODD/

2 STAUDT EDWARD J ◻ 331-2087
11 VAN DERBURGH STELLA M MRS ◻ 338-3288
12 NESSEL WILLIAM G 331-9505
VACANT
14 BROOKS M T NURSE 338-3355
15 GARRITY RUTH E 331-3094
16 BIRMINGHAM DOROTHY 338-5509
18 WILEY ROBERT M ◻ 331-0940
19 ROOSA EDNA L MRS ◻ 338-8025
20 STAHL OTTO ◻ 331-3827
21 JORDAN ROBERT J ◻ 331-9199

22 CONWAY PL ENDS

23 SETERA JOSEPH F ◻ 338-3223

HIGH FR 150 SECOND AV SE TO 141 THIRD AV /RIGHT EVEN/

11 TOMMYS RESTAURANT 338-2715

HIGHLAND AV FR SE OF HASBROUCK PL NW TO 66 FOXHALL AV /RIGHT EVEN/

60 SHULTS J RICHARD ◻ 338-6140

Target Street	Cross Street	Source
✓	-	Price and Lee Co

BROADWAY 1964

Ellsworth Frances Mrs 331-2194
579 Kingston China and Bar Supply Co storage
580 Ideal Tonsorial Parlor 338-1190
Johnson Poptometrist 331-0870
581 Kingston China and Bar Supply Co 331-0824
Mosley Essie G Mrs
Jackson Emmett C 331-2889
Jackson Louis 331-2943
Jackson Rosa Mrs 331-7112
582 Boyce Henry 331-7490
Tony's Pizzeria tavern 331-3918
583 VanTassell Wallpaper & Paints Inc 331-2778
Vacant

583½ CEDAR ST begins

584 Ketterer's Bakery 338-1580
585 Trudi Drug Co 331-7043
586 Frank's Restaurant 331-9210

586½ CORNELL ST begins

588 Pulvirenti J shoe repr
589 Bonnie's Restaurant 331-9839
590 Seagen S & R watch repr 338-5194
591 Vacant
Becker Bernhard
591½ Hornbeck Alice R Mrs 331-6498
592 Vacant
Piccadily Restaurant 338-9850
592½ Krayem K G barber
593 Plaidland stamp redemption store 338-5583
594 Spada's Sport Shop 338-7724
Eigo John L
Hudson Katherine Mrs 331-6999
596 Coryea Helen H Mrs 331-1139
Peters Roger E 331-2136
White Isabelle Mrs
Elting Viola G 331-1882
Vacant
597 Community Theatre Bdg
Air Force Recruiting Service 338-5516
598 Broadway Florist 338-6270
Saccoman A P F barber
Vacant
Vacant
599 Reynolds Tom Photographer 331-5039
600 Empire Liquor Store 338-3165
601 Community Theatre 331-1613
WKNY broadcasting studio 331-1490
(1) Vacant
(2) Vacant
(3) Vacant
(4) Vacant
(6) Vacant
(7) Vacant

Target Street	Cross Street	Source
✓	-	Price and Lee Co

BROADWAY 1964

BROADWAY (CONTINUED)

(9) Vacant
602 Casablanca Restaurant 338-2518
603 Vacant store
605 Capital Cleaners 338-3543

606½ FIELD CT begins

607 Central Hudson Gas & Electric Corp 331-1510
608 Holland House hotel 331-9794
Dwyer Bros Inc paint 331-0154
Dwyer Lighterage Inc 331-0154
610 Vacant
610½ Vacant store
611 O'Reilly William Inc office equipment 331-1500
612 Ambrose F J rest 338-8470
Wastzka Alice
Ambrose Frank Jr
613 (1) Allen Dorothy N Mrs 331-2308
(2) Taylor Isiac 338-8145
(3) Vacant
(4) Bassett Gail 331-3496
(5) VanDyke Henrietta Mrs 331-0098
(6) Stanford John A 331-8903
(7) Vacant
(8) VanDyke Daniel D
614 Vacant
Farrell J J cigars 338-9837
616 Photo Workshop photos 338-5208
618 Cuneo's Restaurant 338-9679
Vacant
(1) Decker Margaret 331-1979
(2) Duhaski Margaret Mrs 338-3496
(3) Weiks Mary Mrs
(4) Vacant
621 Vacant store
Butler Jacob A 331-7996
Van Eatten
Johnson Anna G Mrs
622 Miller Electric appliances 338-8811
(1) Vacant
(2) Collins Irene Mrs 331-4302
(3) Erickson Fred 331-4043
(4) Osterhoudt Alice I 331-6627
624 Vacant
625 Thompson H L gasoline 338-3366
626-630 Broadmar Apts
626 Pardee's Insurance Agency 331-0025
Bruck M E ins
Buddenhagen C H ins

627 HENRY ST begins

628 First Federal Savings & Loan Assn of Kingston 331-0254
Broadmar Apts
(2A) Cappo Henry D 338-3937
(2B) Wade Helen T Mrs 331-3225
(2C) Vacant
(2D) Hammond Georgia Mrs 338-1650
(3A) Vacant
(3B) Melgar Carmen N 338-3938
(3C) Vacant
(3D) Viglielmo Louise Mrs
(3E) Vacant
(3F) Vacant

630½ O'NEIL ST begins

632 Bowen Norman H 338-4376
Decker Agnes V Mrs 331-4491
Wilde Bert Inc tires 331-0072
634 Giustino's Market grocers 338-5872
Vacant
◎ Giustinos George 338-5877
635 Rondout National Bank Bdg
Prudential Ins Co of America 338-6640
Rondout National Bank The 331-5350
636 Sun Restaurant 338-8297
Vacant
Kilmer Chester G 338-7311
Vacant
638 Broadway Dry Goods 338-5709

639 VAN DEUSEN ST begins

640 Vacant
642 Blackstone Pharmacy 338-6765
642½ Oliver's PFAFF Sewing Center 338-7494
644 Empire Cleaners & Dyers Co
◎ Worman Tillie Mrs
644½ Newman Loretta Inc real est 338-1577
646 Central Barber Shop
Vacant
648 Armstrong R antiques
Armstrong Robert
649 Temple Texaco 331-9541
650 Vacant
Otto A E conf 338-9877
652 Riengo's Delicatessen 338-9685
Weiss Albert L
654 Aim to Please Restaurant 338-9780
656 Markle A E cigars

657 VAN BUREN ST begins

658 Ellsworth J A rest
661 Scholar Joseph & Son elec equipment 331-2230

Target Street	Cross Street	Source
-	✓	Price and Lee Co

HENRY ST 1964

HENRY (CONTINUED)

14 Vacant
Fil Jon Mfg Co
16◎ Martino Joseph 331-1402
Lanzafame Jess F P 331-3015
19◎ Arace L A 331-8637
20◎ Wisneski John F 331-4189
Vacant
21◎ Arace Michael J 331-8450
23 Tornatore Sal 338-6731
24◎ Panteli Chris 338-2882
Vacant
25 Vacant
Barber Orville C 331-2289
27 Kuhn Florence
28◎ Lockwood B D Mrs nurse 331-2621
Lahl Frederick
Egli Edwin
29◎ Rich George R 338-6256
Castiglione Rosa Mrs
30◎ Millard K D 331-1622
O'Brien Anna B Mrs
33 Matson Rudolph W 331-1063
◎ Richards Emma M Mrs 331-4535
34 Vacant
35 Georgou Costas 331-5297
Vacant
36◎ Hayman W J 331-7070
37◎ Greer Philip E 338-8144
38◎ Cosenza Hilda M Mrs 331-1691
Greiner Lorraine
42◎ Freer J Addison 331-2757
VanBuren Harry C
43◎ Measter Louise E 338-8504
Jones Ethel M Mrs 331-0761
44 Lasher Sherwood F 338-7137
46◎ Golgoski P J 331-3682
49 Tranker Edward 331-4057
◎ Martino Antonio 338-9417
51◎ Vogel Florence 331-0056
Vacant
54◎ Mehm Marguerite O Mrs 331-4539
56◎ O'Brien F C Mrs 338-2072
Vacant
57 Toffel Joe 331-7080
Davis Joseph M 338-9296
58◎ Carboni Frank C 338-2218
Whitaker Robert L
59 Vacant
◎ Fout Carolyn M 331-3588

60 STERLING ST ends

63 Martini Julius W 331-7175
Welch Albert J 338-9229
Wolven John F 338-4865
-- Ashley Welding Machine and Iron Co Inc 331-1652
65 Williams Arthur L 338-2853
DuBois C A Mrs
66 Samply John W 331-5062
69◎ Panagou Louise O Mrs 338-6872
Vacant
70 Present Solly C 338-3193
Burr Bertrand S
Merikle Grace H Mrs
74◎ Ryndak Joseph J 331-9247
75◎ Nardi F J oil burners 331-4557
Mandau Edith Mrs 338-2027
76 Mayr Robert P 331-6062
78 Vacant
Dreiser Philip A 338-9225
79◎ Hartman John J 331-5082
82 Atkins Albert H 338-3109
VanAken Victoria Mrs 338-1912
83◎ Hartmann George M 331-4872
Manning Elizabeth Mrs 338-4011
86 Locke Lester E 338-1423
Dougherty Walter 331-4048
88◎ Boeniger John J 331-0135
Straub Wara E Mrs
89◎ Thorn Harold V 338-6001

89 PROSPECT ST crosses

90◎ Satterlee Elizabeth 338-8062
93 Tubby James G
Myers Jess W 338-4325
94 DePuy Myron D 331-4731
98 Kaufann Alida Mrs
◎ Shaw Myles O Jr 338-3671
99◎ McCardle F J funeral dir 331-3272
100 Demand Kurt 331-0675
102 Haggins Helen C Mrs 331-1831
103◎ Deegan K R 333-0698
104 Fuller Jennie B 338-5897
106 Vacant
107◎ Matthews R E Mrs furn rms
Heiser Ralph
Matthews Hilton E 331-9078
108◎ Nestell Charles W 331-3540
110 Tel-Rad Co TV 331-2812
Nestell Herbert W 331-2812
112◎ Wolfersheim A H 338-2824
Weber Caroline 338-5686

113 FURNACE ST begins

115 Jones Herbert P 331-3873
116◎ Aldrich Frank 338-2638
117 Elting Myron 338-8835
120◎ Shultis A H Rev artist 338-2869
123◎ Manfro Charles V 338-2623

133 CLINTON AV crosses

140◎ Fleming Edward J 338-8692
143◎ Zoller Edmund G 331-1461
144◎ Wynkoop Ellen 331-4767
147 Ankele Klaus 338-3162
Stauber Hans
Diamond Henry 338-4270
Deyo Ella
Fields Mary E 331-0117
148 Burns John R 3d 338-8712
152◎ Hazenbush Arthur C 331-0096
153 VanBuren Joseph 338-2809
Oppenheimer Myron C 338-5484

Target Street	Cross Street	Source
-	✓	Price and Lee Co

HENRY ST 1964

HENRY (CONTINUED)

154◎ Struber LeRoy
155 OAK ST begins
157◎ Carle Jason E 331-5055
Constable Frankie E Mrs 338-3253
Vacant
158 Vacant
161◎ Schultz Benard J
163 Bittner John R 331-7928
164◎ Williams Asa E 338-6687
166 Barringer George B Jr 338-9435
167◎ VanVliet E C nurse 331-9055
169◎ Metcalf Harold D 338-4372
170 Wells Richard W
Pabon Ralph
171 Burgess Ethel N
Mellert Leo J 331-8114
Thompson Kathryn Mrs
173 Wilson Florence Mrs 338-6264
Freer Helen M Mrs 331-0077
Vacant
173½ PINE ST crosses
175◎ Martini Henry G 338-3704
177◎ Chrisey E plumber 338-6199
Post Joan E 338-7841
179 Klava Lisa Mrs 331-6117
Vacant
180 Vacant
184◎ Katsoulis Nicholas Rev 331-1743
Slater Mary F Mrs
187◎ Tomshaw Tibor 331-1236
188◎ Scully Phyllis A Mrs 338-4767
192 SCHRYVER CT ends
196◎ Mautner Joseph P 338-4824
200 Kupec George W 331-2933
202 Sheeley Jack H
203 FAIR ST crosses
206 Griffin G Jr real est 338-5180

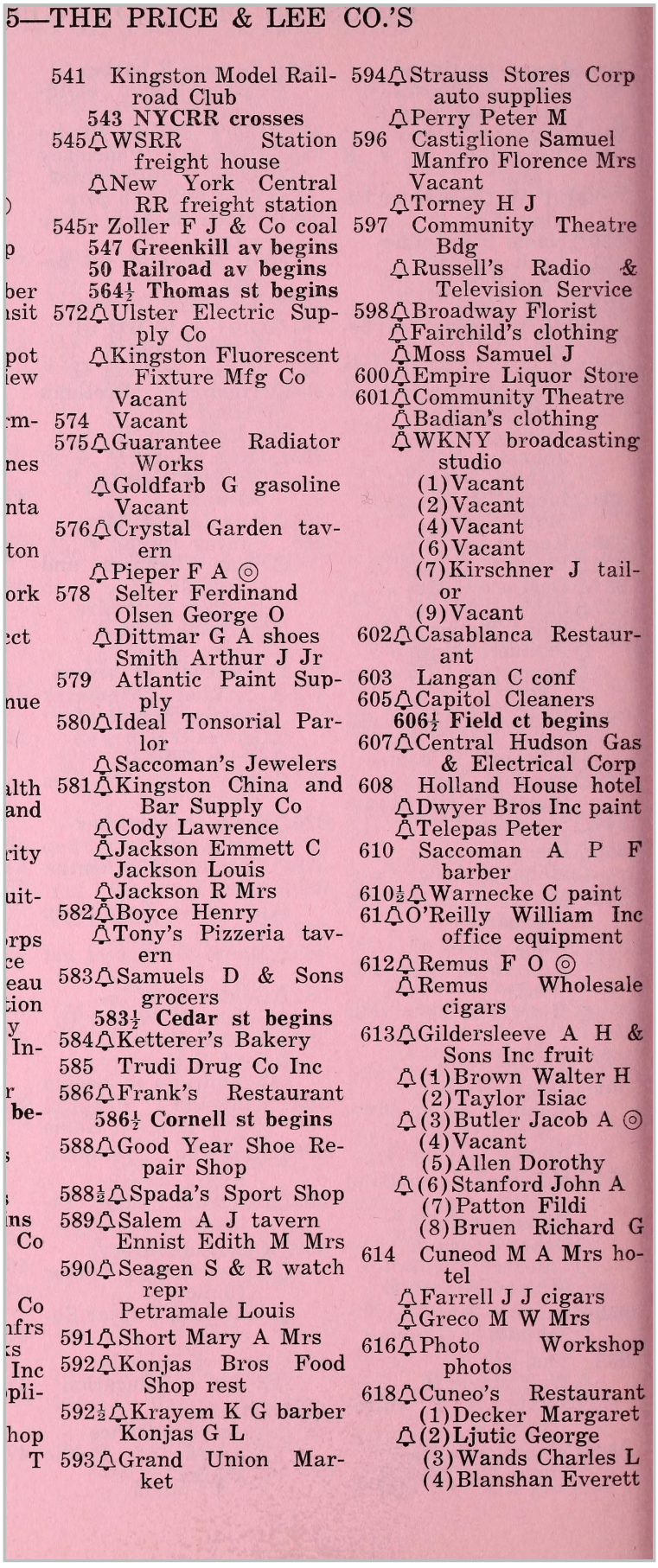
HEWITT PL

Fr 62½ Linderman av SE to Conway pl (Right odd)

2◎ Staudt Edward J 331-2087
11◎ VanDerburgh Stella Mrs 338-3288
12 Minkler Richard L 338-9408
Vacant
14 Lindhurst Christian M 338-7748
15◎ Garrity Ruth E 331-3994
16 Carro John J 338-9484
18◎ McDonough Theresa Mrs 331-3435
19◎ Roosa Alva H 338-8025
20◎ Stahl Otto 331-3827
21◎ Jordan Robert J 331-9199
22 CONWAY PL ends
23◎ Setera Joseph F 338-3223

Target Street	Cross Street	Source
✓	-	Price and Lee Co

BROADWAY 1955



5—THE PRICE & LEE CO.'S

541 Kingston Model Railroad Club
543 NYCRR crosses
545 WSRR Station freight house
New York Central RR freight station
545r Zoller F J & Co coal
547 Greenkill av begins
550 Railroad av begins
564½ Thomas st begins
572 Ulster Electric Supply Co
Kingston Fluorescent Fixture Mfg Co
Vacant
574 Vacant
575 Guarantee Radiator Works
Goldfarb G gasoline
Vacant
576 Crystal Garden tavern
Pieper F A ◎
578 Selter Ferdinand
Olsen George O
Dittmar G A shoes
Smith Arthur J Jr
579 Atlantic Paint Supply
580 Ideal Tonsorial Parlor
Saccoman's Jewelers
581 Kingston China and Bar Supply Co
Cody Lawrence
Jackson Emmett C
Jackson Louis
Jackson R Mrs
582 Boyce Henry
Tony's Pizzeria tavern
583 Samuels D & Sons grocers
583½ Cedar st begins
584 Ketterer's Bakery
585 Trudi Drug Co Inc
586 Frank's Restaurant
586½ Cornell st begins
588 Good Year Shoe Repair Shop
588½ Spada's Sport Shop
589 Salem A J tavern
Ennist Edith M Mrs
590 Seagen S & R watch repr
Petramale Louis
591 Short Mary A Mrs
592 Konjas Bros Food Shop rest
592½ Krayem K G barber
Konjas G L
593 Grand Union Market
594 Strauss Stores Corp auto supplies
Perry Peter M
596 Castiglione Samuel
Manfro Florence Mrs
Vacant
Torney H J
597 Community Theatre Bdg
Russell's Radio & Television Service
598 Broadway Florist
Fairchild's clothing
Moss Samuel J
600 Empire Liquor Store
601 Community Theatre
Badian's clothing
WKNY broadcasting studio
(1) Vacant
(2) Vacant
(4) Vacant
(6) Vacant
(7) Kirschner J tailor
(9) Vacant
602 Casablanca Restaurant
603 Langan C conf
605 Capitol Cleaners
606½ Field ct begins
607 Central Hudson Gas & Electrical Corp
608 Holland House hotel
Dwyer Bros Inc paint
Telepas Peter
610 Saccoman A P F barber
610½ Warnecke C paint
61 O'Reilly William Inc office equipment
612 Remus F O ◎
Remus Wholesale cigars
613 Gildersleeve A H & Sons Inc fruit
(1) Brown Walter H
(2) Taylor Isiac
(3) Butler Jacob A ◎
(4) Vacant
(5) Allen Dorothy
(6) Stanford John A
(7) Patton Fildi
(8) Bruen Richard G
614 Cuneod M A Mrs hotel
Farrell J J cigars
Greco M W Mrs
616 Photo Workshop photos
618 Cuneo's Restaurant
(1) Decker Margaret
(2) Ljutic George
(3) Wands Charles L
(4) Blanshan Everett

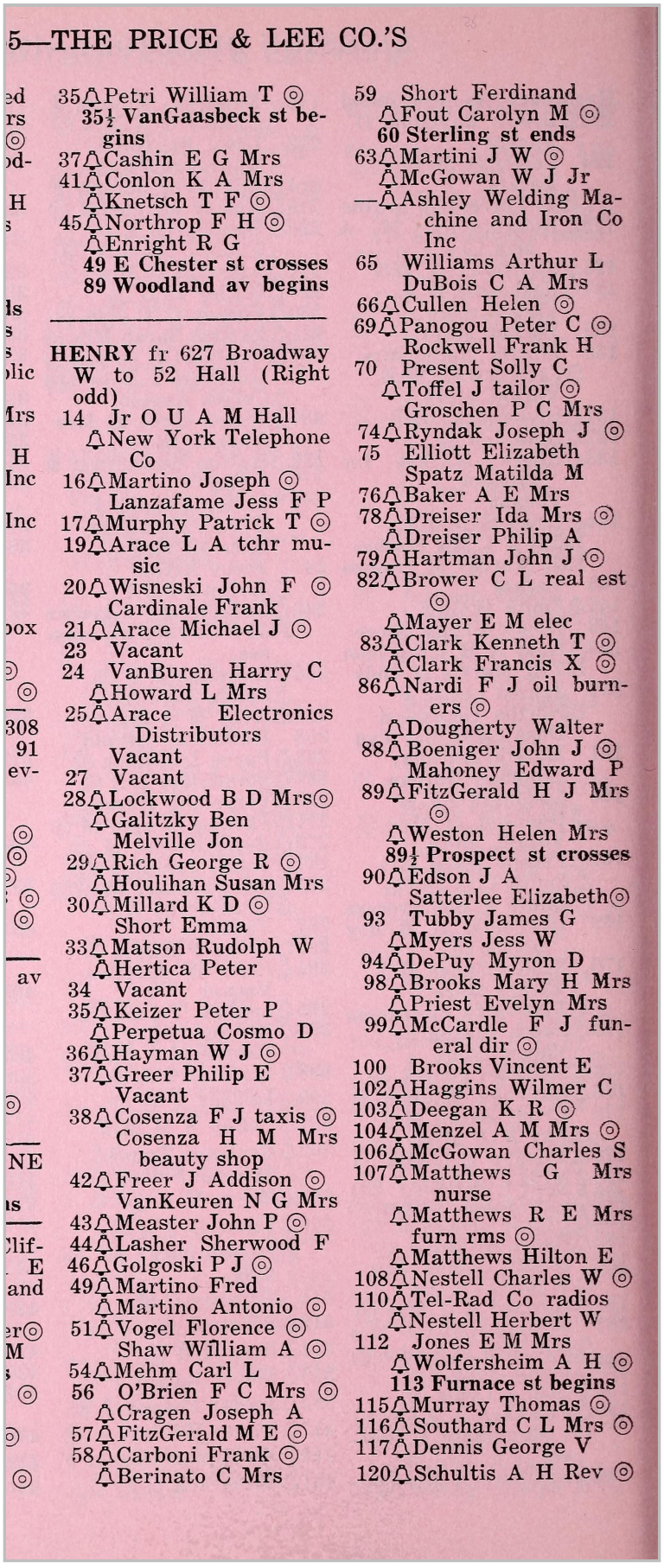
Target Street	Cross Street	Source
✓	-	Price and Lee Co

BROADWAY 1955

Broadway—continued
621 Saccoman T F lwyr
Holland Furnace Co
Ackert Irene Mrs
Egan J T ins
Vacant
622 Arace Appliances
(1) Kraus M T Mrs
(2) Best William J
(3) Peck Arthur L
(4) Cercone Amedeo
624 United Cleaners & Dyers Inc
625 Thompson H L gasoline
626 Mid-Way Gift & Party Shop
627 Henry st begins
628 Homes Seekers Savings & Loan Assn of Kingston N Y
(2A) Beesmer Henry
(2B) Phillips Rodney
(2C) Post Douglas
(2D) Englander M H ◎
(3A) Healey D B
(3B) McAuliffe S M
(3C) Vacant
(3D) Tiano Charles F
(3E) Viglielmo L Mrs
(3F) Hafer Clara Mrs
630 Otto A E conf
630½ O'Neil st begins
632 Bowen Norman H
Decker John J
Wilde Bert Inc tires
634 Giustino's Market
635 Rondout National Bank Bdg
Prudential Ins Co of America
Rondout National Bank The
636 Sun Restaurant
Hornbeck K Mrs
VanWagenene C A
Murphy C E Mrs
638 Broadway Dry Goods
639 Van Deusen st begins
640 Halle's Baby Shop
642 Blackstone Pharmacy
642½ Vacant
644 Empire Cleaners & Dyers Co
Worman Tillie Mrs
644½ Jagger F A optometrist
646 Central Barber Shop
Relyea William
648 Hollings M O Mrs antiques
649 Cassa J R gasoline
650 Tesoro J Jr cigars ◎
652 Gruffie C Mrs grocer ◎
654 Roudis N J rest
656 Markle A E cigars
657 Van Buren st begins
658 Deegan R C liquor
661 Stock's N Sons Inc furniture
662 Beck's Broadway Market meat
Maurer E M ins
Van Valkenburgh-FitzGerald Inc Insurance Agency
644 Orchid Shoppe The florists
664½ Downs st begins
666 Borelli D N
Leahy Joseph
Mid-Town Chop House & Restaurant
Kearney Peter M
Embree Everett
670 Ruzzo Guerino ◎
Ruzzo J R conf
672 Sottile Eugene
Valeo Hardware
McCloskey W Jr
Balash E E Mrs
Vacant
673 Cedar Rest Restaurant
Carter John F
674 Sonner D S Mrs
Vacant store
Schafer Fannie Mrs
678 Kidd Henry B
Kidd's Bicycle Repair Shop
679 Ingalls Wilson C ◎
680 Wirth R upholsterer ◎
Sagendorf E M Mrs
680r Doll A J auto body reprs
681 Franklin st begins
682 Guarantee Auto Parts
683 Turck W J Jr gasoline
688 Wieber & Walter Inc plumbers
688r Vacant
693 Watrous L B elec appliances
Simmons John
LaVallee John F
693r Vacant
694 New York Cleaners and Dyers Co The
Bell Joseph
Quigley Anna G

Target Street	Cross Street	Source
-	✓	Price and Lee Co

HENRY ST 1955



5—THE PRICE & LEE CO.'S

35 Petri William T ◎
35½ VanGaasbeck st begins
37 Cashin E G Mrs
41 Conlon K A Mrs
Knetsch T F ◎
45 Northrop F H ◎
Enright R G
49 E Chester st crosses
89 Woodland av begins

HENRY fr 627 Broadway W to 52 Hall (Right odd)

14 Jr O U A M Hall
New York Telephone Co
16 Martino Joseph ◎
Lanzafame Jess F P
17 Murphy Patrick T ◎
19 Arace L A tchr music
20 Wisneski John F ◎
Cardinale Frank
21 Arace Michael J ◎
23 Vacant
24 VanBuren Harry C
Howard L Mrs
25 Arace Electronics Distributors
Vacant
27 Vacant
28 Lockwood B D Mrs ◎
Galitzky Ben
Melville Jon
29 Rich George R ◎
Houlihan Susan Mrs
30 Millard K D ◎
Short Emma
33 Matson Rudolph W
Hertica Peter
34 Vacant
35 Keizer Peter P
Perpetua Cosmo D
36 Hayman W J ◎
37 Greer Philip E
Vacant
38 Cosenza F J taxis ◎
Cosenza H M Mrs beauty shop
42 Freer J Addison ◎
VanKeuren N G Mrs
43 Measter John P ◎
44 Lasher Sherwood F
46 Golgoski P J ◎
49 Martino Fred
Martino Antonio ◎
51 Vogel Florence ◎
Shaw William A ◎
54 Mehm Carl L
56 O'Brien F C Mrs ◎
Cragen Joseph A
57 FitzGerald M E ◎
58 Carboni Frank ◎
Berinato C Mrs
59 Short Ferdinand
Fout Carolyn M ◎
60 Sterling st ends
63 Martini J W ◎
McGowan W J Jr
— Ashley Welding Machine and Iron Co Inc
65 Williams Arthur L
DuBois C A Mrs
66 Cullen Helen ◎
69 Panogou Peter C ◎
Rockwell Frank H
70 Present Solly C
Toffel J tailor ◎
Groschen P C Mrs
74 Ryndak Joseph J ◎
75 Elliott Elizabeth
Spatz Matilda M
76 Baker A E Mrs
78 Dreiser Ida Mrs ◎
Dreiser Philip A
79 Hartman John J ◎
82 Brower C L real est ◎
Mayer E M elec
83 Clark Kenneth T ◎
Clark Francis X ◎
86 Nardi F J oil burners ◎
Dougherty Walter
88 Boeniger John J ◎
Mahoney Edward P
89 FitzGerald H J Mrs ◎
Weston Helen Mrs
89½ Prospect st crosses
90 Edson J A
Satterlee Elizabeth ◎
93 Tubby James G
Myers Jess W
94 DePuy Myron D
98 Brooks Mary H Mrs
Priest Evelyn Mrs
99 McCardle F J funeral dir ◎
100 Brooks Vincent E
102 Haggins Wilmer C
103 Deegan K R ◎
104 Menzel A M Mrs ◎
106 McGowan Charles S
107 Matthews G Mrs nurse
Matthews R E Mrs furn rms ◎
Matthews Hilton E
108 Nestell Charles W ◎
110 Tel-Rad Co radios
Nestell Herbert W
112 Jones E M Mrs
Wolfersheim A H ◎
113 Furnace st begins
115 Murray Thomas ◎
116 Southard C L Mrs ◎
117 Dennis George V
120 Schultis A H Rev ◎

Appendix H:

Qualifications of Environmental Professional

LAROSA

Steven is a geologist with 25 years of experience in Vermont and has established relationships over the years with many regulators within the VTDEC. He has extensive experience in preparing work plans and Quality Assurance Project Plans using TRIAD investigative techniques, cost estimating, health and safety programs, corrective action feasibility investigations, and corrective action plans. Steve has been involved with all aspects of surface and subsurface investigation with various types of drill and testing equipment, and routinely provides legal expert testimony regarding environmental site contamination issues in Vermont.

RELEVANT EXPERIENCE

Environmental Investigations / Remediation

Shade Roller Mill Redevelopment, Vergennes, Vermont. Project manager for the redevelopment of a former aerospace industrial facility which, over several decades, resulted in the release of chlorinated hydrocarbons into the subsurface soil, groundwater and shallow bedrock immediately upgradient of the Otter Creek River. Following closure of the mill and environmental sampling, the intended redevelopment of two buildings totaling over 8,000 square feet is proposed as commercial and residential use. Oversaw vapor mitigation systems designed for each building, including spray-applied membranes with an applied vacuum using multiple centrifugal fans.

Environmental Services for Fillipo Dry Cleaners, Rutland, Vermont. Project manager for work at a former dry cleaner site where chlorinated solvents released into the soil and groundwater had migrated over 300 feet to a residential neighborhood. Oversaw horizontal and vertical delineation of the groundwater plume. Planning is underway for performing source area soil removal and design/construction of a PRB immediately upgradient of the residential neighborhood.

Site Investigation and Remediation, Maksa, US Inc, Bradford, Vermont. Project manager for a Phase II site investigation, corrective action feasibility studies, and remediation at this former facility that provided industrial dry cleaning for several decades. Designed, installed, and operated multiple soil and groundwater remediation systems and provided expert testimony.

Site Investigations, Village Valet, Manchester, Vermont. Project manager for multiple investigations in a historic portion of the town where solvent released from a small dry cleaner resulted in a widespread vapor phase soil gas plume impacting four downgradient buildings. Identified additional solvent sources in the area and isolated the impacts of each. Sub-slab depressurization systems (SSDSs) in the four buildings are currently operating and successfully mitigating indoor air impacts.

Bonacorsi and Sons Dry Cleaning Remediation, Barre, Vermont. Project manager for a remediation, which included soil vapor extraction, air sparging, in-situ chemical oxidation, soil removal, and SSDSs, for a former dry cleaning facility that released solvents directly to the subsurface on site and through breaks in the sewer system off site, resulting in the contamination of groundwater and soil gas plume beneath eight properties. SSDS were designed, installed and are operating in the City Hall and US Post Office buildings, actively mitigating identified vapor intrusion impacts.

Blinn House Investigation and Remediation, Burlington, Vermont. Project manager for an investigation of the release of chlorinated solvents from a laundry facility housed on this site for several years in the 1950s, resulting in groundwater and vapor plumes that extended several thousand feet to Lake Champlain. Determined that related contamination existed beneath at

least 14 off-site properties in the historic waterfront portion of Burlington. Mitigated soil vapor intrusion through SSDSs in three downgradient tenant-occupied buildings. Performed substantial coordination and outreach with the community to communicate remedial progress with all stakeholders through multiple public meetings, informal meetings with individual property owners, and tenant outreach.

Phase II Investigation of Former Repair Facility, St. Johnsbury, Vermont. Project scientist for investigation that included generation of Phase II work plan and costing; negotiation of Phase II work plan with VTDEC, EPA, and stakeholders; development of a SSQAPP; and coordination of the necessary work tasks with multiple subcontractors and stakeholders. Potential contaminants included VOCs, PCBs, PAHs, and metals.

Former Paper Mill Site Investigation, Bellow Falls, Vermont. Project scientist responsible for the investigation and reporting on a Phase II environmental site investigation, which included soil borings, installation of monitoring wells, and soil, sediment, groundwater and surface water sampling in accordance with a VTDEC and EPA-accepted SSQAPP. Performed work to define the extent of potential contaminants, including PCBs, PAHs, metals and VOCs. Evaluated potential risk to receptors during redevelopment and the risk posed after development is completed. Multiple natural and anthropogenic subsurface features presented difficult conditions to predict contaminant presence and migration paths. Proposed future use is as a walking path and green space.

Indirect Discharge Rule Regulated Facility, Shelburne, Vermont. Performed site and soil evaluation, and designed and tested a pilot drip disposal system—the first such system approved by VTDEC under the IDR. Installed the pilot system and tested it for 6 months to determine the maximum hydrologic capacity and treatment capabilities of the soils. The pilot test proved a capacity for nearly three times greater than originally approved by the VTDEC, and will soon be the first permitted drip disposal system under the IDRs.

Permeable Reactive Barrier Evaluation, Rutland, Vermont. Senior hydrogeologist responsible for evaluation of a zero-valent iron PRB installed to treat a chlorinated solvent plume migrating from a former dry cleaner site towards a densely settled residential neighborhood. The PRB analysis included upgrades to a groundwater monitoring network; groundwater sampling; calculations of vertical and horizontal hydraulic gradients; calculations of groundwater and contaminant velocities; and calculations of trends and ratios of CVOC molar concentrations.

Investigation and Corrective Actions at 9 Depot Square, Barre, Vermont. Project manager / lead scientist for the completion of subsurface investigation, corrective action feasibility investigation, corrective action plan design, installation, and implementation at the former Howe Cleaners site in Barre. Determined the contaminant impact on multiple off-site properties. Corrective actions included vapor intrusion mitigation of the source site building via multiple extraction systems. Corrective action feasibility study included bench- and pilot-testing of ISCO, MPE, and SVE. Performed work under multiple contracts with the VDEC. Served as expert witness for VDEC in multiple lawsuits against former site operators.

Petroleum-Related Site Investigation, Northwest Vermont. Project scientist responsible for a corrective action feasibility investigation and corrective action plan development and implementation at a site where significant contamination of fine-grained soils with gasoline threatened the bedrock aquifer associated with a gasoline distribution facility. The majority of the contaminants were beneath a town road. Performed all corrective actions within the road and right-of-way while permitting use of the road. Remediation included removal and on-site

treatment of 1,000 cubic yards of contaminated soil, soil vapor extraction, and installation of remotely accessed ISCO injection wells beneath the finished road surface.

Gasoline Release Groundwater Control/Vapor Extraction Trench Installation, Vergennes, Vermont. Project manager for installation of a groundwater control/vapor extraction trench and a "pass-through" treatment trench due to a catastrophic release of gasoline from an underground storage tank, resulting in unacceptable levels of vapors in a downgradient apartment building. Designed and oversaw installation and operation of an "emergency" groundwater control and vapor recovery trench adjacent to the apartment building. Installed the 70-foot-long trench to a depth of 10 feet in an area less than 15 feet wide. Groundwater collection and vapor extraction piping was placed within the trench backfill and treatment systems installed. A corrective action plan was also developed to address contaminants closer to the source. A "pass through" trench was installed which included air sparging and vapor extraction components. Groundwater was treated in-situ as it flowed through the trench. This 80 plus foot long trench was installed to 15 feet below grade using a stepped excavation and stacked trench boxes.

Limited Phase II ESA at Former Paper Mill, Brattleboro, Vermont, Windham Regional Commission. Project manager for a Limited Phase II ESA at a former paper mill that dated back to the 1800s at the Wyman Flint West Parcel in Brattleboro Vermont for the Windham Regional Commission. This former industrial property has planned redevelopment into a park with a pedestrian path along the Connecticut River and recreation access along Cond Spring Pond. A sampling plan was implemented to test for a number of parameters (PAHs, Dioxins/Furans, metals and VOCs) within a number of different matrices (soil, sediment, groundwater and surface water). This data was furnished to the engineering team responsible for the park design to incorporated risk management strategies.

Area Wide Phase I ESA and NEPA Permitting for 14 parcels along Dog River in Northfield, Vermont. Project manager for work performed for the Town of Northfield under our Vermont Downtown Action Team (V-DAT) contract funded by the ACCD. This portion of the V-DAT program provides grant application assistance for disaster recovery efforts associated with Tropical Storm Irene. The project goal is for the Town to acquire the properties, demolish the structures and restore the local riparian buffer with amenities such as a riverside park.

Brownfields Redevelopment, Montpelier, Vermont. Project scientist for the Brownfields redevelopment of a former 1-acre junkyard into a new Multi-Modal Transit Facility in Montpelier Vermont. Over numerous years and working with 5 clients (City of Montpelier, CVRPC, 2 consultants and the Owner) we addressed environmental issues such as PCBs, Lead and PAHs bounded by a railroad line and riverfront. Work included Phase I ESA, Phase II ESA, development and implementation of a TSCA Risk-Based PCB Clean-up plan and a separate VTDEC CAP with a soil management plan and a vapor mitigation plan, on-going annual monitoring and design phase engineering.

Wastewater / Water Investigations

Various Wastewater System Investigations, Addison County Wastewater Disposal System Evaluation. Led the performance of the investigation of several dozen wastewater systems installed at "non-conforming" sites throughout the county to determine conditions allowing function of system without evidence of "failure." Work included negotiations with property owners, monitoring well installations, data collection oversight, evaluation, and report presentation.

Various Sewage Disposal System Installations. Performed soil evaluation, and designed and supervised installation of dozens of small-scale on-site sewage disposal systems.

Various Public Water Supply Investigations, Various Locations, Vermont. Performed fracture trace, site reconnaissance, and geophysical investigation of more than a dozen public water supply sources throughout Vermont. Successfully located, tested, and permitted sources ranging from 5 to 150 gallons-per-minute demand. Testing involved performance of step and constant rate pumping tests in accordance with VTDEC Water Supply Rules. Analyses performed included safe yield, interference analyses, development of two-year travel distances, and development of source protection plans.

Drinking Water Source Sampling, Bennington and North Bennington, Vermont. Project manager responsible for drinking water source sampling for PFOA contamination, which was funded by the VTDEC upon discovery of contamination in bedrock water supplies near a former manufacturing plant. Coordinated and led a team of scientists and GIS experts to sample more than 500 residential drinking water supply wells in the North Bennington area. Performed initial sampling of all residential water supplies within 1.5 miles of the plant within weeks. Subsequent sampling efforts included numerous extensions of the area of interest and resampling of nearly 200 wells. Also coordinated the generation of an on-line sample request form for residents, oversight of scientific staff and regulators during cooperative sampling events, and extensive data collection and organization allowing for rapid analysis and reporting of sample results. Additional tasks requested included: septic sludge sampling, assistance with gathering geophysical logging data from select water supplies and data management and conditioning for use in GIS mapping environments. Sampling and reporting is ongoing.

PFC Impact Investigation, Pownal and North Pownal, Vermont. Project manager for investigation of PFC impacts to public and residential drinking water supply wells. Developed a comprehensive drinking water well sampling protocol and provided sampling teams to investigate all water supply wells surrounding the former Warren Wire Plant and former Pownal Tannery under contract with the VTDEC. Tasks included coordination with residents and the Fire District for sampling of the public and private water supplies and performance of preliminary engineering evaluation of remedies to treat or replace the sole source public water supply well. Sampled and analyzed more than 100 wells for the presence of PFCs. Coordinated installation, start-up, and maintenance of seven point-of-entry treatment filtration systems. Guided preliminary engineering to determine if temporary connections could be used to immediately replace impacted public well and provide costing for evaluation. Data management oversight including quality assurance and control review, data entry review and reporting to the VTDEC for publishing to the public. Investigation and evaluation of PFC impacts is ongoing.

Brownfields

Brownfield Redevelopment, St. Albans, Vermont. Senior scientist for the Brownfield redevelopment of a 120,000-square-foot industrial building situated on 5.5 acres with contaminants that included PCBs, PAHs, VOCs, and metals in building materials, soil, and groundwater. Project scope included Qualified Environmental Professional services for Phase II ESA, ABCA/CAP implementation, and redevelopment planning as a Brownfield Economic Revitalization Alliance (BERA) team member.

Pine Street Barge Canal Superfund Site, Burlington, Vermont. Project manager for a Brownfields Development Feasibility Evaluation at a 4.8-acre site abutting the Pine Street Barge Canal Superfund Site in association with the BERA program. Performed a comprehensive geotechnical study which included generation of several proposed development options that considered environmental contamination presence, geotechnical conditions, local planning and

zoning, EPA restrictions, and cost of construction. Presented a proposed site development for a multi-story commercial building, surface parking for 300 vehicles, and stormwater controls. Attended meetings with the BERA team to address developer, regulatory, and zoning concerns.

Phase II Site Investigation, Brattleboro, Vermont. Project manager for a Phase II site investigation at a former dry cleaners property at 118 Elliot Street, which was performed for the Vermont Department of Environmental Conservation. Work included supplemental data collection related to chlorinated solvents in soils, groundwater, and bedrock with 16 soil borings, installation of a 70-foot deep bedrock well, and groundwater sampling. Analysis of the field information determined that the dry cleaner was not a primary cause of the bedrock contamination observed beneath the site, and a Certificate of Completion was obtained to facilitate the property transfer.

Brownfields Project on Two Parcels, Brattleboro, Vermont. Project manager for a Brownfields project for the Windham Regional Commission on two parcels formerly used by the Estey Organ factory. Work involved a Phase I ESA, SSQAPP, and Phase II ESA in support of redevelopment for light industrial/commercial uses on one parcel, and for a wood pellet boiler plant on the other. Field work included testing of soils, groundwater, and soil gas which discovered elevated PAHs and arsenic in soil; lead and copper in a floor drain; and trichloroethylene and chloroform in soil gas.

STEVEN SHAW

BACKGROUND

2015-Present
Project Geologist
Weston & Sampson

2011-2015
Project Geologist
Landau Associates, Inc.

2009-2011
Teaching Assistant / TA Coordinator
Western Washington University

2001-2009
Program Manager
Hurricane Island Outward Bound

EDUCATION

2011
Master of Science
Geology
Western Washington University

2009
Bachelor of Arts
Geology
Western Washington University

2001
Bachelor of Arts
Philosophy
Washington College

PROFESSIONAL CERTIFICATIONS

40-Hour HAZWOPER

UST Site Assessment

UST Decommissioning

Confined-Space Entry Training

First Aid / CPR

HONORS & AWARDS

2011
Teaching Assistant of the Year,
Geology



Steve has 15 years of geology and management experience. His skills include conducting site investigations, developing remediation strategies, and communicating results to regulatory agencies and the public. Steve has expertise in assessing properties, as well as conducting and managing environmental investigations. His experience includes working with numerous types of contaminated media, including indoor air, subslab soil vapor, groundwater, soil, and marine/freshwater sediment. In addition, Steve routinely provides services that include public presentations, estimation of project costs, budget maintenance, and management of field personnel.

SPECIFIC PROJECT EXPERIENCE

16–20 Park Street, Springfield, Vermont. Lead scientist for the evaluation of potential contaminant source areas funded utilizing a VTDEC Brownfields Grant. Contaminants of concern included chlorinated solvents, volatile organic compounds, polycyclic aromatic hydrocarbons, and metals. Responsibilities included coordination with stakeholders to perform the Phase II Environmental Site Assessment, Site Specific Quality Assurance Project Plan generation for VTDEC and EPA approval, soil boring advancement, vapor intrusion testing, and sample collection. The property was being considered for redevelopment as multi-family residential. Also instrumental in generation of the Phase II ESA report including data evaluation and interpretation, conclusions, and recommendations.

Mower's News Service, White River Junction, Vermont. Lead scientist for the evaluation of potential contaminant source areas funded utilizing Two-Rivers Ottauquechee Regional Commission Brownfields Grant. Contaminants of concern at the former vehicle repair facility included chlorinated solvents (from on- and off-site), volatile organic compounds, polycyclic aromatic hydrocarbons, and metals. Responsibilities included oversight of ground penetrating radar survey of the site to identify UST locations and buried infrastructure. Oversaw and reported on the removal and assessment of 5 underground storage tanks. Generation of Site Specific Quality Assurance Project Plan for VTDEC and EPA approval. Coordinated and oversaw staff activities and communications with stakeholders. Also instrumental in generation of the Phase II ESA report including data evaluation and interpretation, conclusions and recommendations.

Beanville Road, Randolph, Vermont. Project scientist for performance of a Phase I Environmental Site Assessment and generation of a HUD required Environmental Review to obtain Community Development Block Grant Funding for construction of a large manufacturing facility in an existing business park. The Green Mountain Economic Development Corporation provided project funding. Environmental Review included collection of data and presentation in accordance with HUD and Vermont Agency of Commerce and Community Development requirements, including digital upload to Grant Electronic Application and Reporting System. Data presented included projected noise, traffic, stormwater, ecologic, and environmental justice related impact assessments.

Former Bennington Brush, Bennington, Vermont. Lead scientist for the evaluation of potential contaminant source areas funded utilizing Bennington County Regional Commission Brownfields Grant. Contaminants of concern at the former mill and textile manufacturing facility included chlorinated solvents, volatile organic compounds, polycyclic aromatic hydrocarbons, PCBs and metals. Responsibilities included performance of a Phase I ESA, oversight of ground penetrating radar survey of the site, and generation of Site Specific Quality Assurance Project Plan for VTDEC and EPA approval. Coordinated and oversaw staff activities and communications with stakeholders. Also instrumental in generation of the Phase II ESA report including data evaluation and interpretation, conclusions and recommendations.

Former Tuttle Hardware, Bennington, Vermont. Lead scientist for the evaluation of potential contaminant source areas funded utilizing Bennington County Regional Commission Brownfields Grant. Contaminants of concern at the former hardware store and gasoline distribution facility included polycyclic aromatic hydrocarbons and metals. Responsibilities included generation of Site Specific Quality Assurance Project Plan for VTDEC and EPA approval. Coordinated and oversaw staff activities and communications with stakeholders. Also instrumental in generation of the Phase II ESA report including data evaluation and interpretation, conclusions and recommendations.

Brownfields Area Wide Plan, Johnson, Vermont. Project scientist responsible for performance of a Phase I Environmental Site Assessment and brownfields site inventory of the Railroad Street corridor associated with the Lamoille County Planning Commission Brownfields Grant. Performed required database and local research regarding past and present uses of more than two dozen properties, potential high risk activities and compiled a comprehensive Phase I ESA report meeting ASTM, EPA and VTDEC requirements.

Blodgett Oven Factory, Burlington, Vermont. Completed Phase I and Phase II environmental site assessments funded by private sources and the Vermont Department of Environmental Conservation (VTDEC) Brownfields Reuse and Environmental Liability Limitation Program (BRELLA). Conducted the Phase I assessment in accordance with the EPA's all appropriate inquiries and ASTM E1527-13 standard. For Phase II, prepared and submitted a site-specific quality assurance project plan (SSQAPP) to VTDEC and the EPA for approval, conducted a thorough site assessment (which included sampling soil, groundwater, window caulking, and subslab soil gas), and reported the results to VTDEC and the EPA. Upon request of the regulatory agencies, conducted follow-up vapor intrusion assessment, including additional subslab soil gas and indoor air sampling.

Former Eveready/Energizer Battery Facility, Saint Albans, Vermont. Completed a Phase I ESA for a former battery manufacturing facility. Conducting operations and maintenance activities mandated by the VTDEC, including the O&M of a subslab depressurization system, monitoring and reporting for a groundwater interception trench, and site groundwater and surface water monitoring.

Blinn House Investigation and Remediation, Burlington, Vermont. Conducted vapor intrusion assessment and subslab depressurization system installation for the assessment and mitigation of vapors related to release of chlorinated solvents from a former laundry facility.

Weston & Sampson

westonandsampson.com

Weston & Sampson PE, LS, LA, PC
1 Winners Circle, Suite 130
Albany, NY 12205
tel: 518.463.4400

REPORT

July 2020

City of Kingston
420 Broadway
Kingston, New York 12401
Brownfield Grant #BF96274600

Phase II Environmental Site Assessment Report 615 Broadway



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EXECUTIVE SUMMARY

Weston & Sampson PE, LS, LA, PC (Weston & Sampson), on behalf of the City of Kingston (the City), has performed this Phase II Environmental Site Assessment (Phase II ESA) for a 0.917-acre commercial property located at 615 Broadway, in Kingston, New York (the Site). A Cooperative Agreement between the City and the United States Environmental Protection Agency (EPA) through a Brownfields Assessment Grant (BF96274600) funded this Phase II ESA. The intent of this Phase II ESA was to investigate the Recognized Environmental Conditions (RECs) identified during the Phase I ESA and to identify potential contaminants of concern (COCs), likely source(s), and the potential extent of contamination in affected media.

In June 2019, eight (8) soil borings were advanced at the Site and six (6) of these borings were completed as groundwater monitoring wells. Soil analysis was completed at two (2) depth intervals within each soil boring. Two (2) rounds of groundwater monitoring were also completed in June 2019 and November 2019. Soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyl (PCBs) and metals. Groundwater samples were analyzed for VOCs, SVOCs, PCBs and Metals in June and VOCs only in November.

The results of this Phase II ESA indicate that shallow soil 0-2 feet below ground surface (ft bgs) in several locations is impacted with metals (mercury and/or lead) as well as SVOCs in two locations. All detected soil impacts are in shallow soils. In addition, elevated levels of tetrachloroethene (PCE) and trichloroethene (TCE) were detected in the groundwater. Based on the groundwater concentrations, the New York State Department of Environmental Conservation (NYSDEC) was notified of the results and NYSDEC Spill #1903819 was assigned to the site.

Based on historic uses of the site (residential, produce storage warehouse, and motel), the presence of the contaminants detected in soil and groundwater are not expected to be related to historic Site activities. Metals and SVOCs are ubiquitous contaminants in urban areas and are likely related to diffuse, non-point source discharges, and surficial runoff. Due to the presence of TCE and PCE in groundwater and absence in soils, it is presumed that the TCE and PCE contamination migrated onto the Site. Based on groundwater flow direction, the historic Site use, and groundwater results from other investigations competed on nearby upgradient sites, there appears to be a larger PCE/TCE plume in the area coming from an off-site source.

Based on the above results, Weston & Sampson recommends that this report be provided to the NYSDEC for review and to pursue the closure of Spill #1903819, as the source of the PCE and TCE appears to be from an offsite source. A vapor intrusion assessment is also recommended prior to or as part of redevelopment. Shallow soil exceeding the thresholds for metals and SVOCs should be removed during redevelopment and confirmation sampling should be performed to confirm the removal of the full extent of impacted soil.

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1.0 SITE BACKGROUND

Weston & Sampson PE, LS, LA, PC (Weston & Sampson), on behalf of the City of Kingston (the City), has performed this Phase II Environmental Site Assessment (Phase II ESA) for a 0.917-acre commercial property located at 615 Broadway, in Kingston, New York (the Site; Figure 1).

1.1 Site Ownership and Location

615 Broadway—Kingston, New York

Latitude (North): 41.9294990 - 41° 55' 46.19''
Longitude (West): 74.0052920 - 74° 0' 19.05''
Universal Transverse Mercator: Zone 18
UTM X (Meters): 582472.9 mE
UTM Y (Meters): 4642213.5 mN
Elevation: ±180 ft. above sea level
Site Owner: City of Kingston
Site Occupants: None
County: Ulster
Parcel ID: 51080056109149
Size: 0.917 acres

1.2 Purpose

The intent of this Phase II ESA was to investigate recognized environmental conditions (RECs) identified during the March 2019 Phase I ESA completed by Weston & Sampson and to identify potential contaminants of concern (COCs), likely source(s), and the extent of contamination in affected media.

Weston & Sampson completed this assessment in accordance with the approved Sampling and Analysis Plan (SAP), submitted May 9, 2019, and the Site-Specific Quality Assurance Project Plan (SSQAPP), submitted May 15, 2019. The results of this work were used to further our understanding of potential contaminants at the Site, update the Conceptual Site Model (CSM) for the Site that was presented in the SAP, and evaluate the potential risk to sensitive receptors.

1.3 Current Use of Property

The Site is currently owned by the City, who acquired the property through tax delinquency. The Site is a 0.917-acre commercial property with no permanent structures and is developed as a paved parking lot. Groundcover in a portion of the Site consists of grass. Site features are shown on Figure 2. The Site is serviced by public utilities.

1.4 Current Use of Adjacent Properties

The Site is located in a mixed-use area (commercial and residential) of Kingston, New York. Adjoining properties to the north and east are commercial, while those to the south and west are a mix of commercial and residential (Figure 2).

1.5 Site History

Based on information gathered from the review of available historical data sources, the earliest identified development of the Site was for residential uses, sometime prior to 1887. By 1950 the Site was developed with several produce warehouses and storage buildings along with several single-family

residential buildings and an apartment building. By 1972 these buildings had been removed and the Site was developed with the Imperial Motel, later known as the Knights Inn. This motel was demolished sometime between 2011 and 2013. The Site is currently developed as a paved parking lot with no permanent structures. No identified former Site uses are considered high-risk uses.

1.6 Previous Investigations

In March 2019, a Phase I ESA was completed for the Site by Weston & Sampson. The following RECs were identified:

- Several high-risk nearby property uses were identified adjacent or upgradient of the Site, including gasoline service stations, a scrap metal yard, manufacturing, dry cleaning, and a bowling alley. Releases which could impact the Site may have occurred due to these high-risk uses.
- Releases have occurred at several nearby or upgradient properties, including known spills and contaminated soil at the adjacent gasoline service station, two releases of #2 fuel oil upgradient of the Site, and known chlorinated solvent contamination identified in groundwater approximately 350 feet cross-gradient of the Site from an unknown source. Contamination from these off-Site releases may have impacted the Site.
- Based on the results of a Vapor Encroachment Screening, the possibility for vapor intrusion into future Site building exists due to two nearby gasoline service stations, several nearby fuel oil releases, and known chlorinated solvent contamination in groundwater identified at a nearby, cross-gradient property.

It should be noted that the groundwater flow direction presumed for the Phase I (to the north-northeast) was based on local topography. However, during Phase II ESA activities the groundwater flow direction was interpreted to be different (to the southwest) than as presumed during the Phase I. Therefore, what was considered “upgradient” of the site has now changed based on the data from the Phase II.

1.7 Proposed Redevelopment

The Site may be redeveloped for mixed use including residential and commercial use as part of the Restore New York program.

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2.0 FIELD ACTIVITIES

Weston & Sampson developed field activities to assess and investigate potential releases to the environment that may have occurred at or near the Site that could impact redevelopment.

2.1 Field Activities

2.1.1 Soil Assessment

On June 10-12, 2019, Weston & Sampson personnel performed an assessment of subsurface soil at the Site. Subsurface soil borings were completed with direct-push drilling methods using a Geoprobe 7822DT track-mounted drill rig. Prior to subsurface field activities, Weston & Sampson personnel marked out the proposed boring locations and Dig Safely New York was notified to clear underground utilities. Selected photographs are provided in Appendix A.

Weston & Sampson personnel observed the advancement of eight (8) soil borings located around the perimeter of the Site (SB-1 through SB-8). Soil boring locations were selected to assess potential impacts from potential and known off-Site releases and to provide a representative evaluation of Site subsurface conditions. Boring locations are shown on Figure 2. Boring logs are provided in Appendix B.

Soil borings were advanced to approximately 5 to 10 feet below the observed groundwater interface and terminating approximately 25 ft below ground surface (bgs). Weston & Sampson personnel continuously screened soil for visual and/or olfactory evidence of contamination and screened for Volatile Organic Compounds (VOCs) with a photoionization detector (PID). Excess soil was placed in labeled drums that were stored on Site.

Weston & Sampson submitted two (2) soil samples for analysis from each boring. One (1) grab sample was collected between 0-2 ft bgs and one (1) grab sample was collected from either the interval with the highest evidence of contamination (based on staining, odors, and/or highest PID reading) or just above the groundwater interface if no obvious contamination was identified.

No obvious evidence of contamination was observed in soil borings SB-1 through SB-8, and subsurface soil samples were collected from just above the groundwater interface.

2.1.2 Groundwater Assessment

Weston & Sampson completed six (6) of the eight (8) soil borings as groundwater monitoring wells (MW-1 through MW-6). Monitoring wells were screened across the groundwater interface (approximately 19 ft bgs) and were constructed of flush-threaded, 1.5-inch diameter, Schedule 40 polyvinyl chloride (PVC) casing with a 10-foot, Schedule 40 PVC, machine-slotted well screen (0.010-inch). A filter pack of #1 silica sand was installed around the screen, extending from the bottom of the end cap to 2 feet above the well screen. A 2-ft. bentonite seal was placed above the filter pack and the remainder of the annulus was filled with soil cuttings. Wells were completed with flush-mount road boxes, secured in concrete. Monitoring well as-builts are provided in Appendix B.

The wells were developed immediately following installation by purging groundwater until the groundwater ran clear. Monitoring wells were allowed to equilibrate for one week following installation and development. Groundwater elevation details can be found on Table 1.

On June 18, 2019, depth-to-water measurements were collected at the six (6) Site wells prior to sampling. Depth-to-water measurements were converted to relative elevation measurements. Relative elevation measurements for the six (6) Site wells were used to generate a groundwater contour map (Figure 3).

Weston & Sampson sampled the Site monitoring wells using the United States Environmental Protection Agency (EPA) "Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells," EQASOP-GW4 (Revision 4, September 19, 2017). Based on the results of the June 18, 2019 sampling round, Weston & Sampson recommended that a second, synoptic groundwater sampling round be conducted at the Site. Weston & Sampson's request to amend the SSQAPP was approved, and the second round of depth-to-water measurements and groundwater sampling was conducted on November 5 and 6, 2019. Depth-to-water measurements were used to create an updated groundwater contour map (Figure 4).

Sample collection forms from the June 2019 and November 2019 sampling rounds are provided in Appendix C.

2.1.3 Site Survey

Weston & Sampson personnel surveyed Site monitoring well locations using a Trimble 7X handheld global positioning system (GPS) and relative well elevations were surveyed using an autolevel. Latitude and longitude coordinates for the well and boring locations are provided on Figure 2. Elevations were tied to an arbitrary 50-foot datum established at MW-1.

2.2 Analytical Methods

Potential COCs at the Site included VOCs, SVOCs, Metals and PCBs in soil and groundwater. Weston & Sampson submitted soil and groundwater samples collected as part of this Phase II ESA to Con-Test for analysis. A summary of the analyses employed by Con-Test is provided in the table below:

Parameter	Media Type	EPA Analytical Method
VOCs	Soil/Groundwater	8260C
SVOCs	Soil/Groundwater	8270D
RCRA 8 Metals	Soil/Groundwater	6010D
PCBs	Soil/Groundwater	8082

2.3 Deviations from the Work Plan

No deviations from the approved SAP or SSQAPP were made during this Phase II ESA except for the following:

- Based on the results of the June 18, 2019 sampling round, Weston & Sampson recommended that a second, synoptic groundwater sampling round be conducted at the Site. Weston & Sampson's request to amend the SSQAPP was approved, and the second round of depth-to-water measurements and groundwater sampling was conducted on November 5 and 6, 2019.

3.0 RESULTS

3.1 Screening Criteria

Current and future proposed use of the Site may include both commercial and residential uses. Soil analytical results were compared to the Unrestricted Use Soil Cleanup Objectives (SCOs), Residential Use SCOs and Commercial Use SCOs published in Title 6, Part 375 of the New York Codes, Rules and Regulations (NYCRR), effective December 14, 2006.

Groundwater analytical results were compared to the Class GA groundwater standards and guidance values published in the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) - Ambient Water Quality Standards and Guidance Values, effective June 1998 (TOGS).

Applicable soil and groundwater screening levels are shown in the analytical results tables (Tables 2 and 3).

3.2 Soil

Subsurface lithology at the Site consists of approximately 1-5 feet of fine to medium sand fill overlying approximately 15 feet of fine to coarse sands and fine to medium sands. Some seams (between 1/16 and 1/2 inches thick) of clay were observed in sands between 22 and 25 ft bgs on the north side of the Site and between 16 and 19 ft bgs on the southern edge of the Site. Bedrock was not encountered in the soil borings, which were completed to depths of 25 ft bgs.

During boring installations, soils were monitored for potential contamination by visual and/or olfactory observation and PID screening. No obvious evidence of contamination within the soil was observed in the soil borings. PID readings ranged from 0.1 to 19.5 ppm for the soil screened.

Detected compounds in soil are shown in Table 2. The laboratory analytical packages are provided in Appendix D.

The results of this Phase II ESA indicate that shallow soil, 0-2 feet below ground surface (ft bgs), in several locations (SB-1, SB-3, SB-5, and SB-8) is impacted with metals (mercury and/or lead) concentrations above the Unrestricted Use SCOs. Lead concentrations in shallow soil at SB-3 are also above the Residential and Commercial Use SCOs. The distribution of lead and mercury exceedances are shown on Figure 5.

At two locations of the Site (SB-3 and SB-7), concentrations of SVOCs detected in shallow soil (0-2 ft bgs) exceed the Unrestricted Use and Residential Use SCOs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and ideno(1,2,3-cd)pyrene. At one location, SB-7, concentrations of benzo(a)pyrene in shallow soil exceed the Commercial SCOs. Exceedances for SVOCs in shallow soil are shown on Figure 6. No other contaminants were detected in soil above the SCOs. It should be noted that SVOC compounds exceed SCOs in shallow soil only, indicating impacts appear to be surficial in nature.

3.3 Groundwater

Groundwater was encountered at approximately 20 ft bgs and flows to the south-southwest with a hydraulic gradient ranging from approximately 0.002 – 0.003 feet/foot based on November 2019 measurements. This is contrary to the groundwater flow direction anticipated during the Phase I based on local topography (to the north-northeast). A groundwater contour map is provided as Figure 3 and 4.

Detected compounds in groundwater are shown in Table 3. The laboratory analytical packages are provided in Appendix D.

Analytical results of both the June and November 2019 sampling rounds indicate that groundwater at the Site is impacted with elevated concentrations of PCE and TCE above the TOGS standards. Sample analytical results from each groundwater sampling event are summarized below.

June 2019

During the June 2019 sampling round, PCE concentrations in MW-2 (7.3 micrograms per liter (µg/L)), MW-5 (12 µg/L), and MW-6 (14 µg/L) were above the TOGS standard (5 µg/L). TCE concentrations in MW-2 (21 µg/L) and MW-6 (12 µg/L) were also above the TOGS standard (5 µg/L). The distribution of PCE and TCE in groundwater is shown on Figure 7.

Based on New York State reporting requirements, the NYSDEC was notified on July 15, 2019 of the TCE and PCE exceedances within the groundwater and NYSDEC Spill #1903819 was assigned to the site.

November 2019

Samples collected during the November 2019 sampling round contained PCE at concentrations in MW-2 (6.6 µg/L) and MW-6 (12 µg/L) above the TOGS standard (5 µg/L). TCE concentrations in MW-2 (14 µg/L) and MW-6 (12 µg/L) were also above the TOGS standard. The PCE concentration decreased slightly between the June and November sampling events and the TCE concentrations decreased slightly or remained the same between the sampling evets. No other VOCs were detected at concentrations above the TOGS standards.

3.4 Investigation Derived Waste

Excess soil and purged groundwater were stored in drums on Site for proper offsite disposal. Samples were collected from the drums for waste disposal characterization purposes including TCLP Lead analysis. All results indicated non-hazardous waste. Analytical results were provided to MC Environmental Services Inc. and Veolia ES Technical Solutions and appropriate disposal was completed. Copies of the waste manifests are included in Appendix E.

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4.0 DATA USABILITY

4.1 Laboratory Data Evaluation

Alpha Geoscience (Alpha) was contracted to perform a data usability evaluation of the data to identify bias or other interference that could affect the quality of sample results. Quality control (QC) components that were evaluated include the following:

- Data completeness
- Holding times
- Sample preservation
- Blank results
- Surrogate recoveries
- Laboratory control sample results
- Field duplicates

Alpha evaluated results from both rounds of sampling, as outlined below:

4.1.1 June Round of Testing

Samples collected in June and evaluated by Alpha included the following quality assurance/quality control (QA/QC) samples:

Parameter	Matrix	Number of Samples	Trip Blanks	Blind Field Duplicates
VOCs	Soil	16	0	1
SVOCs	Soil	16	0	1
RCRA 8 Metals	Soil	16	0	1
PCBs	Soil	6	0	1
VOCs	Groundwater	6	1	1
SVOCs	Groundwater	6	0	1
RCRA 8 Metals (total)	Groundwater	6	0	1
PCBs	Groundwater	2	0	1

Alpha prepared a Data Usability Summary Report (DUSR) as part of their data evaluation. The DUSR identified that the overall performance of the analysis is acceptable, and that Con-Test Analytical Laboratories did fulfill the requirements of the analytical methods. The data are mostly acceptable with some data which was qualified by Alpha as estimated.

Data are considered usable with no data qualified as rejected (R). The data qualified as estimated does not have an impact on the overall findings and conclusions of the investigation.

4.1.2 November Round of Testing

Samples collected in November and evaluated by Alpha included the following QA/QC samples:

Parameter	Matrix	Number of Samples	Trip Blanks	Blind Field Duplicates
Lead	Soil	1	0	0
VOCs	Groundwater	6	1	1
SVOCs	Groundwater	6	1	1

Alpha prepared a Data Usability Summary Report (DUSR) as part of their data evaluation. The DUSR identified that the overall performance of the analysis is acceptable, and that Con-Test Analytical Laboratories did fulfill the requirements of the analytical methods. The data are mostly acceptable with one datum which was qualified by Alpha as estimated.

Data are considered usable with no data qualified as rejected (R). The data qualified as estimated does not have an impact on the overall findings and conclusions of the investigation.

Alpha's DUSRs are provided as Appendices F & G.

4.2 QA/QC Summary

In summary, the results of the Data Usability evaluations indicate that data quality indicators are acceptable, and the soil and groundwater data obtained during this investigation is adequate for characterizing Site conditions. Weston & Sampson considers the data to be of sufficient level of sensitivity to support the conclusions in this report.

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5.0 CONCEPTUAL SITE MODEL

The preliminary Conceptual Site Model (CSM) presented in the approved Sampling and Analysis Plan (SAP) has been updated for the Site based upon the data collected to date. The CSM is a representation of the processes that control the release, transport, migration, and impact of contamination to Site receptors.

5.1 Site Description

The Site is a 0.917-acre commercial property with no permanent structures. The site is completely paved and used as a parking lot, with the exception of a small grassy area (in the area of SB-8). The Site is situated approximately 180 feet above mean sea level and topography at the Site is generally level.

Subsurface lithology at the Site consists of approximately 1-5 feet of fine to medium sand fill overlying approximately 15 feet of fine to coarse sands and fine to medium sands. Seams of tan clay (between 1/16-inch and 1/2-inch thick) are interspersed with sands and silts were encountered between 22-25 feet on the north side of the Site and between 16 and 19 feet on the south side of the Site. Bedrock was not encountered in the soil borings, which were completed to depths of 25 ft bgs.

Groundwater was encountered at approximately 19 ft bgs and flows to the south-southwest with a hydraulic gradient ranging from approximately 0.002 – 0.003 feet/foot based on November 2019 measurements. This is contrary to the groundwater flow direction anticipated during the Phase I based on local topography. Groundwater contour maps are provided as Figures 3 & 4.

5.2 Sensitive Receptors

Potential receptors include Site users of the parking lot; future residents and visitors if the Site is redeveloped to include residential and/or commercial uses; and construction workers during Site redevelopment.

Features that may act as a means of transporting hazardous materials to sensitive receptors include groundwater, surface water, soil, and underground utilities that may act as preferential pathways.

5.3 Contaminants of Concern

Based on the results of the investigation, the COCs for this Site include:

- VOCs (PCE and TCE) in groundwater
- SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-Cd)Pyrene) in shallow soil (0-2 ft bgs)
- Metals (lead and mercury) in shallow soil (0-2 ft bgs)

5.4 Potential Contaminant Sources

The following potential contaminant sources have been identified:

- VOCs (off Site sources):
    - No high-risk historic uses of the Site have been identified that are likely to have caused PCE and TCE contamination to groundwater. It is likely that the source of VOCs in groundwater is from an off-Site source. Potential sources include 605 Broadway, located approximately 200 ft side gradient of the site, which was identified as a former dry cleaner. Another potential offsite source includes 25 Field Court Site, located

approximately 300 ft. upgradient of the Site. The former uses of 25 Field Court include a welding facility, auto repair shop, small engine repair shop, and tire facility at various times between 1950 and 1987. The 25 Field Court site has known PCE and TCE contamination in soil and groundwater, with PCE concentrations in shallow soil up to 8,900 µg/kg and PCE and TCE concentrations in groundwater up to 370 µg/L and 110 µg/L, respectively.

- SVOCs and metals:
  - SVOCs and metals in shallow soil are likely the result of airborne deposition of contaminants due to burning of fossil fuels such as leaded gasoline and/or coal or surficial runoff from the asphalt parking lot.

5.5 Migration Pathways

Once released to the environment, PCE and TCE will migrate vertically through the vadose (unsaturated) zone to groundwater. Once at the groundwater table, PCE and TCE may dissolve into groundwater. If released in sufficient quantity, PCE and/or TCE may be present as a separate non-aqueous phase liquid (NAPL). Once in groundwater in a dissolved phase or as a NAPL, PCE and TCE will flow advectively downgradient.

PCE and/or TCE may be present as soil gas contained in soil pore space. In deeper portions of the vadose zone, PCE and TCE in soil gas will migrate through diffusion. In near-surface zones, soil gas will migrate through advection/convection and can enter building and utility spaces in contact with the soil.

SVOCs and lead are typically not mobilized efficiently in water and are expected to remain adsorbed to the soil matrix. No evidence of mobilization of SVOCs to the groundwater was observed. If minor amounts of SVOCs are being leached to the groundwater, natural attenuation (adsorption, biodegradation and dilution) is likely reducing the concentrations to below screening criteria.

5.6 Exposure Pathways

Potential exposure pathways to sensitive receptors include direct contact with contaminated soil or groundwater; ingestion of contaminated soil or groundwater; and inhalation of indoor air, if vapor intrusion is occurring.

Two incomplete exposure pathways to sensitive receptors have been identified:

- The Site and surrounding areas are served by municipal water; therefore, Site users will not come into contact with groundwater.
- Due to the depth to groundwater (~19 ft bgs) future users, such as construction workers during Site redevelopment, are unlikely to come into contact with groundwater.

One complete exposure pathway to sensitive receptors has been identified.

- Current Site users (trespasses and visitors) and future Site users (construction workers during redevelopment and future residents) may encounter surface soil contaminated with lead, mercury or SVOCs in shallow soil.

One exposure pathway to sensitive receptors may be complete, but its status is currently unknown.

- Soil gas concentrations beneath the paved surface are unknown and vapor intrusion may be a future pathway if a building is constructed.

The following table summarizes the potentially impacted media, sensitive receptors, and whether each exposure pathway is considered complete, incomplete, or is currently unknown.

Media	COCs	Sensitive Receptors	Exposure Pathways	Exposure Pathway Complete?
Surface Soil	Lead. Mercury, (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, and indeno(1,2,3-Cd)Pyrene	Site Users	Ingestion, Dermal Contact	Complete
Subsurface Soil	none	-	-	-
Groundwater	PCE, TCE	Site Users	Ingestion, Dermal Contact,	Incomplete
		Construction workers	Ingestion, Dermal Contact,	Incomplete
Soil Gas	PCE, TCE	Future Site Users	Inhalation	Unknown

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6.0 DISCUSSION AND CONCLUSIONS

The results of this Phase II ESA indicate that shallow soil in several locations at the Site is impacted with metals (mercury and/or lead) and SVOC concentrations above the Unrestricted Use SCOs. Lead concentrations in shallow soil at SB-3 are also above the Residential Use and Commercial Use SCOs. At two locations, concentrations of SVOCs are above the Unrestricted Use and Residential Use SCOs. Concentrations of one SVOC, benzo(a)pyrene, also exceed the Commercial Use SCOs. No other contaminants were detected in soil above the SCOs. Soil impacts are limited to shallow soil, based on deeper soil analytical data.

Results of an initial round of groundwater sampling conducted in June 2019 indicated that groundwater at the Site is impacted with concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) above the TOGS standards. PCE was detected in three of the six wells with concentrations ranging from 7.3 to 14 μg/L, slightly exceeding the PCE TOGS standard (5 μg/L). TCE was detected in two of the six wells with concentrations ranging from 12 to 21 μg/L, exceeding the TCE TOGS standard (5 μg/L). Pursuant to New York State reporting requirements, the NYSDEC was notified of the PCE and TCE exceedances within the groundwater and NYSDEC Spill #1903819 was assigned to the Site.

Based on the June 2019 results, Weston & Sampson recommended a second round of groundwater sampling be conducted. A request to amend the SSQAPP to include this second round of groundwater sampling was approved in September 2019, and sampling was conducted on November 5-6, 2019. Results of the November 2019 sampling event indicated concentrations of PCE and TCE have decreased or remained consistent since the June 2019 sampling event. PCE was detected in two of the six wells with concentrations ranging from 6.6 to 12 μg/L, slightly exceeding the PCE TOGS standard (5 μg/L). TCE was detected in two of the six wells with concentrations ranging from 12 to 14 μg/L, exceeding the TCE TOGS standard (5 μg/L).

Historically, the Site has been developed for residential purposes in the late 1800s, for produce storage and residential use in the 1950s, and later as a hotel in the 1970s. Based on these uses, the presence of the contaminants detected in soil and groundwater are not expected to be related to historic Site activities. Metals and SVOCs are ubiquitous contaminants in urban areas and are likely related to diffuse, non-point source discharges, and surficial runoff. It is likely that the source of VOCs in groundwater is from an off-Site source. Potential sources include the 25 Field Court Site, located approximately 300 ft. upgradient of the Site, which has high levels of PCE and TCE contamination in soil and groundwater.

One (1) complete exposure pathway to sensitive receptors has been identified. Shallow soil in the vicinity of boring SB-8 is exposed at the surface (grass area) and current Site users (trespassers and visitors) may encounter surface soil contaminated with lead, mercury and SVOCs within the shallow soil.

One exposure pathway to sensitive receptors may be complete, but its status is currently unknown. Soil gas concentrations beneath the Site are unknown. If a building is constructed at the Site in the future, vapor intrusion may occur.

Two exposure pathways to sensitive receptors have been identified as incomplete. The Site and surrounding areas are served by municipal water; therefore, Site users will not come into contact with groundwater. In addition, due to the depth to groundwater (~20 ft. bgs) future users, such as construction workers during Site redevelopment, are unlikely to come into contact with groundwater.

7.0 RECOMMENDATIONS

Weston & Sampson offers the following recommendations:

- No further assessment activities are recommended to delineate impacts to soil. Shallow soil in various locations across the Site is impacted with lead, mercury, and SVOCs. This soil should be removed and properly disposed of during redevelopment activities. Confirmation sampling should be performed to confirm the removal of the full extent of impacted soil during removal activities.
- The elevated PCE and TCE concentrations detected within the groundwater are most likely coming from an off-site upgradient source. The results of this investigation should be shared with the NYSDEC to assist them in identifying that source. Weston & Sampson recommends that this report be provided to the NYSDEC for review and to pursue the closure of Spill #1903819.
- Assess the vapor intrusion potential into future Site development from known VOC contamination within groundwater beneath the Site prior to or as part of the redevelopment activities.

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8.0 LIMITATIONS

This Phase II ESA was prepared for the use of the City of Kingston and the EPA, exclusively. The findings provided by Weston & Sampson in this report are based solely on the information reported in this document. Future investigations, and/or information that was not available to Weston & Sampson at the time of the investigation, may result in a modification of the findings stated in this report.

Should additional information become available concerning this Site or neighboring properties, which could directly impact the Site in the future, that information should be made available to Weston & Sampson for review so that, if necessary, conclusions presented in this report may be modified. The conclusions of this report are based on Site conditions observed by Weston & Sampson personnel at the time of the investigation, information provided by the City of Kingston, and samples collected and analyzed on the dates shown or stated in this report. This report has been prepared in accordance with generally accepted engineering and geological practices. No other warranty, express or implied, is made.

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9.0 REFERENCES

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New York State Department of Environmental Conservation. 1998. *Division of Water Technical and Operational Guidance Series (1.1.1) - Ambient Water Quality Standards and Guidance Values.* June.

New York State Museum, New York State Geological Survey, New York State Museum Technology Center. 1999*. 1:250,000 Bedrock Geology of New York State.*

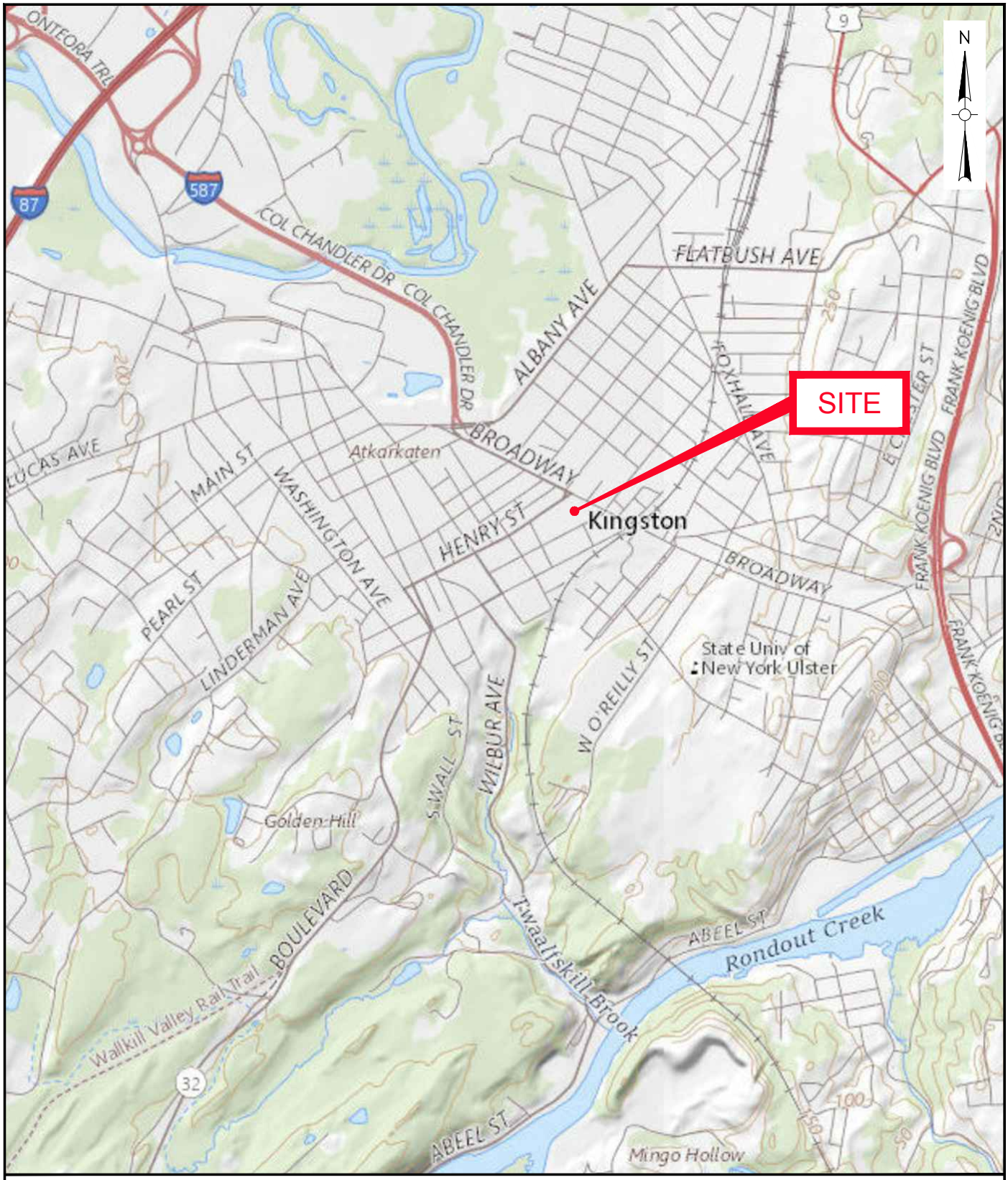
United States Environmental Protection Agency. 2017. *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, EQASOP-GW4 (Revision 4).* September 19.

United States Environmental Protection Agency. 2002. *Guidance for Quality Assurance Project Plans (EPA/240/R-02/009).* December.

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Weston & Sampson Engineers, Inc. 2019. *Phase II ESA Sampling and Analysis Plan, 615 Broadway, Kingston, New York.* Prepared for the City of Kingston. May 9.

Weston & Sampson Engineers, Inc. 2019. *Phase I Environmental Site Assessment Report, 615 Broadway, Kingston, New York.* Prepared for the City of Kingston. March.



DATA SOURCES:

Printed from USGS The National Map:
National Boundaries Dataset
Ulster County-New York
November, 2018

FIGURE 1

SITE LOCUS MAP

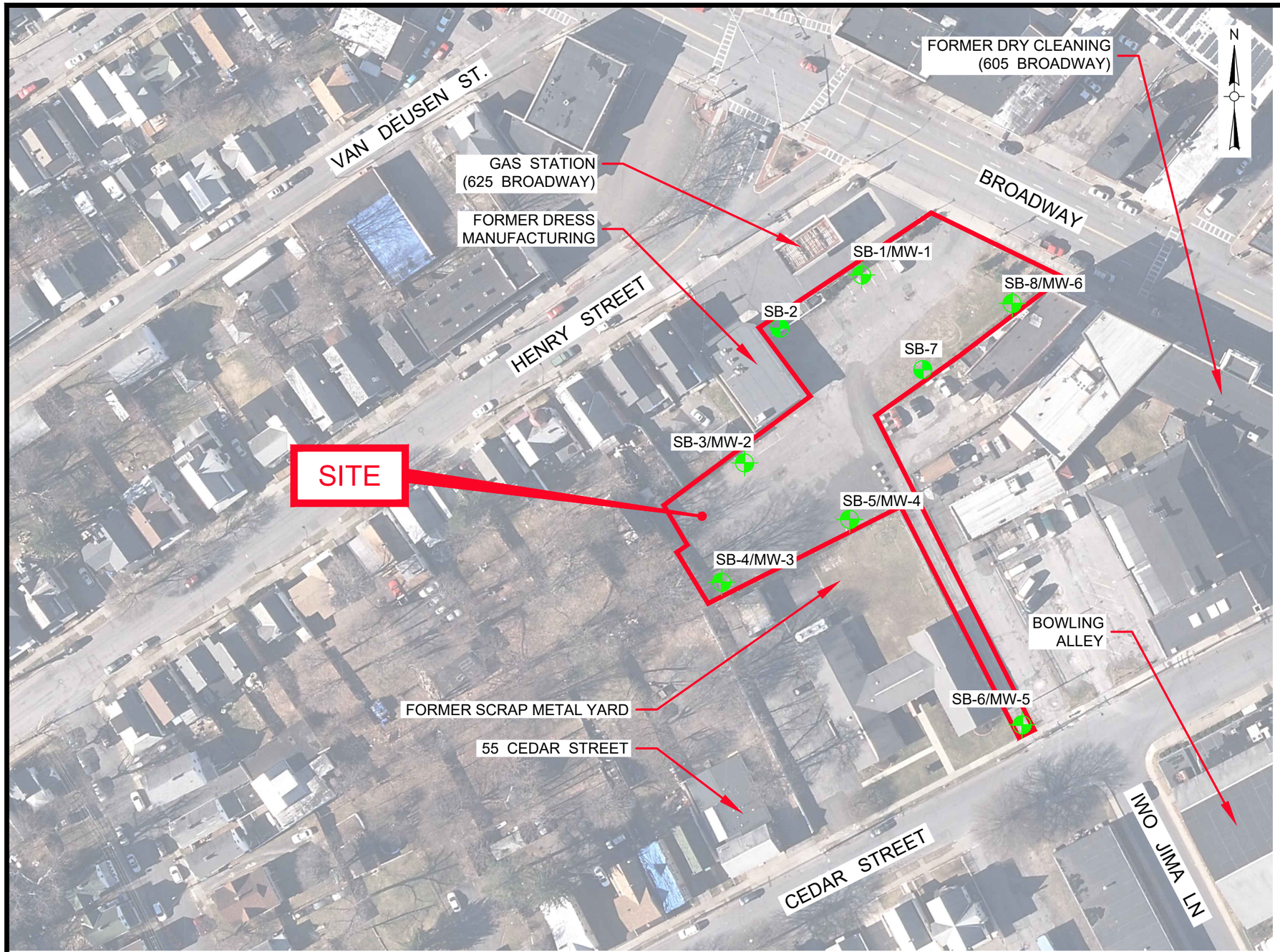
615 BROADWAY

KINGSTON, NEW YORK

SCALE: 1"=2,000'

0 2000 4000

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LEGEND

SB-1/MW-1	SOIL BORING/MONITORING WELL LOCATION
SB-2	SOIL BORING LOCATION

POINT	LATITUDE (N)	LONGITUDE (E)
SB-1/MW-1	41.929569050	74.005471668
SB-2	41.929459828	74.005680061
SB-3/MW-2	41.929204690	74.005780075
SB-4/MW-3	41.928961634	74.005843428
SB-5/MW-4	41.929070948	74.005514481
SB-6/MW-5	41.928678504	74.005006434
SB-7	41.929401612	74.005245860
SB-8/MW-6	41.929507377	74.005058333

DATA SOURCES:

Printed from Orthoimagery
from NYS GIS Clearinghouse
December, 2018

SCALE: 1"=80'

0 80 160

FIGURE 2

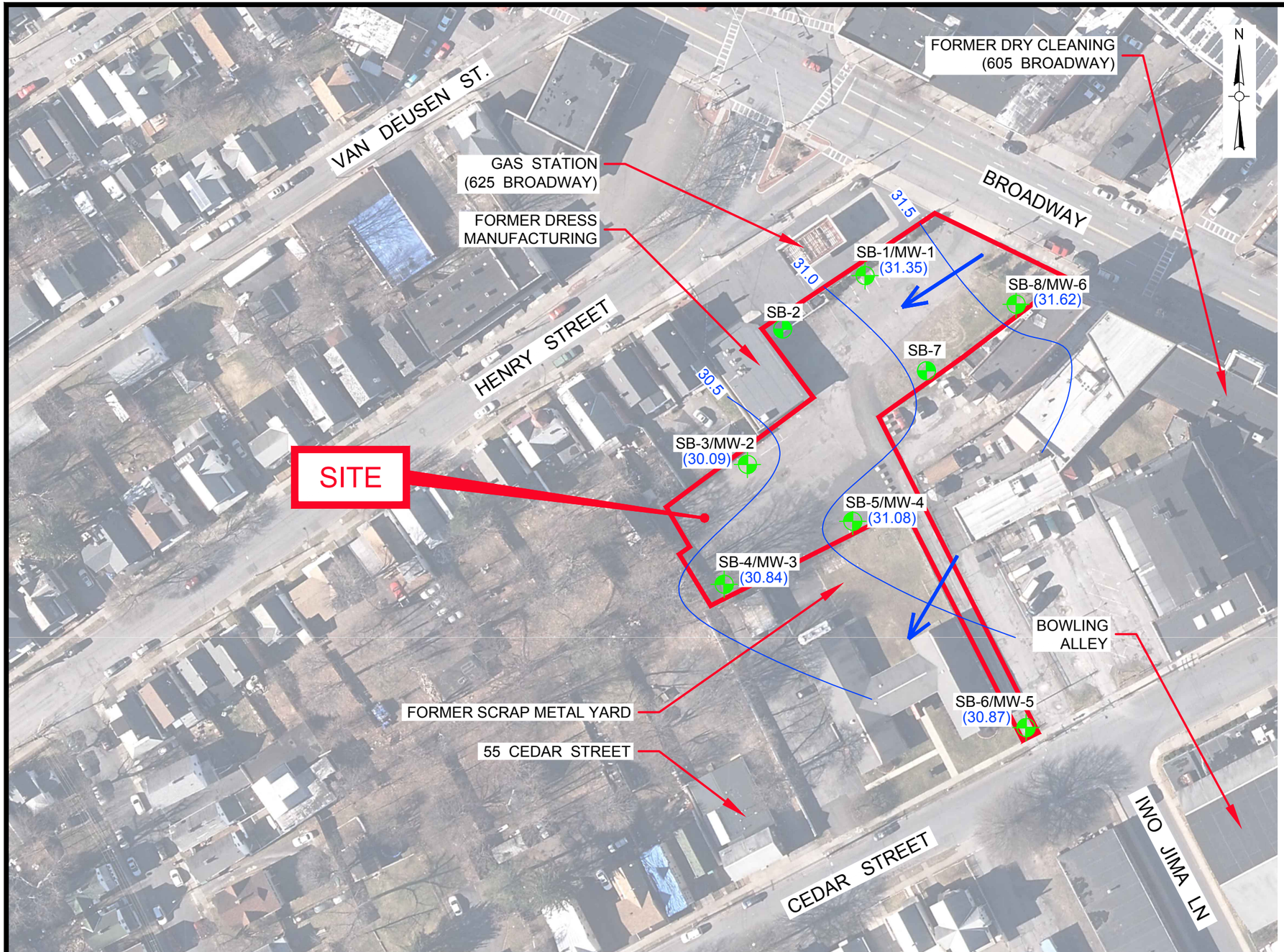
615 BROADWAY
KINGSTON, NEW YORK

SITE PLAN

DESIGNED BY: TJB	CHECKED BY: SDS	DATE: JULY, 2019

Weston & Sampson℠

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LEGEND

SB-1/MW-1	SOIL BORING/MONITORING WELL LOCATION
SB-2	SOIL BORING LOCATION
(31.62)	GROUNDWATER ELEVATION (FEET)
31.00	GROUNDWATER ELEVATION CONTOUR
→	INTERPRETED GROUNDWATER DIRECTION

NOTE:
THE GROUNDWATER FLOW DIRECTION FOR THE GENERAL AREA IS TO THE SOUTHWEST

DATA SOURCES:

Printed from Orthoimagery
from NYS GIS Clearinghouse
December, 2018

SCALE: 1"=80'

0 80 160

FIGURE 3

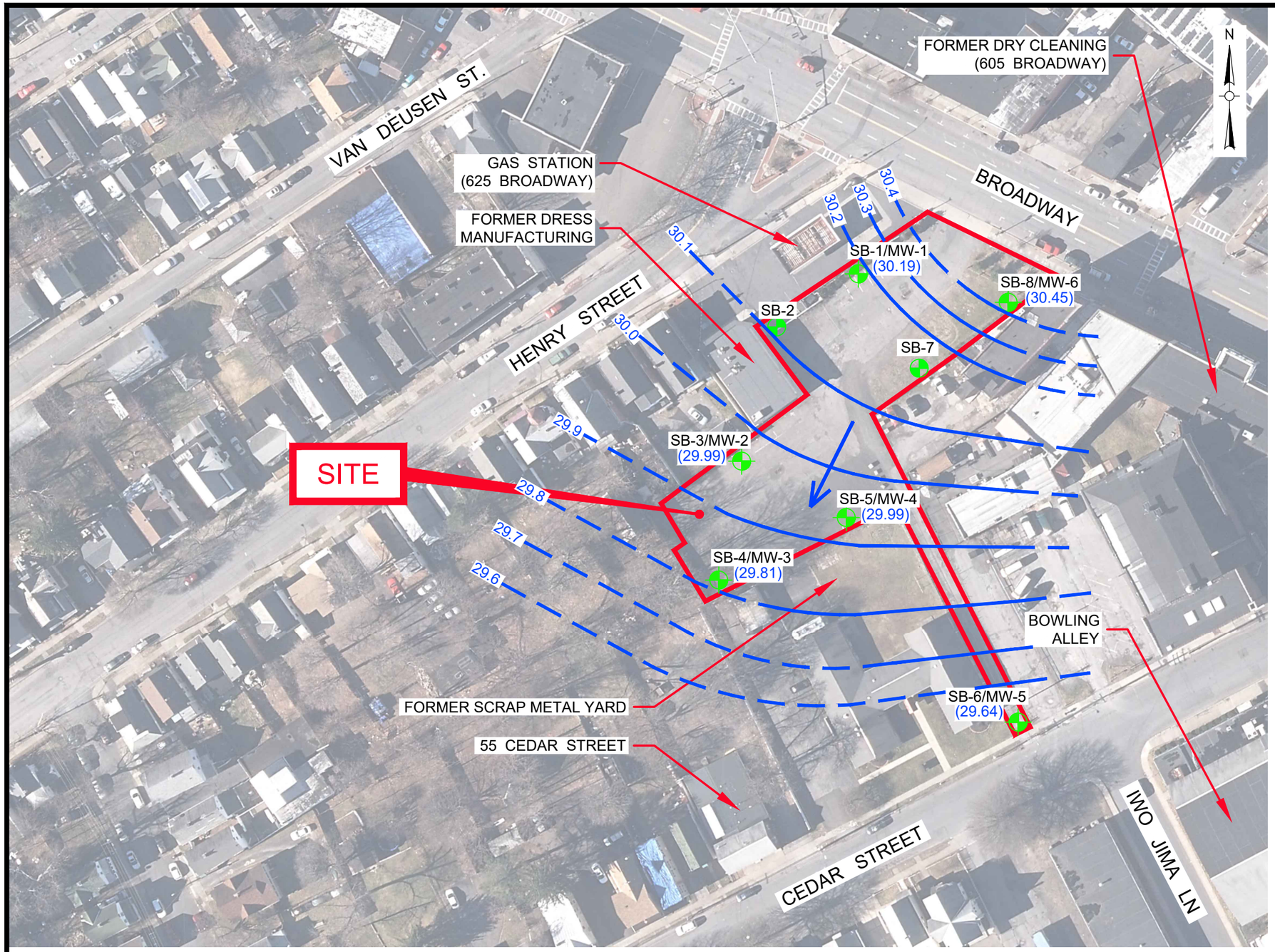
615 BROADWAY
KINGSTON, NEW YORK

GROUNDWATER ELEVATION –
JUNE 18, 2019

DESIGNED BY: TJB	CHECKED BY: SDS	DATE: JULY, 2019

Weston & Sampson℠

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LEGEND

SB-1/MW-1	SOIL BORING/MONITORING WELL LOCATION
SB-2	SOIL BORING LOCATION
(31.62)	GROUNDWATER ELEVATION (FEET)
31.00	GROUNDWATER ELEVATION CONTOUR
→	INTERPRETED GROUNDWATER DIRECTION

NOTE:
THE GROUNDWATER FLOW DIRECTION FOR THE GENERAL AREA IS TO THE SOUTHWEST

DATA SOURCES:

Printed from Orthoimagery
from NYS GIS Clearinghouse
December, 2018

SCALE: 1"=80'

0 80 160

FIGURE 4

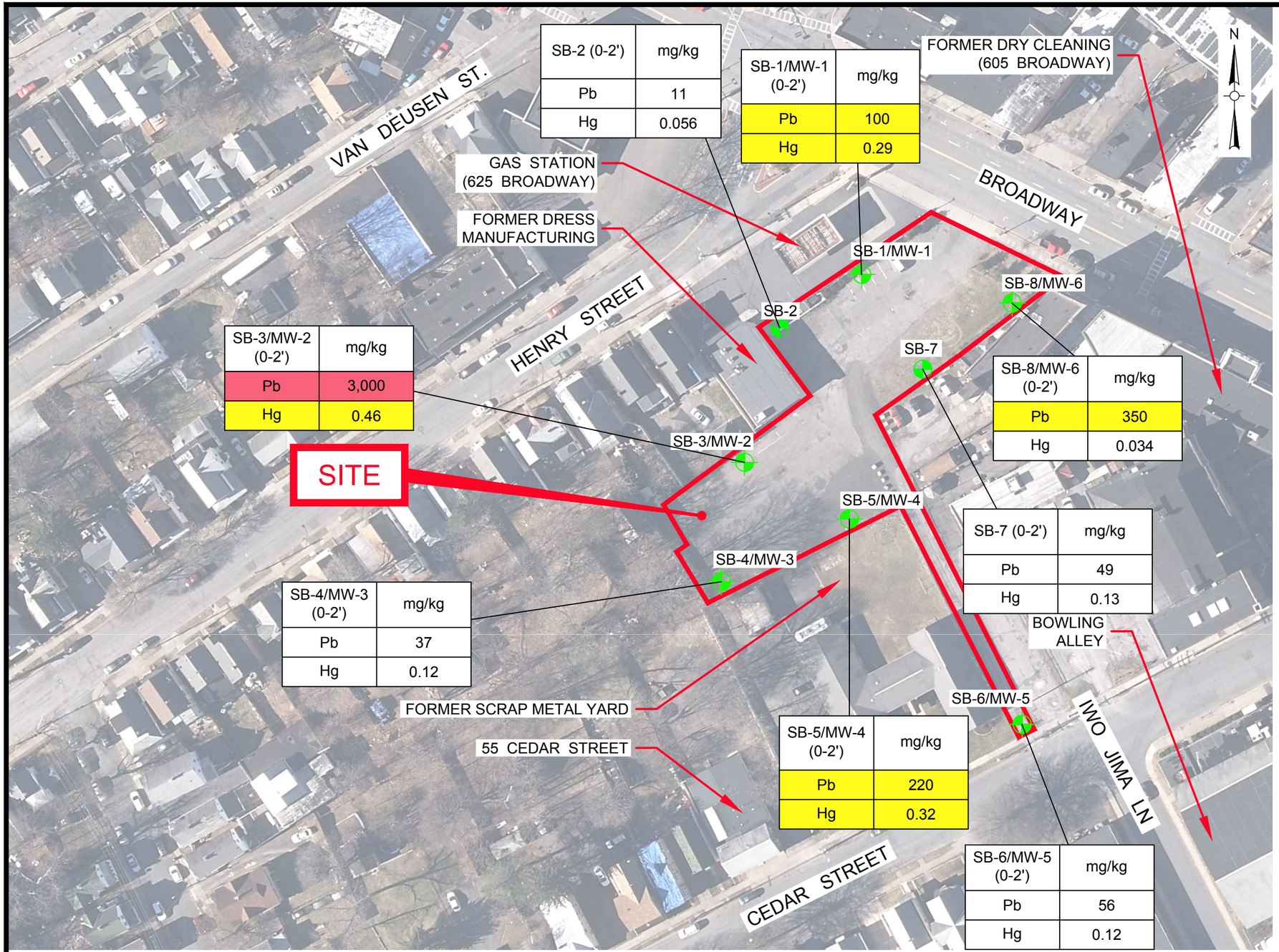
615 BROADWAY
KINGSTON, NEW YORK

GROUNDWATER ELEVATION -
NOVEMBER 5, 2019

DESIGNED BY: TJB	CHECKED BY: SDS	DATE: JULY, 2019

Weston & Sampson℠

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SB-2 (0-2')	mg/kg
Pb	11
Hg	0.056

SB-1/MW-1 (0-2')	mg/kg
Pb	100
Hg	0.29

SB-3/MW-2 (0-2')	mg/kg
Pb	3,000
Hg	0.46

SB-8/MW-6 (0-2')	mg/kg
Pb	350
Hg	0.034

SB-7 (0-2')	mg/kg
Pb	49
Hg	0.13

SB-4/MW-3 (0-2')	mg/kg
Pb	37
Hg	0.12

SB-5/MW-4 (0-2')	mg/kg
Pb	220
Hg	0.32

SB-6/MW-5 (0-2')	mg/kg
Pb	56
Hg	0.12

LEGEND

SB-1/MW-1 — SOIL BORING/MONITORING WELL LOCATION

SB-2 — SOIL BORING LOCATION

Pb	49 — LEAD (mg/kg)
Hg	0.13 — MERCURY (mg/kg)

PARAMETER EXCEEDS THE NYCRR UNRESTRICTED USE SCOs

PARAMETER EXCEEDS NYCRR RESIDENTIAL USE SCOs

PARAMETER EXCEEDS NYCRR COMMERCIAL USE SCOs

	Unrestricted Use SCOs (mg/kg)	Residential Use SCOs (mg/kg)	Commercial Use SCOs (mg/kg)
Pb	63	400	1,000
Hg	0.18	0.81	2.08

DATA SOURCES:

Printed from Orthoimagery
from NYS GIS Clearinghouse
December, 2018

SCALE: 1"=80'

0 80 160

FIGURE 5

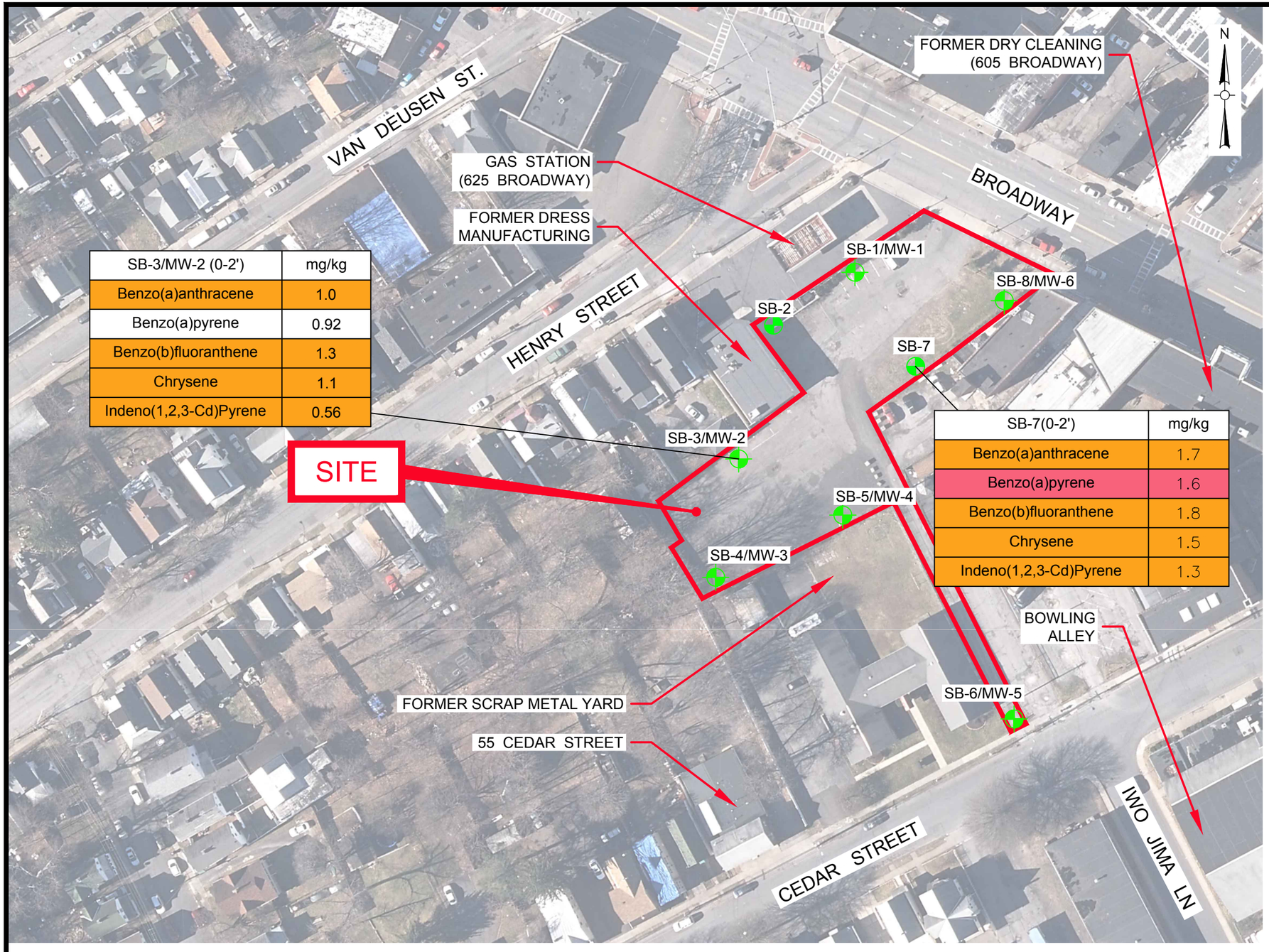
615 BROADWAY
KINGSTON, NEW YORK

SHALLOW SOIL EXCEEDANCES - METALS

DESIGNED BY: TJB | CHECKED BY: SDS | DATE: JULY, 2019

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SB-3/MW-2 (0-2')	mg/kg
Benzo(a)anthracene	1.0
Benzo(a)pyrene	0.92
Benzo(b)fluoranthene	1.3
Chrysene	1.1
Indeno(1,2,3-Cd)Pyrene	0.56

SB-7(0-2')	mg/kg
Benzo(a)anthracene	1.7
Benzo(a)pyrene	1.6
Benzo(b)fluoranthene	1.8
Chrysene	1.5
Indeno(1,2,3-Cd)Pyrene	1.3

LEGEND

- SB-1/MW-1 — SOIL BORING/MONITORING WELL LOCATION
- SB-2 — SOIL BORING LOCATION
- PARAMETER EXCEEDS THE NYCRR UNRESTRICTED USESCOs (mg/kg)
- PARAMETER EXCEEDS NYCRR RESIDENTIAL USE SCOs (mg/kg)
- PARAMETER EXCEEDS NYCRR COMMERCIAL USE SCOs (mg/kg)

	Unrestricted Use SCOs (mg/kg)	Residential Use SCOs (mg/kg)	Commercial Use SCOs (mg/kg)
Benzo(a)anthracene	1	1	5.6
Benzo(a)pyrene	1	1	1
Benzo(b)fluoranthene	1	1	5.6
Chrysene	1	1	5.6
Indeno(1,2,3-Cd)Pyrene	0.5	0.5	5.6

DATA SOURCES:

Printed from Orthoimagery
from NYS GIS Clearinghouse
December, 2018

SCALE: 1"=80'

0 80 160

FIGURE 6

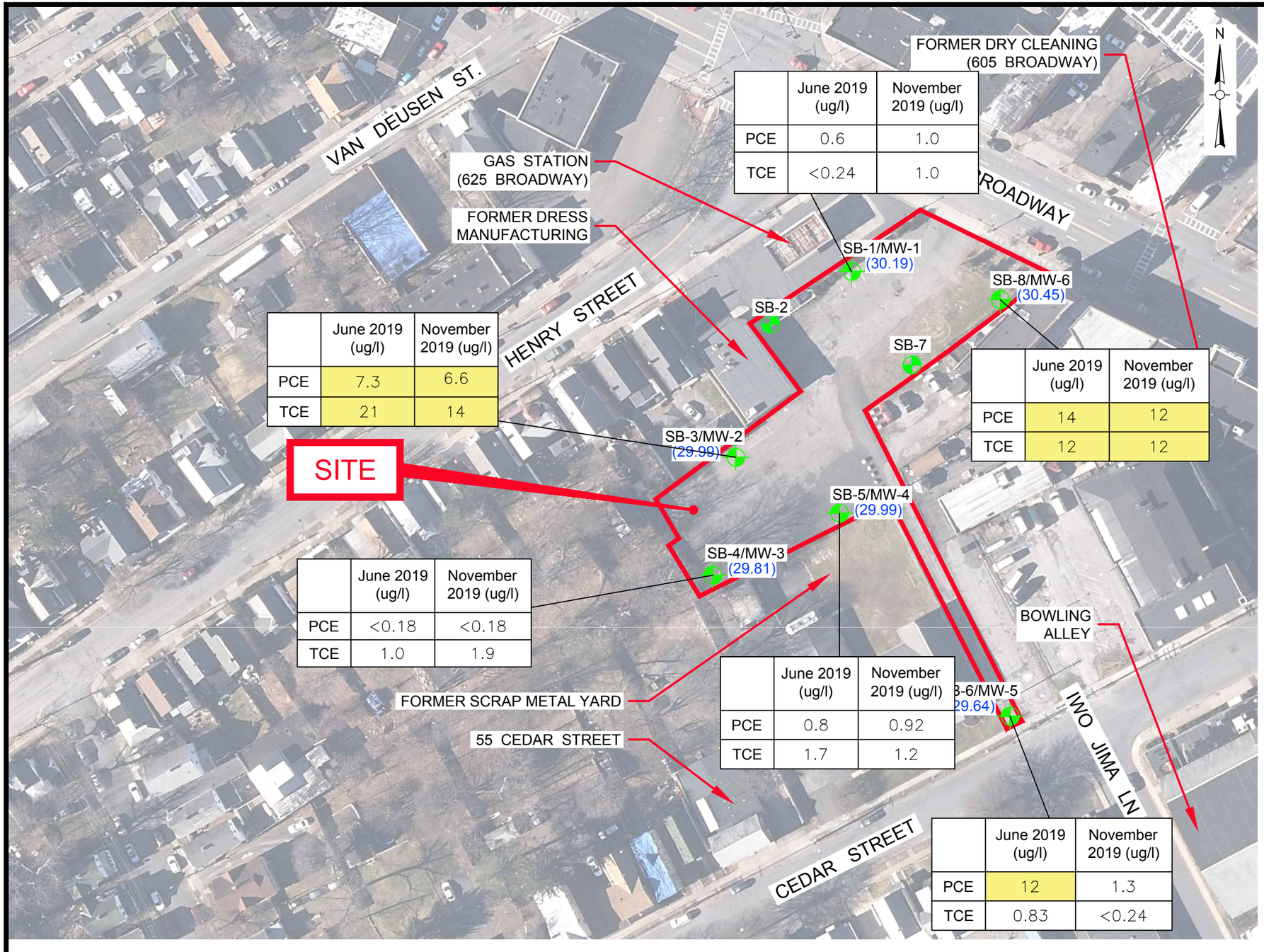
615 BROADWAY
KINGSTON, NEW YORK

SHALLOW SOIL EXCEEDANCES - SVOCS

DESIGNED BY: TJB | CHECKED BY: SDS | DATE: JULY, 2019

Weston & Sampson

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	June 2019 (ug/l)	November 2019 (ug/l)
PCE	0.6	1.0
TCE	<0.24	1.0

	June 2019 (ug/l)	November 2019 (ug/l)
PCE	7.3	6.6
TCE	21	14

	June 2019 (ug/l)	November 2019 (ug/l)
PCE	14	12
TCE	12	12

	June 2019 (ug/l)	November 2019 (ug/l)
PCE	<0.18	<0.18
TCE	1.0	1.9

	June 2019 (ug/l)	November 2019 (ug/l)
PCE	0.8	0.92
TCE	1.7	1.2

	June 2019 (ug/l)	November 2019 (ug/l)
PCE	12	1.3
TCE	0.83	<0.24

LEGEND

- SB-1/MW-1 — SOIL BORING/MONITORING WELL LOCATION
- SB-2 — SOIL BORING LOCATION
- PARAMETER EXCEEDS THE NYSDEC TOGS STANDARD (ug/l)

NYSDEC TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1. STANDARD

	TOGS Standard (ug/l)
PCE	5
TCE	5

DATA SOURCES:

Printed from Orthoimagery
from NYS GIS Clearinghouse
December, 2018

SCALE: 1"=80'

0 80 160

FIGURE 7

615 BROADWAY
KINGSTON, NEW YORK

GROUNDWATER EXCEEDANCES – VOCs

DESIGNED BY: TJB | CHECKED BY: SDS | DATE: MARCH 2020

Weston & Sampson

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TABLE 1
WELL CONSTRUCTION DETAILS
615 BROADWAY
KINGSTON, NEW YORK

Well	Casing Material	Casing Diameter	Total Depth	Screen Length	Screened Interval	Relative Top of PVC Casing (TOC) Elevation [1]	Groundwater Depth Below TOC (ft.)	Relative Groundwater Elevation [1]	Groundwater Depth Below TOC (ft.)	Relative Groundwater Elevation [1]
		(inches)	(ft. bgs)	(ft.)	(ft. bgs)	(ft. elevation)	6/18/2019	(ft. elevation)	11/5/2019	(ft. elevation)
MW-1	Schedule 40 PVC	1.5	25	10	15-25	50.00	18.65	31.35	19.81	30.19
MW-2	Schedule 40 PVC	1.5	25	10	15-25	49.65	19.56	30.09	19.66	29.99
MW-3	Schedule 40 PVC	1.5	25	10	15-25	50.57	19.73	30.84	20.76	29.81
MW-4	Schedule 40 PVC	1.5	25	10	15-25	49.78	18.70	31.08	19.79	29.99
MW-5	Schedule 40 PVC	1.5	25	10	15-25	49.75	18.88	30.87	20.11	29.64
MW-6	Schedule 40 PVC	1.5	25	10	15-25	50.37	18.75	31.62	19.92	30.45

Notes:

ft. bgs- feet below ground surface

(1)- Elevations relative to arbitrary site datum of 50 ft at MW-1.

\\wse03.local\WSE\Projects\NY\Kingston, NY\Brownfields Community Wide Assessment Program - 2018\615 Broadway (former Kings Inn)\2. Deliverables\2019_08 Phase II ESA\Tables\[Table 1_Well Construction Details.xlsx]Tb1_Well Details

Table 2
Soil Analytical Results - Detected Compounds Only*
615 Broadway
Kingston, New York

Parameter	Units	NYSDEC Standards (1)			Sample Location, Depth, and Date															
		Unrestricted Use SCOs	Residential Use SCOs	Commercial Use SCOs	SB-1		SB-2		SB-3	SB-3	SB-4		SB-5		SB-5	SB-6	SB-6	SB-7		SB-8	
					0-2 feet	17.5-19.5 feet	0-2 feet	16-18 feet	0-2 feet	16-18 feet	0-2 feet	18-20 feet	0-2 feet	SB-DUP	17-19 feet	0-2 feet	16-18 feet	0-2 feet	18-20 feet	0-2 feet	18-20 feet
					6/10/19	6/10/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/11/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019
Metals																					
Arsenic	mg/kg	13	16	16	**7.8**	**3.2**	**2.9**	**2.6**	**6.8**	**2.4**	**3.3**	**2.1**	**4.7**	**2.8**	**2.8**	**3.1**	**5**	**4.5**	**4.7**	**3.7**	**3.1**
Barium	mg/kg	350	350	400	**75**	**28**	**30**	**34**	**170**	**29**	**45**	**29**	**120**	**23**	**24**	**51**	**38**	**47**	**47**	**39**	**25**
Cadmium	mg/kg	2.5	2.5	9.3	**0.89**	**0.18**	**0.21**	**0.22**	**0.93**	**0.18**	**0.29**	**0.2**	**0.53**	**0.2**	**0.2**	**0.22**	**0.28**	**0.36**	**0.31**	**0.32**	**0.26**
Chromium	mg/kg	30	36	1,500	**16**	**8.5**	**8.2**	**11**	**13**	**6.8**	**9.3**	**7.8**	**11**	**7.2**	**7.1**	**9**	**8.2**	**9**	**9**	**11**	**7**
Lead	mg/kg	63	400	1,000	**100**	**6**	**11**	**6.8**	**3000**	**6.0**	**37**	**5.9**	**220**	**6.2**	**6.3**	**56**	**7.4**	**49**	**6.4**	**350**	**7.4**
Mercury	mg/kg	0.18	0.81	2.8	**0.29**	<0.0078	**0.056**	**0.016**	**0.46**	**0.0089**	**0.12**	**0.013**	**0.32**	**0.013**	**0.012**	**0.12**	**0.016**	**0.13**	**0.011**	**0.034**	**0.016**
VOCs																					
Acetone	mg/kg	0.05	100	500	<0.0083	**0.0097**	**0.042**	**0.0073**	**0.02**	**0.0061**	**0.024**	**0.0098**	**0.029**	<0.0086	**0.01**	**0.017**	<0.0077	**0.029**	**0.0097**	**0.031**	**0.0076**
Carbon Disulfide	mg/kg	NS	NS	NS	<0.0053	<0.0046	<0.0062	<0.0036	<0.0034	<0.0036	<0.0047	<0.0045	<0.0049	<0.0055	<0.0053	<0.0047	<0.0049	<0.0056	<0.0047	**0.0064**	<0.0037
Diethyl Ether	mg/kg	NS	NS	NS	**0.0013**	**0.0015**	**0.0018**	**0.0015**	**0.00099**	**0.0015**	**0.002**	**0.0019**	**0.0012**	**0.0015**	**0.0015**	<0.00061	<0.00064	**0.002**	**0.0027**	**0.0025**	**0.0013**
Methylene Chloride	mg/kg	0.05	51	500	**0.0021**	**0.0021**	**0.0021**	**0.0016**	**0.001**	**0.0023**	**0.0028**	**0.0022**	**0.0018**	**0.0023**	**0.0025**	**0.0017**	**0.0014**	**0.0022**	**0.0027**	**0.0029**	**0.0021**
Tetrachloroethene	mg/kg	1.3	5.5	150	<0.0012	<0.0010	<0.0014	<0.00080	<0.00076	<0.00079	<0.0010	<0.0010	<0.0011	<0.0012	<0.0012	**0.0092**	**0.0036**	<0.0012	<0.0010	<0.0011	**0.0011**
Toluene	mg/kg	0.7	100	500	<0.00059	<0.00051	**0.0012**	<0.00040	<0.00038	**0.0012**	<0.00052	<0.00050	<0.00054	<0.00061	<0.00059	**0.00059**	<0.00055	<0.00062	<0.00052	<0.00056	<0.00041
Trichloroethene	mg/kg	0.47	10	200	<0.00079	<0.00068	<0.00091	<0.00053	<0.00051	<0.00053	<0.00069	<0.00067	<0.00072	<0.00082	<0.00079	<0.00069	<0.00073	<0.00082	**0.00069**	<0.00074	**0.00078**
SVOCs																					
Anthracene	mg/kg	100	100	500	<0.098	<0.093	<0.099	<0.094	**0.18**	<0.095	<0.098	<0.093	<0.099	<0.097	<0.099	<0.095	<0.10	**0.43**	<0.097	<0.098	<0.10
Benzo(a)anthracene	mg/kg	1	1	5.6	<0.12	<0.11	<0.12	<0.11	**1.0**	<0.12	<0.12	<0.11	**0.55**	<0.12	<0.12	<0.12	<0.13	**1.7**	<0.12	**0.15**	<0.13
Benzo(a)pyrene	mg/kg	1	1	1	<0.12	<0.11	<0.12	<0.11	**0.92**	<0.12	<0.12	<0.11	**0.45**	<0.12	<0.12	<0.12	<0.13	**1.6**	<0.12	**0.16**	<0.13
Benzo(b)fluoranthene	mg/kg	1	1	5.6	**0.18**	<0.11	<0.12	<0.11	**1.3**	<0.12	<0.12	<0.11	**0.66**	<0.12	<0.12	<0.12	<0.13	**1.8**	<0.12	**0.2**	<0.13
Benzo(g,h,i)perylene	mg/kg	100	100	500	**0.19**	<0.10	<0.11	<0.10	**0.55**	<0.11	<0.11	<0.10	**0.25**	<0.11	<0.11	<0.11	<0.12	**1.3**	<0.11	**0.15**	<0.11
Benzo(k)fluoranthene	mg/kg	0.8	1	56	<0.12	<0.11	<0.12	<0.11	**0.46**	<0.12	<0.12	<0.11	**0.22**	<0.12	<0.12	<0.12	<0.13	**0.69**	<0.12	<0.12	<0.13
Carbazole	mg/kg	NS	NS	NS	<0.098	<0.093	<0.099	<0.094	**0.11**	<0.095	<0.098	<0.093	<0.099	<0.097	<0.099	<0.095	<0.10	**0.29**	<0.097	<0.098	<0.10
Chrysene	mg/kg	1	1	56	<0.12	<0.11	<0.12	<0.11	**1.1**	<0.12	<0.12	<0.11	**0.56**	<0.12	<0.12	<0.12	<0.13	**1.5**	<0.12	0.17	<0.13
Dibenz(a,h)anthracene	mg/kg	NS	0.33	0.56	<0.11	<0.10	<0.11	<0.10	**0.13**	<0.11	<0.11	<0.10	<0.11	<0.11	<0.11	<0.11	<0.12	**0.25**	<0.11	<0.11	<0.11
Fluoranthene	mg/kg	100	100	500	**0.16**	<0.10	<0.11	<0.10	**2.2**	<0.11	<0.11	<0.10	**1.0**	<0.11	<0.11	<0.11	<0.12	**3.8**	<0.11	**0.32**	<0.11
Indeno(1,2,3-Cd)Pyrene	mg/kg	0.5	0.5	5.6	**0.16**	<0.12	<0.13	<0.13	**0.56**	<0.13	<0.13	<0.12	**0.27**	<0.13	<0.13	<0.13	<0.14	**1.3**	<0.13	<0.13	<0.14
Phenanthrene	mg/kg	100	100	500	<0.098	<0.093	<0.099	<0.094	**0.96**	<0.095	<0.098	<0.093	**0.4**	<0.097	<0.099	<0.095	<0.10	**2.1**	<0.097	**0.15**	<0.10
Pyrene	mg/kg	100	100	500	**0.18**	<0.11	<0.12	<0.11	**1.8**	<0.12	<0.12	<0.11	**0.84**	<0.12	<0.12	<0.12	<0.13	**3.5**	<0.12	**0.3**	<0.13
PCBs					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

QC by CEL 3/11/2020

Abbreviations:
VOCs and SVOCs = Volatile and Semivolatile Organic Compounds
PCBs=Polychlorinated Biphenyls
NS = No Standard available
ND = Not Detected
NYSDEC = New York State Department of Environmental Conservation
SCO = Soil Cleanup Objective
mg/kg = milligram per killiogram (ppm)
ppm = parts per million

Notes:
< = indicates parameter not detected above laboratory method reporting limit, shown
BOLD Parameter detected above laboratory detection limit
BOLD Parameter exceeds the NYCRR Unrestricted Use SCOs
BOLD Parameter exceeds the NYCRR Residential Use SCOs
BOLD Parameter exceeds the NYCRR Commercial Use SCOs

1 = Standards are from the Compilation of Codes, Rules, and Regulations of the State of New York (NYCRR), 6 NYCRR Part 375, December 2006.
* = Data only displayed for compounds detected above laboratory reporting limits. Please refer to laboratory analytical reports included in Appendix D for complete results.

Table 3
Groundwater Analytical Results - Detected Compounds Only*
615 Broadway
Kingston, New York

Parameter	Units	NYSDEC TOGS 1.1.1 Standards[1]	Sample Location and Date												
			MW-1			MW-2		MW-3		MW-4			MW-5		MW-6	
			6/19/2019	11/5/2019	DUP 11/5/19	6/20/2019	11/6/2019	6/20/2019	11/6/2019	6/19/2019	DUP 6/19/2019	11/6/2019	6/18/2019	11/6/2019	6/18/2019	11/5/2019
Metals																
Arsenic	ug/l	50	<0.64	NT	NT	<0.64	NT	**0.73**	NT	<0.64	<0.64	NT	**0.74**	NT	<0.64	NT
Barium	ug/l	2000	**66**	NT	NT	**17**	NT	**32**	NT	**33**	**35**	NT	**81**	NT	**59**	NT
Cadmium	ug/l	10	**0.049**	NT	NT	<0.038	NT	**0.067**	NT	**0.22**	**0.25**	NT	**0.06**	NT	**0.092**	NT
Chromium (Total)	ug/l	100	**1.1**	NT	NT	**1**	NT	**2.1**	NT	**0.69**	**0.91**	NT	**0.89**	NT	**0.96**	NT
Lead	ug/l	50	**0.49**	NT	NT	<0.085	NT	**0.99**	NT	**0.31**	**0.35**	NT	**0.87**	NT	**0.98**	NT
Selenium	ug/l	20	**20**	NT	NT	**4.4**	NT	**9.1**	NT	**14**	**15**	NT	**6.6**	NT	**2.3**	NT
VOCs																
Chloroform	ug/l	7	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	**0.33**	<0.17	<0.17	**0.24**
Tetrachloroethene	ug/l	5	**0.6**	**1.0**	**1.1**	**7.3**	**6.6**	<0.18	<0.18	**0.8**	**0.69**	**0.92**	**12**	**1.3**	**14**	**12**
Trichloroethene	ug/l	5	<0.24	0.24	<0.24	**21**	**14**	**1.0**	**1.9**	**1.7**	**1.5**	**1.2**	**0.83**	<0.24	**12**	**12**
SVOCs			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCBs			ND	NT	NT	ND	NT	ND	NT	ND	ND	NT	ND	NT	ND	NT

QC by CEL: 3/11/2020

Abbreviations:
VOCs = Volatile Organic Compounds
SVOCs = Semivolatile Organic Compounds
ND = Not Detected
NT = Not Tested
NYSDEC = New York State Department of Environmental Conservation
ug/l = micrograms per liter (ppb)
ppb = parts per billion

Notes:

* = Data only displayed for compounds detected above laboratory reporting limits. Please refer to laboratory analytical reports included in Appendix D for complete results.

< = indicates parameter not detected above laboratory method reporting limit, shown

BOLD Parameter detected above laboratory detection limit

BOLD Parameter exceeds the applicable NYSDEC standard

1 = Standards are from the NYSDEC Division of Water Technical & Operational Guidence Series (TOGS) 1.1.1, dated June 1998.

APPENDIX A
Selected Site Photographs

Selected Site Photos

615 Broadway, Kingston, NY



Photo #1
Site overview, facing northeast



Photo #2
Track-mounted GeoProbe rig
at boring location SB-4/MW-3

APPENDIX B
Boring Logs and Well As-Builts

Weston & Sampson℠

PROJECT		BORING No.	SB-1/MW-1
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/10/19	DATE END	6/10/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher
CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	30/60			1.3	0-0.5 ft. bgs: ASPHALT.		*Asphalt*
							0.5-4.75 ft. bgs: Dark brown, fine SAND and FILL (brick, apparent slag and clinkers), some fine to medium gravel. Dry. No odor.		*Sandy Fill*
						1.3			
5		S-2	39.5/60			0.9	4.75-16.5 ft. bgs: Orange-tan, fine to coarse SAND. Dry. No odor.		*Sand*
						1.1			
10		S-3	40/60			0.9			
						1.0			
15		S-4	48/60			0.6	16.5-17.5 ft. bgs: Medium-tan, fine SAND. Damp. No odor.		
						0.4	17.5-20 ft. bgs: Medium-tan, fine SAND with orange and dark brown banding. Damp to wet at 19.5 ft. bgs. No odor.		
20		S-5	45/60			0.1	20-20.5 ft. bgs: Medium-to-dark-tan, fine SAND mottled with dark brown. Wet. No odor.		
						0.1	20.5-25 ft. bgs: Medium-tan, fine to medium SAND with bands of light tan clay at 24.75 ft. bgs. Wet. No odor.		*Sand and Clay*
25									
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 19.5 ft. bgs. Monitoring well set at 25 ft. bgs. Samples collected from 0-2 ft. bgs at 1450 and 17.5-19.5 ft. bgs at 1520 to be analyzed for VOCs, SVOCs, and RCRA 8 Metals.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-1/MW-1

Weston & Sampson℠

PROJECT		BORING No.	SB-2
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/11/19	DATE END	6/11/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher
CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	36/60			19.5	0-0.5 ft. bgs: ASPHALT.		*Asphalt*
							0.5-1 ft. bgs: Medium-tan, fine to coarse SAND, ASPHALT, and fine GRAVEL. Dry. No odor.		*Sandy Fill*
						17.5	1-2 ft. bgs: Crushed CONCRETE.		
5		S-2	33/60			12.8	2-3.5 ft. bgs: Medium-tan, fine to medium SAND, some red-tan banding. Dry. No odor.		*Sand*
						9.0	3.5-5 ft. bgs: Medium-tan, fine to coarse SAND and FILL (brick, slag). Dry. No odor.		
10		S-3	38/60			3.4	5-6.5 ft. bgs: Orange-tan, fine to coarse SAND. Dry. No odor.		*Rock*
							6.5-9 ft. bgs: Medium-tan, fine to medium SAND. Dry. No odor.		*Sand*
						7.2	9-11 ft. bgs: Medium-tan, fine to coarse SAND. Dry. No odor.		
15		S-4	32.5/60			11.0	11-11.5 ft. bgs: Crushed ROCK.		
							11.5-14 ft. bgs: Medium-tan, gravelly fine to coarse SAND. Dry. No odor.		
20		S-5	46/60			5.0	14-20 ft. bgs: Medium-tan, fine to medium SAND. Dry to damp at 19 ft. bgs. No odor.		*Sand, Silt, and Clay*
						0.1	20-22 ft. bgs: Medium-to-dark-tan, fine SAND, trace clay. Wet. No odor.		
						0.1	22-24 ft. bgs: Medium-to-dark-tan, fine SAND, some Silt and bands of light tan clay. Wet. No odor.		
25							24-24.5 ft. bgs: Medium-tan, gravelly fine to coarse SAND. Wet. No odor.		
							24.5-24.75 ft. bgs: Medium-to-dark-tan, fine SAND, some silt and clay. Wet. No odor.		
30							24.75-25 ft. bgs: Medium-tan, fine SAND. Wet. No odor.		

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 19 ft. bgs. No monitoring well set. Samples collected from 0-2 ft. bgs at 0805 and 16-18 ft. bgs at 0815 to be analyzed for VOCs, SVOCs, RCRA 8 Metals, and PCBs.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-2

Weston & Sampson SM

PROJECT		BORING No.	SB-3/MW-2
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/11/19	DATE END	6/11/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher
CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	33/60			5.2	0-0.5 ft. bgs: ASPHALT.		*Asphalt and Concrete*
							0.5-1 ft. bgs: CONCRETE.		
						1.7	1-1.5 ft. bgs: Medium-tan, fine to medium SAND. Dry. No odor.		*Sandy Fill*
5		S-2	32/60			5.7	1.5-3.5 ft. bgs: Dark gray-tan, fine to coarse SAND and FILL (clinkers, brick, clam shells). Dry. No odor.		*Rock*
							3.5-5.5 ft. bgs: Medium-red-tan, fine to medium SAND. Dry. No odor.		*Sand*
						8.0	5.5-5.75 ft. bgs: Crushed ROCK.		
10		S-3	46/60			2.8	5.75-10 ft. bgs: Medium-tan, gravelly fine to coarse SAND. Dry. No odor.		*Rock*
							10-11 ft. bgs: Dark tan, fine to medium SAND, some fine gravel. Dry. No odor.		*Sand*
						7.3	11-11.25 ft. bgs: Crushed ROCK.		
15		S-4	41.5/60			4.3	11.25-25 ft. bgs: Medium-tan, fine to medium SAND. Wet at 18 ft. bgs. No odor.		
						7.1			
20		S-5	38/60			2.1			
						1.0			
25									
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 18 ft. bgs. Monitoring well set at 24 ft. bgs. Samples collected from 0-2 ft. bgs at 0850 and 16-18 ft. bgs at 0905 to be analyzed for VOCs, SVOCs, RCRA 8 Metals, and PCBs.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-3/MW-2

Weston & Sampson℠

PROJECT		BORING No.	SB-4/MW-3
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/11/19	DATE END	6/11/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher
CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	28/60			5.0	0-1 ft. bgs: ASPHALT.		*Asphalt*
							1-4.5 ft. bgs: Medium-tan, fine to medium SAND, some fine gravel. Dry. No odor.		*Sandy Fill*
						3.8			
5		S-2	21/60			1.3	4.5-12 ft. bgs: Dark tan, gravelly fine to coarse SAND. Dry. No odor.		*Gravelly Sand*
						4.0			
10		S-3	30/60			1.0	12-14 ft. bgs: Medium-tan, fine to gravelly coarse SAND. Dry. No odor.		
						2.1	14-15 ft. bgs: Medium-tan, fine to medium SAND. Dry. No odor.		
15		S-4	29/60			0.7	15-20 ft. bgs: Medium-tan, fine to coarse SAND. Band of medium-tan clay at 19 ft. bgs. Damp. No odor.		*Sand*
						0.6			*Clay*
20		S-5	38/60			0.1	20-25 ft. bgs: Medium-to-dark tan, fine to medium SAND. Wet. No odor.		*Sand*
						0.1			
25									
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 20 ft. bgs. Monitoring well set at 25 ft. bgs. Samples collected from 0-2 ft. bgs at 1030 and 18-20 ft. bgs at 1105 to be analyzed for VOCs, SVOCs, and RCRA 8 Metals.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-4/MW-3

Weston & Sampson SM

PROJECT		BORING No.	SB-5/MW-4
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/11/19	DATE END	6/11/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher
CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	23.5/60			3.3	0-1 ft. bgs: ASPHALT.		*Asphalt*
							1-5 ft. bgs: Dark-tan, fine to medium SAND, some fine to medium gravel. Band of crushed rock at 1.25 ft. bgs and band of clinkers and white fill material at 4.75 ft. bgs. Dry. No odor.		*Sandy Fill*
						1.5			
5		S-2	23/60			0.8	5-10 ft. bgs: Medium-tan, fine to medium SAND. Dry. No odor.		*Sand*
						2.0			
10		S-3	26/60			1.3	10-14 ft. bgs: Light tan, fine to coarse SAND. Dry. No odor.		
						0.6	14-15 ft. bgs: Light tan, fine to coarse SAND. Dry. No odor.		
15		S-4	31/60			0.9	15-19 ft. bgs: Medium-tan, fine SAND. Bands of medium-tan clay at 16.5 and 19 ft. bgs. Damp. No odor.		*Sand and Clay*
						0.1	19-20 ft. bgs: Medium-tan, fine to medium SAND. Damp to wet at 19.5 ft. bgs. No odor.		
20		S-5	36/60			0.2	20-25 ft. bgs: Medium-tan, fine to medium SAND. Bands of dark tan clay at 21.5 to 22 ft. bgs and 24.5 to 24.75 ft. bgs. Wet. No odor.		
						0.2			
25									
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 19.5 ft. bgs. Monitoring well set at 25 ft. bgs. Samples collected from 0-2 ft. bgs at 1240 and 17-19 ft. bgs at 1300 to be analyzed for VOCs, SVOCs, RCRA 8 Metals, and PCBs. SB-DUP collected at 17-19 ft. bgs.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-5/MW-4

Weston & Sampson℠

PROJECT		BORING No.	SB-6/MW-5
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/11/19	DATE END	6/11/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher
CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	35/60			9.7	0-1 ft. bgs: ASPHALT.		*Asphalt*
							5-6.5 ft. bgs: Medium-tan, fine to medium SAND, trace fine to medium gravel. Dry. No odor.		*Sandy Fill*
						3.2			
5		S-2	39/60			0.8	6.5-17.5 ft. bgs: Medium-tan, fine to coarse SAND, some fine to medium gravel. Dry. No odor.		*Sand*
						13.9			
10		S-3	38/60			3.6			
						1.4			
15		S-4	41/60			1.2			
						1.4	17.5-20 ft. bgs: Medium-to-dark tan, silty fine SAND. Damp to wet at 18.5 ft. bgs. No odor.		*Silty Sand*
20		S-5	38/60			0.8	20-23 ft. bgs: Medium-tan, silty fine SAND with red-tan banding. Wet. No odor.		
						0.6	23-25 ft. bgs: Medium-tan, fine to coarse SAND. Wet. No odor.		*Sand*
25									
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 18.5 ft. bgs. Monitoring well set at 24 ft. bgs. Samples collected from 0-2 ft. bgs at 1440 and 16-18 ft. bgs at 1500 to be analyzed for VOCs, SVOCs, and RCRA 8 Metals.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-6/MW-5

Weston & Sampson

PROJECT		BORING No.	SB-7
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/12/19	DATE END	6/12/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher

CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	31/60			0.4	0-1 ft. bgs: Dark brown, fine to medium SAND, fine GRAVEL, and ORGANICS. Dry. No odor.		*Sand, Gravel, Organics*
									Rock
						0.6	1-1.25 ft. bgs: Crushed ROCK.		*Sandy Fill*
5		S-2	37/60			0.6	1.25-6 ft. bgs: Medium-tan, fine to medium SAND, trace fine gravel. Dry. No odor.		
						0.7	6-10 ft. bgs: Medium-tan, fine to coarse SAND, trace fine to medium gravel. Dry. No odor.		
10		S-3	33/60			0.7	10-14 ft. bgs: Medium-tan, fine to coarse SAND, some fine to medium gravel. Dry. No odor.		*Sand*
						0.7			
15		S-4	38/60			0.7	14-16.5 ft. bgs: Medium-tan, fine to medium SAND, some fine to medium gravel. Dry. No odor.		
						0.6	16.5-17 ft. bgs: Medium-tan, fine SAND. Damp. No odor.		
20		S-5	37/60			0.1	17-19.5 ft. bgs: Medium-tan, fine to coarse SAND. Damp. No odor.		*Sand & Silt*
						0.1	19.5-20 ft. bgs: Medium-tan, fine to medium SAND. Damp. No odor.		*Sand*
25							20-25 ft. bgs: Medium-tan, fine to medium to fine SAND. Band of sand and silt at 20.5 ft. bgs. Wet. No odor.		
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 20 ft. bgs. No monitoring well set. Samples collected from 0-2 ft. bgs at 0740 and 18-20 ft. bgs at 0815 to be analyzed for VOCs, SVOCs, and RCRA 8 Metals.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-7

Weston & Sampson SM

PROJECT		BORING No.	SB-1/MW-1
Brownfields Assessment 615 Broadway Kingston, NY		SHEET	1 OF 1
		Project No.	N2180061
		CHKD BY	Steven Shaw

BORING Co.	Coredown Drilling	BORING LOCATION	See attached plan		
FOREMAN	Andrew Bellucci	GROUND SURFACE ELEV.		DATUM	
WSE REP.	Jill Murphy	DATE START	6/12/19	DATE END	6/12/19

SAMPLER: Geoprobe 7822DT track-mounted rig
DT 22 Sampler 2.25 inch
CASING: DT 22 2.25-inch PVC liners w/o catcher

CASING SIZE: 2.25 IN. INSIDE DIAMETER Method: Direct Push

GROUNDWATER OBSERVATIONS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (blows/ft)	SAMPLE No.	SAMPLE REC/PEN (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION	NOTES	STRATUM DESCRIPTION
0		S-1	40/60			1.2	0-1 ft. bgs: Dark brown, fine SAND and ORGANICS, some crushed rock and fine gravel. Dry. No odor.		*Sand and Organics*
						2.2	1-3.5 ft. bgs: Orange-tan, fine to medium SAND. Dry. No odor.		*Sand*
5		S-2	31/60			1.7	3.5-7.5 ft. bgs: Medium-to-dark tan, gravelly fine to medium SAND. Dry. No odor.		*Gravelly Sand*
						1.5	7.5-10 ft. bgs: Medium-tan, fine to coarse SAND, layer of dark brown "mulch-like" material at 9.5 ft. bgs. Dry. No odor.		*Sand*
10		S-3	31/60			0.9	10-11 ft. bgs: Medium-tan, gravelly fine to coarse SAND. Dry. No odor.		*Gravelly Sand*
						0.7	11-16 ft. bgs: Medium-tan, fine to medium SAND. Dry. Damp at 16 ft. bgs. No odor.		*Sand*
15		S-4	33/60			0.6	17.5-19.25 ft. bgs: Medium-tan, fine SAND, orange mottling. Orange and black banding at 19 ft. bgs. Damp. No odor.		
						0.6	19.25-20 ft. bgs: Medium-tan, fine to medium SAND. Wet at 20 ft. bgs. No odor.		
20		S-5	27/60			0.1	20-25 ft. bgs: Medium-tan, fine to coarse SAND. Wet. No odor.		
						0.1			
25									
30									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

NOTES: Apparent groundwater at 20 ft. bgs. Monitoring well set at 25 ft. bgs. Samples collected from 0-2 ft. bgs at 0855 and 18-20 ft. bgs at 0905 to be analyzed for VOCs, SVOCs, and RCRA 8 Metals.

GENERAL NOTES: i) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
ii) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No. SB-1/MW-1

APPENDIX C
Groundwater Sample Collection Forms

Well Purging/Groundwater Sampling Report

Project Name: 615 Broadway Project #: _____ Date: 6/19/19
Well ID: MW-1 Well Diameter (in) 2" Casing Type: PVC
Depth to Water: 18.70' Total Depth: _____ Screen Length: _____
Sampling Method: low flow peristaltic pump
Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: AR
Tube Diameter: ¼" OD Notes: _____

11258

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
1300	75	18.77	19.7						
1310	75	18.77	9.16						
1320		18.75	5.02	90.3	19.0	0.88	3.41	7.04	
1323		18.76	5.13	84.2	19.0	0.89	3.12	7.01	
1326		18.77	5.57	78.8	19.0	0.91	2.92	7.03	
1329		18.77	5.13	76.1	18.4	0.92	4.60	7.04	
1332		19.77	4.65	75.1	19.0	0.92	4.95	7.01	
1335		18.77	4.91	70.8	19.0	0.93	4.57	7.04	
1338	~~1339~~	18.77	4.70	70.5	19.0	0.93	4.53	7.03	
1341	~~1342~~								
1344	~~1355~~								
1347	~~1358~~								

Sample(s) Collected	Time	Preservative
SVOCs, VOCs, RCRA 8 metals	1340	VOCs → I+H
~~MBT~~ NO S/O		SVOCs → I
NO color		metals → I+N

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Well Purging/Groundwater Sampling Report

Project Name: 615 Broadway Project #: N2180061 Date: 6/20/17
Well ID: MW-2 Well Diameter (in) ~~2"~~ 1" Casing Type: PVC
Depth to Water: 18.65 Total Depth: 23.52 Screen Length: 10'
Sampling Method: low flow peristaltic pump
Tube Intake Set at: Depth to Water with Tube: Sampled By: JKM
Tube Diameter: ¼" OD Notes: Began purging 0830

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
0850	100	18.65	1.42	71.3	16.3	0.558	8.57	7.02	Initial: clear,
0855	100	18.65	1.27	74.8	16.3	0.556	6.21	7.06	no sheen, no odor, Final:
0900	100	18.65	0.98	71.4	16.3	0.556	5.82	7.11	same
0905	100	18.65	1.45	64.6	16.3	0.556	5.99	7.15	~2 gal
0910	100	18.65	1.32	61.8	16.3	0.556	5.66	7.17	purged
0915	100	18.65	1.40	61.0	16.3	0.553	5.99	7.15	

Sample(s) Collected	Time	Preservative
VOCs, SVOCs, Total RCRA 8 metals,	0915	HCl, none, HNO_3,
PCBs		none

Weston & Sampson

Well Purging/Groundwater Sampling Report

Page _____ of _____

Project Name: 615 Broadway Project #: _____ Date: 6/20/19
Well ID: MW-3 Well Diameter (in) 2" Casing Type: PVC
Depth to Water: 19.75 Total Depth: _____ Screen Length: _____
Sampling Method: low flow peristaltic pump
Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: AP
Tube Diameter: ¼" OD Notes: _____

827

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
834	100	19.80	24.8						
842		19.82	20.3						
847		19.78	22.9						
852		19.78	19.3						
855		19.74	21.0	137.4	16.0	0.69	4.00	7.05	
859		19.78	19.0	132.4	16.7	0.69	4.46	6.88	
901		19.78	19.8	129.6	16.1	0.69	4.03	6.85	
904		19.78	16.8	125.9	15.8	0.68	3.89	6.82	✓
907		19.78	18.9	125.8	15.7	0.68	4.02	6.81	✓
910		19.78	16.7	124.5	15.7	0.68	4.11	6.81	✓
913									
916									
919									
922									

Sample(s) Collected	Time	Preservative
SVOCs	910	SVOCs → I
VOCs		VOCs → I+H
RCRA 8 metals		Metals → I+N

Weston & Samps

Well Purging/Groundwater Sampling Report

Page 1 of 1

Project Name: ~~Kingston~~ 65 Broadway Project #: N2180061 Date: 6/19/17
Well ID: MW-~~11~~14 Well Diameter (in) 2" Casing Type: PVC
Depth to Water: 18.73 Total Depth: 24.10 Screen Length: 10'
Sampling Method: low flow peristaltic pump
Tube Intake Set at: Depth to Water with Tube: Sampled By: JKM
Tube Diameter: ¼" OD Notes:

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
~~1325~~ ~~1330~~	100	~~18.75~~	6.10	128.9	16.4	0.537	4.97	6.80	Clear, no Sheen, no odor, ~ 1.75 gal purged
1330	100	~~18.76~~	3.81	128.9	16.3	0.524	6.19	6.63	
1335	100	18.76	6.91	122.8	16.0	0.522	6.36	6.60	
1340	100	~~18.75~~	5.66	116.1	16.6	0.515	6.50	6.63	
1345	100	~~18.76~~	2.91	107.4	16.3	0.512	6.50	6.65	
1350	100	18.76	3.02	109.5	16.3	0.510	6.50	6.65	

Sample(s) Collected	Time	Preservative
VOCs SVOCs RCRA 8 Metals (Total)	1350	HCL, none, HNO_3,
PCBs		
*DUP collected		

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Well Purging/Groundwater Sampling Report

Page _____ of _____

Project Name: 615 Broadway Project #: _____ Date: 6/18/19
Well ID: MW-5 Well Diameter (in) 2" Casing Type: PVC
Depth to Water: 18.97' Total Depth: 23.47' Screen Length: _____
Sampling Method: low flow peristaltic pump
Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: AP
Tube Diameter: ¼" OD Notes: _____

1402

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
1406	75	19.20	11.3						
1412		19.21	11.17						
1422		19.27	11.6	137.4	-4.2	2.78	27.09	6.93	
1425		19.27	11.17	131.2	-3.1	2.72	27.86	6.92	
1428		19.27	8.62	123.9	-2.8	2.67	23.43	6.93	
1431		19.29	10.07	121.7	-2.8	2.66	23.48	6.93	
1434		19.30	9.11	117.6	-2.7	2.68	19.41	6.92	
1437		19.30	7.37	115.2	0.5	2.40	17.35	6.93	
1440		19.30	7.77	113.9	[redacted]	2.37	17.71	6.91	Temp → 1[redacted]
1443		19.30	7.78	114.5	[redacted]	2.39	17.73	6.91	Temp → 1.[redacted]8
1446	↓	19.30	7.53	113.3	1.8	2.33	17.81	6.92	
1449									
1452									

Sample(s) Collected	Time	Preservative
VOCs SVOCs RCRA 8 Metal	1450	V → H+I
↓	No S/O	SVOCs → I
	No color	Metal → N+I

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Well Purging/Groundwater Sampling Report

Page _____ of _____

Project Name: 1215 Broadway Project #: N2180061 Date: 6/18/19
Well ID: MW-6 Well Diameter (in) 2" Casing Type: PVC
Depth to Water: _____ Total Depth: _____ Screen Length: 10'
Sampling Method: low flow peristaltic pump
Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: JKM
Tube Diameter: ¼" OD Notes: _____

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
1430	100	18.81	17.1	139.3	16.2	1.319	4.35	6.70	~ 1.5 gal purged. Initial: some
1435	100	18.81	14.0	142.5	15.9	1.330	4.11	6.61	lt tan fine sand,
1440	100	18.8	12.1	146.2	15.8	1.326	4.34	6.56	then clear ~~material~~
1445	100	18.81	11.0	145.4	15.7	1.319	4.02	6.57	~~sand~~. No sheen
1450	100	18.81	11.5	144.1	15.8	1.323	4.38	6.59	no odor.
1455	100	18.81	11.4	145.2	15.6	1.320	4.35	6.58	

Sample(s) Collected	Time	Preservative
VOCs, SVOCs, Total RCRA 8 metals	1455	HCl, None, HNO_3

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Well Purging/Groundwater Sampling Report

Project Name: Kingston Braunfields 615 Broadway Project #: Date: 11/5/19
Well ID: MW-1 (DUP) Well Diameter (in) 1.5 Casing Type: PVC
Depth to Water: 19.81 Total Depth: 24.72 Screen Length: 10'
Sampling Method: low flow bladder pump
Tube Intake Set at: Depth to Water with Tube: Sampled By: EMG
Tube Diameter: ¼" OD Notes:

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	* 13 cycles (12.5)
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
1340		~~19.85~~ 19.81	9.8	228.3	16.4	0.746	5.29	6.90	Began purging at 1255,
1343									initial
1348		19.84	8.8	229.5	16.4	0.739	5.30	6.89	conditions clear,
1353		19.84	6.5	232.2	16.4	0.723	5.35	6.88	no sheen, no
1358		19.84	5.3	233.2	16.4	0.722	5.36	6.88	odor.

Sample(s) Collected	Time	Preservative
VOCs	1358	HCl

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Well Purging/Groundwater Sampling Report

Project Name: Kingston Brownfields GPS Broadway Project #: N2180061 Date: 11/6/19
Well ID: MW-2 Well Diameter (in) 1" Casing Type: PVC
Depth to Water: _____ Total Depth: _____ Screen Length: 10'
Sampling Method: low flow bladder pump
Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: JKM/EMG
Tube Diameter: ¼" OD Notes: _____

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
~~0830~~ ~~0875~~		19.70	31.3	190.4	16.4	0.490	8.68	7.01	Initial conditions: turbid with med-
0835		19.70	150.2	194.1	16.0	0.488	8.65	7.01	tan sediment,
0840		19.70	91.6	199.3	15.9	0.487	8.65	7.00	no sheen, no
0845		19.70	64.4	202.4	15.9	0.489	8.64	6.99	odor, then
0850		19.70	38.0	206.0	15.7	0.494	8.63	6.98	clear, no sheen
0855		19.70	33.6	207.6	15.7	0.496	8.62	6.98	no odor.
0900		19.70	31.9	208.2	15.7	0.496	8.61	6.98	

Sample(s) Collected	Time	Preservative
VOCs	0900	H/O

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Well Purging/Groundwater Sampling Report

Page _____ of _____

Project Name: 615 Broadway Kingston, NY Brownfields Project #: N2180061 Date: 11/6/19

Well ID: MW-3 Well Diameter (in) 1.5 Casing Type: PVC

Depth to Water: 20.76 Total Depth: 24.43 Screen Length: 10'

Sampling Method: low flow bladder pump

Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: JKM/EMG

Tube Diameter: ¼" OD Notes: _____

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
0925		~~20.82~~	53.16	143.7	13.2	0.000	7.61	6.58	Began purging 0910, initial
0930		~~20.82~~	42.40	157.3	13.4	0.000	7.56	6.53	conditions clear,
0935		20.82	25.93	169.7	13.7	0.000	7.52	6.50	no sheen, no
0940		20.82	22.97	173.0	13.8	0.000	7.51	6.50	odor (same final
0945		20.82	18.16	176.5	13.9	0.000	7.50	6.50	conditions)
0950		20.82	17.14	178.0	13.9	0.000	7.49	6.50	~1.0 gal purged
0955		20.82	16.71	180.1	13.9	0.000	7.50	6.50	

Sample(s) Collected	Time	Preservative
VOCs	0955	HCl

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Well Purging/Groundwater Sampling Report

Project Name: 615 Broadway Kingston Brownfields Project #: N218006.1 Date: 11/6/19
Well ID: MW-4 Well Diameter (in) 1.5 Casing Type: PVC
Depth to Water: 19.79 Total Depth: 24.09 Screen Length: 10'
Sampling Method: low flow bladder pump
Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: JKM/EMG
Tube Diameter: ¼" OD Notes: _____

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
1045	21	19.85	955.4	275.8	15.3	0.406	2.30	5.13	Began purging ~~1017~~ 1010. Initial
1050	21	19.85	837.9	284.6	15.3	0.392	2.18	5.13	conditions: turbid
1055	21	19.85	733.2	289.7	15.3	0.378	2.21	5.12	w/ med-tan sediment,
1100	21	19.85	655.4	292.3	15.5	0.369	2.22	5.12	no sheen, no
1105	21	19.85	566.0	294.3	15.5	0.361	2.20	5.11	odor.
1110	21	19.85	564.3	295.1	15.5	0.357	2.18	5.11	
1115	21	19.85	560.1	295.4	15.5	0.356	2.17	5.11	

Sample(s) Collected	Time	Preservative
VOCs	1115	HCl

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Well Purging/Groundwater Sampling Report

Project Name: Kingston, NY Brownfields 61 Broadway Project #: N2180061 Date: 11/6/19
Well ID: MW-5 Well Diameter (in) _____ Casing Type: PVC
Depth to Water: 20.11 Total Depth: 23.46 Screen Length: 10'
Sampling Method: low flow bladder pump
Tube Intake Set at: _____ Depth to Water with Tube: _____ Sampled By: JKM/EMG
Tube Diameter: ¼" OD Notes: _____

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
1215	143	20.23	139.15	202.9	16.2	0.000	2.36	5.34	Began purging at initial conditions
1220		20.23	149.12	222.6	16.1	0.000	1.12	5.27	
1225		20.23	165.32	230.7	16.1	0.000	0.99	5.26	
1230		20.23	141.53	237.8	16.1	0.000	0.72	5.26	
1235		20.23	145.13	240.5	16.0	0.000	0.89	5.25	

Sample(s) Collected	Time	Preservative
VOCs	1235	HCl

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Well Purging/Groundwater Sampling Report

Project Name: Kingston Brownfields 615 Broadway Project #: Date: 11/5/19
Well ID: MW-6 Well Diameter (in) 1.5 Casing Type: PVC
Depth to Water: 19.92 Total Depth: 24.67 Screen Length: 10'
Sampling Method: low flow bladder pump
Tube Intake Set at: Depth to Water with Tube: Sampled By: EMG/JKM
Tube Diameter: ¼" OD Notes:

	ml\min	Ft.	NTU's	mV	°C	mS/cm	mg\L	Units	
Time	Flow	DTW	Turb	ORP	Temp	SpC	DO	PH	Comments
Min	ml/min	+/- 0.02	+/- 10%	+/- 10	+/- 3%	+/- 3%	+/- 10%	+/- 0.1	
2:25pm		19.92	37.72	156.2	14.7	0.883	6.00	6.52	Purge water: clear, no sheen, no odor.
2:30pm		19.92	29.55	166.4	14.7	0.868	5.71	6.32	
2:35pm		19.92	26.87	174.5	14.8	0.859	5.46 ~~5.46~~	6.25	
2:40pm		19.92	23.61	179.5	14.9	.857	5.45	6.23	
2:45		19.92	17.11	183.9	14.9	0.856	5.43	6.24	

Sample(s) Collected	Time	Preservative
VOCs	1445	HCl

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APPENDIX D
Laboratory Analytical Data

con-test® ANALYTICAL LABORATORY
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June 19, 2019

Steve Shaw
Weston & Sampson - Waterbury, VT
98 South Main Street
Waterbury, VT 05676

Project Location: 615 Broadway, Kingston, NY
Client Job Number:
Project Number: N2180061
Laboratory Work Order Number: 19F0630

Enclosed are results of analyses for samples received by the laboratory on June 12, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

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Weston & Sampson - Waterbury, VT
98 South Main Street
Waterbury, VT 05676
ATTN: Steve Shaw

REPORT DATE: 6/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: N2180061

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19F0630

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

PROJECT LOCATION: 615 Broadway, Kingston, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-2 (0-2)	19F0630-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
SB-2 (16-18)	19F0630-02	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
SB-3 (0-2)	19F0630-03	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
SB-3 (16-18)	19F0630-04	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
SB-4 (0-2)	19F0630-05	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	
SB-4 (18-20)	19F0630-06	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	
SB-5 (0-2)	19F0630-07	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	

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Weston & Sampson - Waterbury, VT
98 South Main Street
Waterbury, VT 05676
ATTN: Steve Shaw

REPORT DATE: 6/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: N2180061

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19F0630

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

PROJECT LOCATION: 615 Broadway, Kingston, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-5 (17-19)	19F0630-08	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
SB-1 (0-2)	19F0630-09	Soil		SM 2540G	
				SW-846 8260C	
				SW-846 8270D	
SB-1 (17.5-19.5)	19F0630-10	Soil		SM 2540G	
				SW-846 8260C	
				SW-846 8270D	
SB-6 (0-2)	19F0630-11	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	
SB-6 (16-18)	19F0630-12	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	
SB-7 (0-2)	19F0630-13	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	
SB-7 (18-20)	19F0630-14	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	
SB-8 (0-2)	19F0630-15	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	

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98 South Main Street
Waterbury, VT 05676
ATTN: Steve Shaw

REPORT DATE: 6/19/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: N2180061

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19F0630

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

PROJECT LOCATION: 615 Broadway, Kingston, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-8 (18-20)	19F0630-16	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8260C	
				SW-846 8270D	
SB-Dup	19F0630-17	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	

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.

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SW-846 8082A

Qualifications:

DL-04

Elevated reporting limit due to high concentration of an interfering analyte(s).

Analyte & Samples(s) Qualified:

19F0630-07[SB-5 (0-2)]

S-01

The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
19F0630-07[SB-5 (0-2)]

Decachlorobiphenyl [2C]
19F0630-07[SB-5 (0-2)]

Tetrachloro-m-xylene
19F0630-07[SB-5 (0-2)]

Tetrachloro-m-xylene [2C]
19F0630-07[SB-5 (0-2)]

SW-846 8260C

Qualifications:

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

tert-Butyl Alcohol (TBA)
B233252-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:

tert-Butyl Alcohol (TBA)
B233252-BS1, B233252-BSD1, S037093-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
19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], 19F0630-10[SB-1 (17.5-19.5)], 19F0630- 11[SB-6 (0-2)], 19F0630-12[SB-6 (16-18)], 19F0630-13[SB-7 (0-2)], 19F0630-14[SB-7 (18-20)], 19F0630-15[SB-8 (0-2)], 19F0630-16[SB-8 (18-20)], 19F0630-17[SB-Dup], B233215-BLK1, B233215-BS1, B233215-BSD1, B233252-BLK1, B233252-BS1, B233252-BSD1, S037092-CCV1, S037093-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
B233215-BS1, B233215-BSD1, B233252-BS1, B233252-BSD1, S037092-CCV1, S037093-CCV1

SW-846 8270D

Qualifications:

L-04

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

Analyte & Samples(s) Qualified:

Benzoic Acid
19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], 19F0630-10[SB-1 (17.5-19.5)], 19F0630- 11[SB-6 (0-2)], 19F0630-12[SB-6 (16-18)], 19F0630-13[SB-7 (0-2)], 19F0630-14[SB-7 (18-20)], 19F0630-15[SB-8 (0-2)], 19F0630-16[SB-8 (18-20)], 19F0630-17[SB-Dup], B233189-BLK1, B233189-BS1, B233189-BSD1

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V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:

Benzidine

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], 19F0630-10[SB-1 (17.5-19.5)], 19F0630- 11[SB-6 (0-2)], 19F0630-12[SB-6 (16-18)], 19F0630-13[SB-7 (0-2)], 19F0630-14[SB-7 (18-20)], 19F0630-15[SB-8 (0-2)], 19F0630-16[SB-8 (18-20)], 19F0630-17[SB-Dup], B233189-BLK1, B233189-BS1, B233189-BSD1, S037163-CCV1, S037217-CCV1, S037254-CCV1

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:

2,4-Dinitrophenol

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], B233189-BS1, S037217-CCV1

Benzidine

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], B233189-BLK1, B233189-BS1, B233189-BSD1, S037163-CCV1, S037217-CCV1

Di-n-octylphthalate

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], B233189-BS1, S037217-CCV1

Hexachlorocyclopentadiene

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], B233189-BS1, S037217-CCV1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

Pentachloronitrobenzene

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], B233189-BS1, S037217-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:

3,3-Dichlorobenzidine

19F0630-10[SB-1 (17.5-19.5)], 19F0630-11[SB-6 (0-2)], 19F0630-12[SB-6 (16-18)], 19F0630-13[SB-7 (0-2)], 19F0630-14[SB-7 (18-20)], 19F0630-15[SB-8 (0-2)], 19F0630-16[SB-8 (18-20)], 19F0630-17[SB-Dup], B233189-BLK1, B233189-BS1, B233189-BSD1, S037163-CCV1, S037254-CCV1

4-Chloroaniline

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], 19F0630-10[SB-1 (17.5-19.5)], 19F0630- 11[SB-6 (0-2)], 19F0630-12[SB-6 (16-18)], 19F0630-13[SB-7 (0-2)], 19F0630-14[SB-7 (18-20)], 19F0630-15[SB-8 (0-2)], 19F0630-16[SB-8 (18-20)], 19F0630-17[SB-Dup], B233189-BLK1, B233189-BS1, B233189-BSD1, S037163-CCV1, S037217-CCV1, S037254-CCV1

Aniline

19F0630-01[SB-2 (0-2)], 19F0630-02[SB-2 (16-18)], 19F0630-03[SB-3 (0-2)], 19F0630-04[SB-3 (16-18)], 19F0630-05[SB-4 (0-2)], 19F0630-06[SB-4 (18-20)], 19F0630-07[SB-5 (0-2)], 19F0630-08[SB-5 (17-19)], 19F0630-09[SB-1 (0-2)], B233189-BS1, S037217-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.

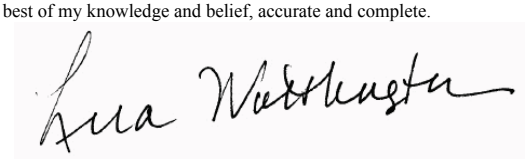
Analyte & Samples(s) Qualified:

Benzidine

19F0630-10[SB-1 (17.5-19.5)], 19F0630-11[SB-6 (0-2)], 19F0630-12[SB-6 (16-18)], 19F0630-13[SB-7 (0-2)], 19F0630-14[SB-7 (18-20)], 19F0630-15[SB-8 (0-2)], 19F0630-16[SB-8 (18-20)], 19F0630-17[SB-Dup], B233189-BLK1, B233189-BS1, B233189-BSD1, S037163-CCV1, S037254-CCV1

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The results of analyses reported only relate to samples submitted to the Con-Test 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® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) | Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.042	0.11	0.0096	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Acrylonitrile	ND	0.0069	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Benzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromochloromethane	ND	0.0046	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromodichloromethane	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromoform	ND	0.0046	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromomethane	ND	0.011	0.0013	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2-Butanone (MEK)	ND	0.046	0.0063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Butyl Alcohol (TBA)	ND	0.046	0.0051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
n-Butylbenzene	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
sec-Butylbenzene	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Butylbenzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Carbon Disulfide	ND	0.0069	0.0062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Carbon Tetrachloride	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chlorobenzene	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chlorodibromomethane	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chloroethane	ND	0.023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chloroform	ND	0.0046	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chloromethane	ND	0.011	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2-Chlorotoluene	ND	0.0023	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
4-Chlorotoluene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Dibromomethane	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dichlorobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3-Dichlorobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,4-Dichlorobenzene	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
trans-1,4-Dichloro-2-butene	ND	0.0046	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.023	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1-Dichloroethane	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dichloroethane	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1-Dichloroethylene	ND	0.0046	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
cis-1,2-Dichloroethylene	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
trans-1,2-Dichloroethylene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dichloropropane	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3-Dichloropropane	ND	0.0011	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2,2-Dichloropropane	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1-Dichloropropene	ND	0.0046	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Diethyl Ether	0.0018	0.023	0.00080	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) | Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

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	0.0011	0.00023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,4-Dioxane	ND	0.11	0.0061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Ethylbenzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Hexachlorobutadiene	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2-Hexanone (MBK)	ND	0.023	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Isopropylbenzene (Cumene)	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methyl Acetate	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methyl Cyclohexane	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methylene Chloride	0.0021	0.023	0.0011	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	0.0029	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Naphthalene	ND	0.0046	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
n-Propylbenzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Styrene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Tetrachloroethylene	ND	0.0023	0.0014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Tetrahydrofuran	ND	0.011	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Toluene	0.0012	0.0023	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,3-Trichlorobenzene	ND	0.0023	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,4-Trichlorobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3,5-Trichlorobenzene	ND	0.0023	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,1-Trichloroethane	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,2-Trichloroethane	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Trichloroethylene	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,3-Trichloropropane	ND	0.0046	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,4-Trimethylbenzene	ND	0.0023	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3,5-Trimethylbenzene	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Vinyl Chloride	ND	0.011	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
m+p Xylene	ND	0.0046	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
o-Xylene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.4	70-130		6/13/19 13:06
Toluene-d8	100	70-130		6/13/19 13:06
4-Bromofluorobenzene	102	70-130		6/13/19 13:06

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) | Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Aniline	ND	0.37	0.088	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Anthracene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzidine	ND	0.73	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(a)anthracene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(a)pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(b)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(g,h,i)perylene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(k)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzoic Acid	ND	1.1	0.65	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Carbazole	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Chloroaniline	ND	0.73	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Chloro-3-methylphenol	ND	0.73	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Chrysene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,4-Dichlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dinitrophenol	ND	0.73	0.51	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,6-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Di-n-octylphthalate	ND	0.37	0.17	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Fluoranthene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) | Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Hexachlorocyclopentadiene	ND	0.37	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Indeno(1,2,3-cd)pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1-Methylnaphthalene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Nitrophenol	ND	0.73	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Phenanthrene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	56.0	30-130		6/17/19 19:10
Phenol-d6	64.2	30-130		6/17/19 19:10
Nitrobenzene-d5	66.8	30-130		6/17/19 19:10
2-Fluorobiphenyl	70.7	30-130		6/17/19 19:10
2,4,6-Tribromophenol	50.0	30-130		6/17/19 19:10
p-Terphenyl-d14	87.4	30-130		6/17/19 19:10

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) | Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	0.040	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1221 [1]	ND	0.089	0.067	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1232 [1]	ND	0.089	0.080	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1242 [1]	ND	0.089	0.067	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1248 [1]	ND	0.089	0.031	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1254 [1]	ND	0.089	0.036	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1260 [1]	ND	0.089	0.049	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1262 [1]	ND	0.089	0.044	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1268 [1]	ND	0.089	0.071	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.0	30-150		6/18/19 20:22
Decachlorobiphenyl [2]	90.8	30-150		6/18/19 20:22
Tetrachloro-m-xylene [1]	89.1	30-150		6/18/19 20:22
Tetrachloro-m-xylene [2]	86.4	30-150		6/18/19 20:22

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.9	1.9	0.94	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Barium	30	1.9	0.92	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Cadmium	0.21	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Chromium	8.2	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Lead	11	0.56	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Mercury	0.056	0.029	0.0086	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:42	AJL
Selenium	ND	3.7	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Silver	ND	0.37	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.6		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) | Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0073	0.067	0.0056	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Acrylonitrile	ND	0.0040	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00067	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Benzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromochloromethane	ND	0.0027	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromodichloromethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromoform	ND	0.0027	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromomethane	ND	0.0067	0.00073	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2-Butanone (MEK)	ND	0.027	0.0037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Butyl Alcohol (TBA)	ND	0.027	0.0030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
n-Butylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
sec-Butylbenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Butylbenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00067	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Carbon Disulfide	ND	0.0040	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Carbon Tetrachloride	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chlorobenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chlorodibromomethane	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chloroethane	ND	0.013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chloroform	ND	0.0027	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chloromethane	ND	0.0067	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2-Chlorotoluene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
4-Chlorotoluene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dibromoethane (EDB)	ND	0.00067	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Dibromomethane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dichlorobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3-Dichlorobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,4-Dichlorobenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
trans-1,4-Dichloro-2-butene	ND	0.0027	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1-Dichloroethane	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1-Dichloroethylene	ND	0.0027	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
cis-1,2-Dichloroethylene	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
trans-1,2-Dichloroethylene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3-Dichloropropane	ND	0.00067	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1-Dichloropropene	ND	0.0027	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
cis-1,3-Dichloropropene	ND	0.00067	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
trans-1,3-Dichloropropene	ND	0.00067	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Diethyl Ether	0.0015	0.013	0.00047	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:33	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) | Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

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	0.00067	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,4-Dioxane	ND	0.067	0.0035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Ethylbenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Hexachlorobutadiene	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2-Hexanone (MBK)	ND	0.013	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Isopropylbenzene (Cumene)	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methyl Acetate	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0027	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methyl Cyclohexane	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methylene Chloride	0.0016	0.013	0.00067	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:33	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Naphthalene	ND	0.0027	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
n-Propylbenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Styrene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,2,2-Tetrachloroethane	ND	0.00067	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Tetrachloroethylene	ND	0.0013	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Tetrahydrofuran	ND	0.0067	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Toluene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,3-Trichlorobenzene	ND	0.0013	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,4-Trichlorobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3,5-Trichlorobenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,1-Trichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,2-Trichloroethane	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Trichloroethylene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0067	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,3-Trichloropropane	ND	0.0027	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0067	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,4-Trimethylbenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3,5-Trimethylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Vinyl Chloride	ND	0.0067	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
m+p Xylene	ND	0.0027	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
o-Xylene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.8	70-130		6/13/19 13:33
Toluene-d8	100	70-130		6/13/19 13:33
4-Bromofluorobenzene	103	70-130		6/13/19 13:33

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) | Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Aniline	ND	0.36	0.084	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Anthracene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzidine	ND	0.69	0.19	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(a)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(a)pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(b)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(g,h,i)perylene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(k)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzoic Acid	ND	1.0	0.62	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-chloroisopropyl)ether	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Bromophenylphenylether	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Carbazole	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Chloroaniline	ND	0.69	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Chloro-3-methylphenol	ND	0.69	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Chloronaphthalene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Chrysene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Dibenz(a,h)anthracene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Di-n-butylphthalate	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2-Dichlorobenzene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,3-Dichlorobenzene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,4-Dichlorobenzene	ND	0.36	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dichlorophenol	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4,6-Dinitro-2-methylphenol	ND	0.36	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dinitrophenol	ND	0.69	0.48	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Fluoranthene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) | Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Hexachlorocyclopentadiene	ND	0.36	0.29	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Hexachloroethane	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1-Methylnaphthalene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Nitrophenol	ND	0.69	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pentachlorophenol	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Phenanthrene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pyridine	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2,4-Trichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.3	30-130		6/17/19 19:36
Phenol-d6	69.8	30-130		6/17/19 19:36
Nitrobenzene-d5	72.2	30-130		6/17/19 19:36
2-Fluorobiphenyl	77.0	30-130		6/17/19 19:36
2,4,6-Tribromophenol	65.9	30-130		6/17/19 19:36
p-Terphenyl-d14	84.4	30-130		6/17/19 19:36

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) | Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	0.038	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1221 [1]	ND	0.085	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1232 [1]	ND	0.085	0.076	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1242 [1]	ND	0.085	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1248 [1]	ND	0.085	0.030	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1254 [1]	ND	0.085	0.034	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1260 [1]	ND	0.085	0.047	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1262 [1]	ND	0.085	0.042	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1268 [1]	ND	0.085	0.068	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.0	30-150		6/18/19 20:35
Decachlorobiphenyl [2]	85.4	30-150		6/18/19 20:35
Tetrachloro-m-xylene [1]	84.6	30-150		6/18/19 20:35
Tetrachloro-m-xylene [2]	81.5	30-150		6/18/19 20:35

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.6	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Barium	34	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Cadmium	0.22	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Chromium	11	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Lead	6.8	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Mercury	0.016	0.027	0.0082	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:44	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) | Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.2		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.020	0.064	0.0053	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Acrylonitrile	ND	0.0038	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00064	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Benzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromochloromethane	ND	0.0025	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromodichloromethane	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromoform	ND	0.0025	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromomethane	ND	0.0064	0.00070	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2-Butanone (MEK)	ND	0.025	0.0035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Butyl Alcohol (TBA)	ND	0.025	0.0029	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
n-Butylbenzene	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
sec-Butylbenzene	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Butylbenzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00064	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Carbon Disulfide	ND	0.0038	0.0034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Carbon Tetrachloride	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chlorobenzene	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chlorodibromomethane	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chloroethane	ND	0.013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chloroform	ND	0.0025	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chloromethane	ND	0.0064	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2-Chlorotoluene	ND	0.0013	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
4-Chlorotoluene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dibromoethane (EDB)	ND	0.00064	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Dibromomethane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dichlorobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3-Dichlorobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,4-Dichlorobenzene	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
trans-1,4-Dichloro-2-butene	ND	0.0025	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00070	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1-Dichloroethane	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dichloroethane	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1-Dichloroethylene	ND	0.0025	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
cis-1,2-Dichloroethylene	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
trans-1,2-Dichloroethylene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dichloropropane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3-Dichloropropane	ND	0.00064	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2,2-Dichloropropane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1-Dichloropropene	ND	0.0025	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
cis-1,3-Dichloropropene	ND	0.00064	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
trans-1,3-Dichloropropene	ND	0.00064	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Diethyl Ether	0.00099	0.013	0.00044	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:00	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

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	0.00064	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,4-Dioxane	ND	0.064	0.0034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Ethylbenzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Hexachlorobutadiene	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2-Hexanone (MBK)	ND	0.013	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Isopropylbenzene (Cumene)	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methyl Acetate	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0025	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methyl Cyclohexane	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methylene Chloride	0.0010	0.013	0.00064	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:00	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0016	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Naphthalene	ND	0.0025	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
n-Propylbenzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Styrene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,2,2-Tetrachloroethane	ND	0.00064	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Tetrachloroethylene	ND	0.0013	0.00076	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Tetrahydrofuran	ND	0.0064	0.00070	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Toluene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,3-Trichlorobenzene	ND	0.0013	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,4-Trichlorobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3,5-Trichlorobenzene	ND	0.0013	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,1-Trichloroethane	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,2-Trichloroethane	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Trichloroethylene	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0064	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,3-Trichloropropane	ND	0.0025	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0064	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,4-Trimethylbenzene	ND	0.0013	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3,5-Trimethylbenzene	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Vinyl Chloride	ND	0.0064	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
m+p Xylene	ND	0.0025	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
o-Xylene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.2	70-130		6/13/19 14:00
Toluene-d8	100	70-130		6/13/19 14:00
4-Bromofluorobenzene	104	70-130		6/13/19 14:00

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Acenaphthylene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Acetophenone	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Aniline	ND	0.40	0.093	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Anthracene	0.18	0.20	0.10	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzidine	ND	0.77	0.21	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(a)anthracene	1.0	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(a)pyrene	0.92	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(b)fluoranthene	1.3	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(g,h,i)perylene	0.55	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(k)fluoranthene	0.46	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzoic Acid	ND	1.2	0.69	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-chloroethoxy)methane	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-chloroethyl)ether	ND	0.40	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-chloroisopropyl)ether	ND	0.40	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Bromophenylphenylether	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Butylbenzylphthalate	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Carbazole	0.11	0.20	0.10	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Chloroaniline	ND	0.77	0.16	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Chloro-3-methylphenol	ND	0.77	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Chloronaphthalene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Chlorophenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Chlorophenylphenylether	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Chrysene	1.1	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Dibenz(a,h)anthracene	0.13	0.20	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Dibenzofuran	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Di-n-butylphthalate	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2-Dichlorobenzene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,3-Dichlorobenzene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,4-Dichlorobenzene	ND	0.40	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
3,3-Dichlorobenzidine	ND	0.20	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dichlorophenol	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Diethylphthalate	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dimethylphenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Dimethylphthalate	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4,6-Dinitro-2-methylphenol	ND	0.40	0.35	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dinitrophenol	ND	0.77	0.53	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dinitrotoluene	ND	0.40	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,6-Dinitrotoluene	ND	0.40	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Di-n-octylphthalate	ND	0.40	0.17	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Fluoranthene	2.2	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Fluorene	ND	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.40	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Hexachlorobutadiene	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Hexachlorocyclopentadiene	ND	0.40	0.33	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Hexachloroethane	ND	0.40	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Indeno(1,2,3-cd)pyrene	0.56	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Isophorone	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1-Methylnaphthalene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Methylnaphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Methylphenol	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
3/4-Methylphenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Naphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Nitroaniline	ND	0.40	0.23	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
3-Nitroaniline	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Nitroaniline	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Nitrobenzene	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Nitrophenol	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Nitrophenol	ND	0.77	0.28	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
N-Nitrosodimethylamine	ND	0.40	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
N-Nitrosodi-n-propylamine	ND	0.40	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pentachloronitrobenzene	ND	0.40	0.14	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pentachlorophenol	ND	0.40	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Phenanthrene	0.96	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Phenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pyrene	1.8	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pyridine	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2,4-Trichlorobenzene	ND	0.40	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4,5-Trichlorophenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4,6-Trichlorophenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	52.1	30-130		6/17/19 20:02
Phenol-d6	58.3	30-130		6/17/19 20:02
Nitrobenzene-d5	59.7	30-130		6/17/19 20:02
2-Fluorobiphenyl	64.5	30-130		6/17/19 20:02
2,4,6-Tribromophenol	51.0	30-130		6/17/19 20:02
p-Terphenyl-d14	71.5	30-130		6/17/19 20:02

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	0.041	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1221 [1]	ND	0.091	0.068	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1232 [1]	ND	0.091	0.082	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1242 [1]	ND	0.091	0.068	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1248 [1]	ND	0.091	0.032	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1254 [1]	ND	0.091	0.036	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1260 [1]	ND	0.091	0.050	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1262 [1]	ND	0.091	0.045	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1268 [1]	ND	0.091	0.073	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.2	30-150		6/18/19 22:05
Decachlorobiphenyl [2]	90.4	30-150		6/18/19 22:05
Tetrachloro-m-xylene [1]	87.3	30-150		6/18/19 22:05
Tetrachloro-m-xylene [2]	83.8	30-150		6/18/19 22:05

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	6.8	1.9	0.95	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Barium	170	1.9	0.93	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Cadmium	0.93	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Chromium	13	0.38	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Lead	3000	0.57	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Mercury	0.46	0.028	0.0084	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:45	AJL
Selenium	ND	3.8	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Silver	ND	0.38	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.8		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) | Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0061	0.066	0.0055	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Acrylonitrile	ND	0.0039	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00066	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Benzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromochloromethane	ND	0.0026	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromodichloromethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromoform	ND	0.0026	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromomethane	ND	0.0066	0.00072	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2-Butanone (MEK)	ND	0.026	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Butyl Alcohol (TBA)	ND	0.026	0.0030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
n-Butylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
sec-Butylbenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Butylbenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00066	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Carbon Disulfide	ND	0.0039	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Carbon Tetrachloride	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chlorobenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chlorodibromomethane	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chloroethane	ND	0.013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chloroform	ND	0.0026	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chloromethane	ND	0.0066	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2-Chlorotoluene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
4-Chlorotoluene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dibromoethane (EDB)	ND	0.00066	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Dibromomethane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dichlorobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3-Dichlorobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,4-Dichlorobenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
trans-1,4-Dichloro-2-butene	ND	0.0026	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1-Dichloroethane	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1-Dichloroethylene	ND	0.0026	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
cis-1,2-Dichloroethylene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
trans-1,2-Dichloroethylene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3-Dichloropropane	ND	0.00066	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1-Dichloropropene	ND	0.0026	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
cis-1,3-Dichloropropene	ND	0.00066	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
trans-1,3-Dichloropropene	ND	0.00066	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Diethyl Ether	0.0015	0.013	0.00046	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) | Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

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	0.00066	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,4-Dioxane	ND	0.066	0.0035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Ethylbenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Hexachlorobutadiene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2-Hexanone (MBK)	ND	0.013	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Isopropylbenzene (Cumene)	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methyl Acetate	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0026	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methyl Cyclohexane	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methylene Chloride	0.0023	0.013	0.00066	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0016	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Naphthalene	ND	0.0026	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
n-Propylbenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Styrene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,2,2-Tetrachloroethane	ND	0.00066	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Tetrachloroethylene	ND	0.0013	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Tetrahydrofuran	ND	0.0066	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Toluene	0.0012	0.0013	0.00039	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,3-Trichlorobenzene	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,4-Trichlorobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3,5-Trichlorobenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,1-Trichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,2-Trichloroethane	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Trichloroethylene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0066	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,3-Trichloropropane	ND	0.0026	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0066	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,4-Trimethylbenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3,5-Trimethylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Vinyl Chloride	ND	0.0066	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
m+p Xylene	ND	0.0026	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
o-Xylene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	100	70-130		6/13/19 14:27
Toluene-d8	99.4	70-130		6/13/19 14:27
4-Bromofluorobenzene	102	70-130		6/13/19 14:27

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) | Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Aniline	ND	0.36	0.084	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Anthracene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzidine	ND	0.70	0.19	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzoic Acid	ND	1.1	0.62	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-chloroisopropyl)ether	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Carbazole	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Chloroaniline	ND	0.70	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Chloro-3-methylphenol	ND	0.70	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,4-Dichlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dinitrophenol	ND	0.70	0.49	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) | Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1-Methylnaphthalene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Nitrophenol	ND	0.70	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pentachlorophenol	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Phenanthrene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.8	30-130		6/17/19 20:28
Phenol-d6	69.7	30-130		6/17/19 20:28
Nitrobenzene-d5	70.8	30-130		6/17/19 20:28
2-Fluorobiphenyl	74.2	30-130		6/17/19 20:28
2,4,6-Tribromophenol	71.7	30-130		6/17/19 20:28
p-Terphenyl-d14	79.7	30-130		6/17/19 20:28

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) | Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	0.037	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1221 [1]	ND	0.082	0.062	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1232 [1]	ND	0.082	0.074	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1242 [1]	ND	0.082	0.062	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1248 [1]	ND	0.082	0.029	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1254 [1]	ND	0.082	0.033	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1260 [1]	ND	0.082	0.045	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1262 [1]	ND	0.082	0.041	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1268 [1]	ND	0.082	0.066	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.2	30-150		6/18/19 22:17
Decachlorobiphenyl [2]	90.9	30-150		6/18/19 22:17
Tetrachloro-m-xylene [1]	78.7	30-150		6/18/19 22:17
Tetrachloro-m-xylene [2]	76.6	30-150		6/18/19 22:17

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.4	1.7	0.88	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Barium	29	1.7	0.86	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Cadmium	0.18	0.17	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Chromium	6.8	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Lead	6.0	0.52	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Mercury	0.0089	0.027	0.0081	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:30	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Silver	ND	0.35	0.20	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) | Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.024	0.087	0.0073	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Acrylonitrile	ND	0.0052	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00087	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Benzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromochloromethane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromoform	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromomethane	ND	0.0087	0.00095	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2-Butanone (MEK)	ND	0.035	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Butyl Alcohol (TBA)	ND	0.035	0.0039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
sec-Butylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Butylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Carbon Disulfide	ND	0.0052	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Carbon Tetrachloride	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chlorodibromomethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chloroethane	ND	0.017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chloroform	ND	0.0035	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chloromethane	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
4-Chlorotoluene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dibromoethane (EDB)	ND	0.00087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Dibromomethane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
trans-1,4-Dichloro-2-butene	ND	0.0035	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1-Dichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1-Dichloroethylene	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3-Dichloropropane	ND	0.00087	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1-Dichloropropene	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
cis-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
trans-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Diethyl Ether	0.0020	0.017	0.00061	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:55	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) | Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

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	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,4-Dioxane	ND	0.087	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Ethylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Hexachlorobutadiene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methyl Acetate	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methyl Cyclohexane	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methylene Chloride	0.0028	0.017	0.00087	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0022	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Naphthalene	ND	0.0035	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
n-Propylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Styrene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Tetrahydrofuran	ND	0.0087	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Toluene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Trichloroethylene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,3-Trichloropropane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0087	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Vinyl Chloride	ND	0.0087	0.00078	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
m+p Xylene	ND	0.0035	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
o-Xylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.3	70-130		6/13/19 14:55
Toluene-d8	98.2	70-130		6/13/19 14:55
4-Bromofluorobenzene	98.6	70-130		6/13/19 14:55

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) | Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Aniline	ND	0.37	0.087	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Anthracene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzoic Acid	ND	1.1	0.64	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Carbazole	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,4-Dichlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dinitrophenol	ND	0.72	0.50	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) | Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Hexachlorocyclopentadiene	ND	0.37	0.30	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1-Methylnaphthalene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Phenanthrene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	50.0	30-130		6/17/19 20:54
Phenol-d6	58.8	30-130		6/17/19 20:54
Nitrobenzene-d5	54.8	30-130		6/17/19 20:54
2-Fluorobiphenyl	65.5	30-130		6/17/19 20:54
2,4,6-Tribromophenol	63.0	30-130		6/17/19 20:54
p-Terphenyl-d14	72.9	30-130		6/17/19 20:54

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.3	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Barium	45	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Cadmium	0.29	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Chromium	9.3	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Lead	37	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Mercury	0.12	0.026	0.0077	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:47	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) | Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.9		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) | Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0098	0.083	0.0070	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Acrylonitrile	ND	0.0050	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00083	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Benzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromochloromethane	ND	0.0033	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromodichloromethane	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromoform	ND	0.0033	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromomethane	ND	0.0083	0.00091	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2-Butanone (MEK)	ND	0.033	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Butyl Alcohol (TBA)	ND	0.033	0.0037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
n-Butylbenzene	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
sec-Butylbenzene	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Butylbenzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00083	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Carbon Disulfide	ND	0.0050	0.0045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Carbon Tetrachloride	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chlorobenzene	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chlorodibromomethane	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chloroethane	ND	0.017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chloroform	ND	0.0033	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chloromethane	ND	0.0083	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2-Chlorotoluene	ND	0.0017	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
4-Chlorotoluene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dibromoethane (EDB)	ND	0.00083	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Dibromomethane	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
trans-1,4-Dichloro-2-butene	ND	0.0033	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1-Dichloroethane	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dichloroethane	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1-Dichloroethylene	ND	0.0033	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dichloropropane	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3-Dichloropropane	ND	0.00083	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2,2-Dichloropropane	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1-Dichloropropene	ND	0.0033	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
cis-1,3-Dichloropropene	ND	0.00083	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
trans-1,3-Dichloropropene	ND	0.00083	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Diethyl Ether	0.0019	0.017	0.00058	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:22	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) | Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

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	0.00083	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,4-Dioxane	ND	0.083	0.0044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Ethylbenzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Hexachlorobutadiene	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methyl Acetate	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methyl Cyclohexane	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methylene Chloride	0.0022	0.017	0.00083	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:22	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Naphthalene	ND	0.0033	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
n-Propylbenzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Styrene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,2,2-Tetrachloroethane	ND	0.00083	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Tetrahydrofuran	ND	0.0083	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Toluene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Trichloroethylene	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0083	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,3-Trichloropropane	ND	0.0033	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0083	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Vinyl Chloride	ND	0.0083	0.00075	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
m+p Xylene	ND	0.0033	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
o-Xylene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.1	70-130		6/13/19 15:22
Toluene-d8	99.4	70-130		6/13/19 15:22
4-Bromofluorobenzene	99.8	70-130		6/13/19 15:22

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Acetophenone	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Aniline	ND	0.35	0.083	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Anthracene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzidine	ND	0.68	0.19	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(a)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(a)pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(b)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(g,h,i)perylene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(k)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzoic Acid	ND	1.0	0.61	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-chloroethoxy)methane	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-chloroethyl)ether	ND	0.35	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-chloroisopropyl)ether	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Bromophenylphenylether	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Butylbenzylphthalate	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Carbazole	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Chloroaniline	ND	0.68	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Chloro-3-methylphenol	ND	0.68	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Chloronaphthalene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Chlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Chlorophenylphenylether	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Chrysene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Dibenz(a,h)anthracene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Dibenzofuran	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Di-n-butylphthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,3-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,4-Dichlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
3,3-Dichlorobenzidine	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dichlorophenol	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Diethylphthalate	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dimethylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Dimethylphthalate	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4,6-Dinitro-2-methylphenol	ND	0.35	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dinitrophenol	ND	0.68	0.48	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,6-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Di-n-octylphthalate	ND	0.35	0.15	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Fluoranthene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Fluorene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) | Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Hexachlorobutadiene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Hexachlorocyclopentadiene	ND	0.35	0.29	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Hexachloroethane	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Isophorone	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1-Methylnaphthalene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Methylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
3/4-Methylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Nitroaniline	ND	0.35	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
3-Nitroaniline	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Nitroaniline	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Nitrobenzene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Nitrophenol	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Nitrophenol	ND	0.68	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
N-Nitrosodimethylamine	ND	0.35	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
N-Nitrosodi-n-propylamine	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pentachloronitrobenzene	ND	0.35	0.12	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pentachlorophenol	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Phenanthrene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Phenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pyridine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2,4-Trichlorobenzene	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4,5-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4,6-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	62.5	30-130		6/17/19 21:19
Phenol-d6	68.1	30-130		6/17/19 21:19
Nitrobenzene-d5	69.0	30-130		6/17/19 21:19
2-Fluorobiphenyl	73.0	30-130		6/17/19 21:19
2,4,6-Tribromophenol	62.1	30-130		6/17/19 21:19
p-Terphenyl-d14	78.2	30-130		6/17/19 21:19

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.1	1.7	0.84	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Barium	29	1.7	0.82	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Cadmium	0.20	0.17	0.10	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Chromium	7.8	0.33	0.20	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Lead	5.9	0.50	0.29	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Mercury	0.013	0.024	0.0073	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:48	AJL
Selenium	ND	3.3	2.7	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Silver	ND	0.33	0.19	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) | Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.5		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.029	0.090	0.0076	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Acrylonitrile	ND	0.0054	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00090	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Benzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromochloromethane	ND	0.0036	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromodichloromethane	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromoform	ND	0.0036	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromomethane	ND	0.0090	0.00099	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2-Butanone (MEK)	ND	0.036	0.0050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	0.0041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
n-Butylbenzene	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
sec-Butylbenzene	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Butylbenzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00090	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Carbon Disulfide	ND	0.0054	0.0049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Carbon Tetrachloride	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chlorobenzene	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chlorodibromomethane	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chloroethane	ND	0.018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chloroform	ND	0.0036	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chloromethane	ND	0.0090	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2-Chlorotoluene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
4-Chlorotoluene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dibromoethane (EDB)	ND	0.00090	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Dibromomethane	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dichlorobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3-Dichlorobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,4-Dichlorobenzene	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1-Dichloroethane	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dichloroethane	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1-Dichloroethylene	ND	0.0036	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
cis-1,2-Dichloroethylene	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
trans-1,2-Dichloroethylene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dichloropropane	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3-Dichloropropane	ND	0.00090	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2,2-Dichloropropane	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1-Dichloropropene	ND	0.0036	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
cis-1,3-Dichloropropene	ND	0.00090	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
trans-1,3-Dichloropropene	ND	0.00090	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Diethyl Ether	0.0012	0.018	0.00063	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:49	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

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	0.00090	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,4-Dioxane	ND	0.090	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Ethylbenzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Hexachlorobutadiene	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2-Hexanone (MBK)	ND	0.018	0.0018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Isopropylbenzene (Cumene)	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methyl Acetate	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methyl Cyclohexane	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methylene Chloride	0.0018	0.018	0.00090	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:49	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Naphthalene	ND	0.0036	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
n-Propylbenzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Styrene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,2,2-Tetrachloroethane	ND	0.00090	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Tetrachloroethylene	ND	0.0018	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Tetrahydrofuran	ND	0.0090	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Toluene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,3-Trichlorobenzene	ND	0.0018	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,4-Trichlorobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3,5-Trichlorobenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,1-Trichloroethane	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,2-Trichloroethane	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Trichloroethylene	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0090	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,3-Trichloropropane	ND	0.0036	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0090	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,4-Trimethylbenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3,5-Trimethylbenzene	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Vinyl Chloride	ND	0.0090	0.00081	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
m+p Xylene	ND	0.0036	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
o-Xylene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	104	70-130		6/13/19 15:49
Toluene-d8	99.2	70-130		6/13/19 15:49
4-Bromofluorobenzene	100	70-130		6/13/19 15:49

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Acetophenone	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Aniline	ND	0.38	0.088	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Anthracene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzidine	ND	0.73	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(a)anthracene	0.55	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(a)pyrene	0.45	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(b)fluoranthene	0.66	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(g,h,i)perylene	0.25	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(k)fluoranthene	0.22	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzoic Acid	ND	1.1	0.65	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-chloroethoxy)methane	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-chloroethyl)ether	ND	0.38	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-chloroisopropyl)ether	ND	0.38	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Bromophenylphenylether	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Butylbenzylphthalate	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Carbazole	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Chloroaniline	ND	0.73	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Chloro-3-methylphenol	ND	0.73	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Chloronaphthalene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Chlorophenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Chlorophenylphenylether	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Chrysene	0.56	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Dibenzofuran	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Di-n-butylphthalate	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2-Dichlorobenzene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,3-Dichlorobenzene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,4-Dichlorobenzene	ND	0.38	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dichlorophenol	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Diethylphthalate	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dimethylphenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Dimethylphthalate	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4,6-Dinitro-2-methylphenol	ND	0.38	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dinitrophenol	ND	0.73	0.51	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dinitrotoluene	ND	0.38	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,6-Dinitrotoluene	ND	0.38	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Di-n-octylphthalate	ND	0.38	0.17	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Fluoranthene	1.0	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.38	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Hexachlorobutadiene	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Hexachlorocyclopentadiene	ND	0.38	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Hexachloroethane	ND	0.38	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Indeno(1,2,3-cd)pyrene	0.27	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Isophorone	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1-Methylnaphthalene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Methylphenol	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
3/4-Methylphenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Nitroaniline	ND	0.38	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
3-Nitroaniline	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Nitroaniline	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Nitrobenzene	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Nitrophenol	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Nitrophenol	ND	0.73	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
N-Nitrosodimethylamine	ND	0.38	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
N-Nitrosodi-n-propylamine	ND	0.38	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pentachloronitrobenzene	ND	0.38	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pentachlorophenol	ND	0.38	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Phenanthrene	0.40	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Phenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pyrene	0.84	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pyridine	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2,4-Trichlorobenzene	ND	0.38	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4,5-Trichlorophenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4,6-Trichlorophenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	61.8	30-130		6/17/19 21:45
Phenol-d6	68.4	30-130		6/17/19 21:45
Nitrobenzene-d5	67.3	30-130		6/17/19 21:45
2-Fluorobiphenyl	75.0	30-130		6/17/19 21:45
2,4,6-Tribromophenol	69.9	30-130		6/17/19 21:45
p-Terphenyl-d14	79.6	30-130		6/17/19 21:45

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Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Sample Flags: DL-04

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.90	0.40	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1221 [1]	ND	0.90	0.67	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1232 [1]	ND	0.90	0.81	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1242 [1]	ND	0.90	0.67	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1248 [1]	ND	0.90	0.31	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1254 [1]	ND	0.90	0.36	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1260 [1]	ND	0.90	0.49	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1262 [1]	ND	0.90	0.45	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1268 [1]	ND	0.90	0.72	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	6/19/19 10:12
Decachlorobiphenyl [2]	*	30-150	S-01	6/19/19 10:12
Tetrachloro-m-xylene [1]	*	30-150	S-01	6/19/19 10:12
Tetrachloro-m-xylene [2]	*	30-150	S-01	6/19/19 10:12

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Field Sample #: SB-5 (0-2) Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.7	1.9	0.94	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Barium	120	1.9	0.92	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Cadmium	0.53	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Chromium	11	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Lead	220	0.56	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Mercury	0.32	0.028	0.0085	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:50	AJL
Selenium	ND	3.7	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Silver	ND	0.37	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB

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Sample ID: 19F0630-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) | Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.010	0.098	0.0083	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Acrylonitrile	ND	0.0059	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00098	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Benzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromochloromethane	ND	0.0039	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromodichloromethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromoform	ND	0.0039	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromomethane	ND	0.0098	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2-Butanone (MEK)	ND	0.039	0.0054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	0.0044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
n-Butylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
sec-Butylbenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Butylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00098	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Carbon Disulfide	ND	0.0059	0.0053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Carbon Tetrachloride	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chlorobenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chlorodibromomethane	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chloroethane	ND	0.020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chloroform	ND	0.0039	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chloromethane	ND	0.0098	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2-Chlorotoluene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
4-Chlorotoluene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00098	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Dibromomethane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1-Dichloroethane	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1-Dichloroethylene	ND	0.0039	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3-Dichloropropane	ND	0.00098	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1-Dichloropropene	ND	0.0039	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
cis-1,3-Dichloropropene	ND	0.00098	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
trans-1,3-Dichloropropene	ND	0.00098	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Diethyl Ether	0.0015	0.020	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:16	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) | Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

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	0.00098	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,4-Dioxane	ND	0.098	0.0052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Ethylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Hexachlorobutadiene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2-Hexanone (MBK)	ND	0.020	0.0020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methyl Acetate	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methyl Cyclohexane	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methylene Chloride	0.0025	0.020	0.00098	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	0.0025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Naphthalene	ND	0.0039	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
n-Propylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Styrene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.00098	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Tetrachloroethylene	ND	0.0020	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Tetrahydrofuran	ND	0.0098	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Toluene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,1-Trichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,2-Trichloroethane	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Trichloroethylene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0098	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,3-Trichloropropane	ND	0.0039	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0098	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Vinyl Chloride	ND	0.0098	0.00089	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
m+p Xylene	ND	0.0039	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
o-Xylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.7	70-130		6/13/19 16:16
Toluene-d8	100	70-130		6/13/19 16:16
4-Bromofluorobenzene	99.5	70-130		6/13/19 16:16

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Aniline	ND	0.37	0.088	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Anthracene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(a)anthracene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(a)pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(b)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(g,h,i)perylene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(k)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzoic Acid	ND	1.1	0.65	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Carbazole	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Chrysene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,4-Dichlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dinitrophenol	ND	0.72	0.51	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,6-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Fluoranthene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Hexachlorocyclopentadiene	ND	0.37	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Indeno(1,2,3-cd)pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1-Methylnaphthalene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Phenanthrene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	62.6	30-130		6/17/19 22:10
Phenol-d6	68.2	30-130		6/17/19 22:10
Nitrobenzene-d5	67.9	30-130		6/17/19 22:10
2-Fluorobiphenyl	70.5	30-130		6/17/19 22:10
2,4,6-Tribromophenol	70.1	30-130		6/17/19 22:10
p-Terphenyl-d14	79.5	30-130		6/17/19 22:10

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) | Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	0.039	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1221 [1]	ND	0.086	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1232 [1]	ND	0.086	0.077	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1242 [1]	ND	0.086	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1248 [1]	ND	0.086	0.030	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1254 [1]	ND	0.086	0.034	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1260 [1]	ND	0.086	0.047	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1262 [1]	ND	0.086	0.043	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1268 [1]	ND	0.086	0.069	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.9	30-150		6/18/19 22:43
Decachlorobiphenyl [2]	94.5	30-150		6/18/19 22:43
Tetrachloro-m-xylene [1]	85.3	30-150		6/18/19 22:43
Tetrachloro-m-xylene [2]	83.2	30-150		6/18/19 22:43

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.8	1.8	0.92	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Barium	24	1.8	0.90	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Cadmium	0.20	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Chromium	7.1	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Lead	6.3	0.55	0.32	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Mercury	0.012	0.027	0.0080	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:52	AJL
Selenium	ND	3.7	3.0	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Silver	ND	0.37	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) | Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.8		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) | Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.099	0.0083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Acrylonitrile	ND	0.0059	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00099	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Benzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromochloromethane	ND	0.0040	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromodichloromethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromoform	ND	0.0040	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromomethane	ND	0.0099	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2-Butanone (MEK)	ND	0.040	0.0054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	0.0044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
n-Butylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
sec-Butylbenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Butylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00099	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Carbon Disulfide	ND	0.0059	0.0053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Carbon Tetrachloride	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chlorobenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chlorodibromomethane	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chloroethane	ND	0.020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chloroform	ND	0.0040	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chloromethane	ND	0.0099	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2-Chlorotoluene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
4-Chlorotoluene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00099	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Dibromomethane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1-Dichloroethane	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1-Dichloroethylene	ND	0.0040	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3-Dichloropropane	ND	0.00099	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1-Dichloropropene	ND	0.0040	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
cis-1,3-Dichloropropene	ND	0.00099	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
trans-1,3-Dichloropropene	ND	0.00099	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Diethyl Ether	0.0013	0.020	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:44	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) | Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

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	0.00099	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,4-Dioxane	ND	0.099	0.0052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Ethylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Hexachlorobutadiene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2-Hexanone (MBK)	ND	0.020	0.0020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methyl Acetate	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methyl Cyclohexane	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methylene Chloride	0.0021	0.020	0.00099	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	0.0025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Naphthalene	ND	0.0040	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
n-Propylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Styrene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00099	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Tetrachloroethylene	ND	0.0020	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Tetrahydrofuran	ND	0.0099	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Toluene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,1-Trichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,2-Trichloroethane	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Trichloroethylene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0099	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,3-Trichloropropane	ND	0.0040	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0099	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Vinyl Chloride	ND	0.0099	0.00089	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
m+p Xylene	ND	0.0040	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
o-Xylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.3	70-130		6/13/19 16:44
Toluene-d8	101	70-130		6/13/19 16:44
4-Bromofluorobenzene	100	70-130		6/13/19 16:44

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) | Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Aniline	ND	0.37	0.087	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Anthracene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(a)anthracene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(a)pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(b)fluoranthene	0.18	0.19	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(g,h,i)perylene	0.19	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(k)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzoic Acid	ND	1.1	0.64	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Carbazole	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Chrysene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,4-Dichlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dinitrophenol	ND	0.72	0.50	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Fluoranthene	0.16	0.19	0.11	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Hexachlorocyclopentadiene	ND	0.37	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Indeno(1,2,3-cd)pyrene	0.16	0.19	0.13	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1-Methylnaphthalene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Phenanthrene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pyrene	0.18	0.19	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	60.2	30-130		6/17/19 22:35
Phenol-d6	65.7	30-130		6/17/19 22:35
Nitrobenzene-d5	68.0	30-130		6/17/19 22:35
2-Fluorobiphenyl	73.6	30-130		6/17/19 22:35
2,4,6-Tribromophenol	63.7	30-130		6/17/19 22:35
p-Terphenyl-d14	88.2	30-130		6/17/19 22:35

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0097	0.085	0.0072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Acrylonitrile	ND	0.0051	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Benzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromochloromethane	ND	0.0034	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromoform	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromomethane	ND	0.0085	0.00094	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2-Butanone (MEK)	ND	0.034	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Butyl Alcohol (TBA)	ND	0.034	0.0038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
sec-Butylbenzene	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Butylbenzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Carbon Disulfide	ND	0.0051	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Carbon Tetrachloride	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chlorodibromomethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chloroethane	ND	0.017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chloroform	ND	0.0034	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chloromethane	ND	0.0085	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
4-Chlorotoluene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Dibromomethane	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
trans-1,4-Dichloro-2-butene	ND	0.0034	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00094	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1-Dichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1-Dichloroethylene	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dichloropropane	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3-Dichloropropane	ND	0.00085	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2,2-Dichloropropane	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1-Dichloropropene	ND	0.0034	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
cis-1,3-Dichloropropene	ND	0.00085	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
trans-1,3-Dichloropropene	ND	0.00085	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Diethyl Ether	0.0015	0.017	0.00060	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:17	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) | Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

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	0.00085	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,4-Dioxane	ND	0.085	0.0045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Ethylbenzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Hexachlorobutadiene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methyl Acetate	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methyl Cyclohexane	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methylene Chloride	0.0021	0.017	0.00085	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:17	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Naphthalene	ND	0.0034	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
n-Propylbenzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Styrene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Tetrahydrofuran	ND	0.0085	0.00094	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Toluene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Trichloroethylene	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,3-Trichloropropane	ND	0.0034	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0085	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Vinyl Chloride	ND	0.0085	0.00077	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
m+p Xylene	ND	0.0034	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
o-Xylene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.2	70-130		6/13/19 21:17
Toluene-d8	100	70-130		6/13/19 21:17
4-Bromofluorobenzene	102	70-130		6/13/19 21:17

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Acetophenone	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Aniline	ND	0.35	0.083	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Anthracene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzidine	ND	0.69	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(a)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(a)pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(b)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(g,h,i)perylene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(k)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzoic Acid	ND	1.0	0.61	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-chloroethoxy)methane	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-chloroethyl)ether	ND	0.35	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Bromophenylphenylether	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Butylbenzylphthalate	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Carbazole	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Chloroaniline	ND	0.69	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Chloro-3-methylphenol	ND	0.69	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Chloronaphthalene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Chlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Chlorophenylphenylether	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Chrysene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Dibenz(a,h)anthracene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Dibenzofuran	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Di-n-butylphthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,3-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,4-Dichlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
3,3-Dichlorobenzidine	ND	0.18	0.13	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dichlorophenol	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Diethylphthalate	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dimethylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Dimethylphthalate	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4,6-Dinitro-2-methylphenol	ND	0.35	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dinitrophenol	ND	0.69	0.48	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,6-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Di-n-octylphthalate	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Fluoranthene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Fluorene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) | Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Hexachlorobutadiene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Hexachlorocyclopentadiene	ND	0.35	0.29	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Hexachloroethane	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Isophorone	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1-Methylnaphthalene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Methylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
3/4-Methylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Nitroaniline	ND	0.35	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
3-Nitroaniline	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Nitroaniline	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Nitrobenzene	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Nitrophenol	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Nitrophenol	ND	0.69	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
N-Nitrosodimethylamine	ND	0.35	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
N-Nitrosodi-n-propylamine	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pentachloronitrobenzene	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pentachlorophenol	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Phenanthrene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Phenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pyridine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2,4-Trichlorobenzene	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4,5-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4,6-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	59.5	30-130		6/19/19 8:20
Phenol-d6	64.9	30-130		6/19/19 8:20
Nitrobenzene-d5	62.6	30-130		6/19/19 8:20
2-Fluorobiphenyl	79.0	30-130		6/19/19 8:20
2,4,6-Tribromophenol	52.9	30-130		6/19/19 8:20
p-Terphenyl-d14	87.3	30-130		6/19/19 8:20

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) | Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.017	0.087	0.0073	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Acrylonitrile	ND	0.0052	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00087	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Benzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromochloromethane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromoform	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromomethane	ND	0.0087	0.00095	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2-Butanone (MEK)	ND	0.035	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Butyl Alcohol (TBA)	ND	0.035	0.0039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
sec-Butylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Butylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Carbon Disulfide	ND	0.0052	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Carbon Tetrachloride	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chlorodibromomethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chloroethane	ND	0.017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chloroform	ND	0.0035	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chloromethane	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
4-Chlorotoluene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Dibromomethane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
trans-1,4-Dichloro-2-butene	ND	0.0035	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1-Dichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1-Dichloroethylene	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3-Dichloropropane	ND	0.00087	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1-Dichloropropene	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
cis-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
trans-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Diethyl Ether	ND	0.017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) | Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

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	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,4-Dioxane	ND	0.087	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Ethylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Hexachlorobutadiene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methyl Acetate	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methyl Cyclohexane	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methylene Chloride	0.0017	0.017	0.00087	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0022	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Naphthalene	ND	0.0035	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
n-Propylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Styrene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Tetrachloroethylene	0.0092	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Tetrahydrofuran	ND	0.0087	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Toluene	0.00059	0.0017	0.00052	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Trichloroethylene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,3-Trichloropropane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0087	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Vinyl Chloride	ND	0.0087	0.00078	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
m+p Xylene	ND	0.0035	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
o-Xylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/13/19 21:44
Toluene-d8	99.6	70-130		6/13/19 21:44
4-Bromofluorobenzene	99.2	70-130		6/13/19 21:44

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) | Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Aniline	ND	0.36	0.084	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Anthracene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzidine	ND	0.70	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzoic Acid	ND	1.1	0.62	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Carbazole	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Chloroaniline	ND	0.70	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Chloro-3-methylphenol	ND	0.70	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,4-Dichlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dinitrophenol	ND	0.70	0.48	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) | Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1-Methylnaphthalene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Nitrophenol	ND	0.70	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pentachlorophenol	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Phenanthrene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.2	30-130		6/19/19 8:47
Phenol-d6	67.8	30-130		6/19/19 8:47
Nitrobenzene-d5	62.8	30-130		6/19/19 8:47
2-Fluorobiphenyl	77.5	30-130		6/19/19 8:47
2,4,6-Tribromophenol	64.4	30-130		6/19/19 8:47
p-Terphenyl-d14	86.9	30-130		6/19/19 8:47

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.1	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Barium	51	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Cadmium	0.22	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Chromium	9.0	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Lead	56	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Mercury	0.12	0.026	0.0079	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:53	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.0		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) | Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.091	0.0077	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Acrylonitrile	ND	0.0055	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00091	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Benzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromochloromethane	ND	0.0037	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromodichloromethane	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromoform	ND	0.0037	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromomethane	ND	0.0091	0.0010	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2-Butanone (MEK)	ND	0.037	0.0050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	0.0041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
n-Butylbenzene	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
sec-Butylbenzene	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Butylbenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00091	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Carbon Disulfide	ND	0.0055	0.0049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Carbon Tetrachloride	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chlorobenzene	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chlorodibromomethane	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chloroethane	ND	0.018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chloroform	ND	0.0037	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chloromethane	ND	0.0091	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2-Chlorotoluene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
4-Chlorotoluene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dibromoethane (EDB)	ND	0.00091	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Dibromomethane	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dichlorobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3-Dichlorobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,4-Dichlorobenzene	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1-Dichloroethane	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dichloroethane	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1-Dichloroethylene	ND	0.0037	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
cis-1,2-Dichloroethylene	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
trans-1,2-Dichloroethylene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dichloropropane	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3-Dichloropropane	ND	0.00091	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2,2-Dichloropropane	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1-Dichloropropene	ND	0.0037	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
cis-1,3-Dichloropropene	ND	0.00091	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
trans-1,3-Dichloropropene	ND	0.00091	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Diethyl Ether	ND	0.018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) | Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

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	0.00091	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,4-Dioxane	ND	0.091	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Ethylbenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Hexachlorobutadiene	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2-Hexanone (MBK)	ND	0.018	0.0018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Isopropylbenzene (Cumene)	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methyl Acetate	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methyl Cyclohexane	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methylene Chloride	0.0014	0.018	0.00091	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:11	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Naphthalene	ND	0.0037	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
n-Propylbenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Styrene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,2,2-Tetrachloroethane	ND	0.00091	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Tetrachloroethylene	0.0036	0.0018	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Tetrahydrofuran	ND	0.0091	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Toluene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,3-Trichlorobenzene	ND	0.0018	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,4-Trichlorobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3,5-Trichlorobenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,1-Trichloroethane	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,2-Trichloroethane	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Trichloroethylene	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0091	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,3-Trichloropropane	ND	0.0037	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0091	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,4-Trimethylbenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3,5-Trimethylbenzene	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Vinyl Chloride	ND	0.0091	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
m+p Xylene	ND	0.0037	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
o-Xylene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.4	70-130		6/13/19 22:11
Toluene-d8	98.9	70-130		6/13/19 22:11
4-Bromofluorobenzene	104	70-130		6/13/19 22:11

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Acenaphthylene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Acetophenone	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Aniline	ND	0.39	0.092	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Anthracene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzidine	ND	0.76	0.21	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(a)anthracene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(a)pyrene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(b)fluoranthene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(g,h,i)perylene	ND	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(k)fluoranthene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzoic Acid	ND	1.2	0.68	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-chloroethoxy)methane	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-chloroethyl)ether	ND	0.39	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Bromophenylphenylether	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Butylbenzylphthalate	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Carbazole	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Chloroaniline	ND	0.76	0.16	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Chloro-3-methylphenol	ND	0.76	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Chloronaphthalene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Chlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Chlorophenylphenylether	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Chrysene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Dibenz(a,h)anthracene	ND	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Dibenzofuran	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Di-n-butylphthalate	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2-Dichlorobenzene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,3-Dichlorobenzene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,4-Dichlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
3,3-Dichlorobenzidine	ND	0.20	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dichlorophenol	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Diethylphthalate	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dimethylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Dimethylphthalate	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4,6-Dinitro-2-methylphenol	ND	0.39	0.35	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dinitrophenol	ND	0.76	0.53	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,6-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Di-n-octylphthalate	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Fluoranthene	ND	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Fluorene	ND	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) | Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Hexachlorobutadiene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Hexachlorocyclopentadiene	ND	0.39	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Hexachloroethane	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Indeno(1,2,3-cd)pyrene	ND	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Isophorone	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1-Methylnaphthalene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Methylnaphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Methylphenol	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
3/4-Methylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Naphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Nitroaniline	ND	0.39	0.23	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
3-Nitroaniline	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Nitroaniline	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Nitrobenzene	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Nitrophenol	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Nitrophenol	ND	0.76	0.28	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
N-Nitrosodimethylamine	ND	0.39	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
N-Nitrosodi-n-propylamine	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pentachloronitrobenzene	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pentachlorophenol	ND	0.39	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Phenanthrene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Phenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pyrene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pyridine	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2,4-Trichlorobenzene	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4,5-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4,6-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.6	30-130		6/19/19 9:14
Phenol-d6	67.2	30-130		6/19/19 9:14
Nitrobenzene-d5	59.9	30-130		6/19/19 9:14
2-Fluorobiphenyl	77.3	30-130		6/19/19 9:14
2,4,6-Tribromophenol	75.7	30-130		6/19/19 9:14
p-Terphenyl-d14	87.7	30-130		6/19/19 9:14

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	5.0	1.9	0.97	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Barium	38	1.9	0.95	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Cadmium	0.28	0.19	0.12	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Chromium	8.2	0.39	0.24	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Lead	7.4	0.58	0.34	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Mercury	0.016	0.028	0.0085	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:59	AJL
Selenium	ND	3.9	3.2	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Silver	ND	0.39	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) | Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.1		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) | Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.029	0.10	0.0086	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Acrylonitrile	ND	0.0062	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Benzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromochloromethane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromodichloromethane	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromoform	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromomethane	ND	0.010	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2-Butanone (MEK)	ND	0.041	0.0057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Butyl Alcohol (TBA)	ND	0.041	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
n-Butylbenzene	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
sec-Butylbenzene	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Butylbenzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Carbon Disulfide	ND	0.0062	0.0056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Carbon Tetrachloride	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chlorobenzene	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chlorodibromomethane	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chloroethane	ND	0.021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chloroform	ND	0.0041	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chloromethane	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2-Chlorotoluene	ND	0.0021	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
4-Chlorotoluene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Dibromomethane	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
trans-1,4-Dichloro-2-butene	ND	0.0041	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1-Dichloroethane	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dichloroethane	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1-Dichloroethylene	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dichloropropane	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3-Dichloropropane	ND	0.0010	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2,2-Dichloropropane	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1-Dichloropropene	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
cis-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
trans-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Diethyl Ether	0.0020	0.021	0.00072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:38	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) | Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

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	0.0010	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,4-Dioxane	ND	0.10	0.0055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Ethylbenzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Hexachlorobutadiene	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2-Hexanone (MBK)	ND	0.021	0.0021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Isopropylbenzene (Cumene)	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methyl Acetate	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methyl Cyclohexane	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methylene Chloride	0.0022	0.021	0.0010	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:38	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	0.0026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Naphthalene	ND	0.0041	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
n-Propylbenzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Styrene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Tetrachloroethylene	ND	0.0021	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Tetrahydrofuran	ND	0.010	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Toluene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,3-Trichlorobenzene	ND	0.0021	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,4-Trichlorobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3,5-Trichlorobenzene	ND	0.0021	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,1-Trichloroethane	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,2-Trichloroethane	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Trichloroethylene	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,3-Trichloropropane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,4-Trimethylbenzene	ND	0.0021	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Vinyl Chloride	ND	0.010	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
m+p Xylene	ND	0.0041	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
o-Xylene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.0	70-130		6/13/19 22:38
Toluene-d8	98.6	70-130		6/13/19 22:38
4-Bromofluorobenzene	102	70-130		6/13/19 22:38

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Acetophenone	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Aniline	ND	0.35	0.083	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Anthracene	0.43	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzidine	ND	0.69	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(a)anthracene	1.7	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(a)pyrene	1.6	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(b)fluoranthene	1.8	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(g,h,i)perylene	1.3	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(k)fluoranthene	0.69	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzoic Acid	ND	1.0	0.62	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-chloroethoxy)methane	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-chloroethyl)ether	ND	0.35	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Bromophenylphenylether	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Butylbenzylphthalate	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Carbazole	0.29	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Chloroaniline	ND	0.69	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Chloro-3-methylphenol	ND	0.69	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Chloronaphthalene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Chlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Chlorophenylphenylether	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Chrysene	1.5	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Dibenz(a,h)anthracene	0.25	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Dibenzofuran	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Di-n-butylphthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,3-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,4-Dichlorobenzene	ND	0.35	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dichlorophenol	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Diethylphthalate	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dimethylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Dimethylphthalate	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4,6-Dinitro-2-methylphenol	ND	0.35	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dinitrophenol	ND	0.69	0.48	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,6-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Di-n-octylphthalate	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Fluoranthene	3.8	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) | Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.35	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Hexachlorobutadiene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Hexachlorocyclopentadiene	ND	0.35	0.29	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Hexachloroethane	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Indeno(1,2,3-cd)pyrene	1.3	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Isophorone	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1-Methylnaphthalene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Methylphenol	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
3/4-Methylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Nitroaniline	ND	0.35	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
3-Nitroaniline	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Nitroaniline	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Nitrobenzene	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Nitrophenol	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Nitrophenol	ND	0.69	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
N-Nitrosodimethylamine	ND	0.35	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
N-Nitrosodi-n-propylamine	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pentachloronitrobenzene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pentachlorophenol	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Phenanthrene	2.1	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Phenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pyrene	3.5	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pyridine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2,4-Trichlorobenzene	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4,5-Trichlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4,6-Trichlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	61.0	30-130		6/19/19 9:48
Phenol-d6	64.3	30-130		6/19/19 9:48
Nitrobenzene-d5	61.0	30-130		6/19/19 9:48
2-Fluorobiphenyl	79.7	30-130		6/19/19 9:48
2,4,6-Tribromophenol	65.6	30-130		6/19/19 9:48
p-Terphenyl-d14	80.0	30-130		6/19/19 9:48

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.5	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Barium	47	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Cadmium	0.36	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Chromium	9.2	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Lead	49	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Mercury	0.13	0.027	0.0081	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 11:01	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) | Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0097	0.086	0.0072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Acrylonitrile	ND	0.0052	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Benzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromochloromethane	ND	0.0034	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromoform	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromomethane	ND	0.0086	0.00095	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2-Butanone (MEK)	ND	0.034	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Butyl Alcohol (TBA)	ND	0.034	0.0039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
sec-Butylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Butylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Carbon Disulfide	ND	0.0052	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Carbon Tetrachloride	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chlorodibromomethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chloroethane	ND	0.017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chloroform	ND	0.0034	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chloromethane	ND	0.0086	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
4-Chlorotoluene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Dibromomethane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
trans-1,4-Dichloro-2-butene	ND	0.0034	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1-Dichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1-Dichloroethylene	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3-Dichloropropane	ND	0.00086	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1-Dichloropropene	ND	0.0034	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
cis-1,3-Dichloropropene	ND	0.00086	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
trans-1,3-Dichloropropene	ND	0.00086	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Diethyl Ether	0.0027	0.017	0.00060	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) | Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

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	0.00086	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,4-Dioxane	ND	0.086	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Ethylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Hexachlorobutadiene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methyl Acetate	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methyl Cyclohexane	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methylene Chloride	0.0027	0.017	0.00086	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0022	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Naphthalene	ND	0.0034	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
n-Propylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Styrene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Tetrahydrofuran	ND	0.0086	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Toluene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Trichloroethylene	0.00069	0.0017	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,3-Trichloropropane	ND	0.0034	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0086	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Vinyl Chloride	ND	0.0086	0.00078	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
m+p Xylene	ND	0.0034	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
o-Xylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.5	70-130		6/13/19 23:06
Toluene-d8	101	70-130		6/13/19 23:06
4-Bromofluorobenzene	99.9	70-130		6/13/19 23:06

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) | Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Aniline	ND	0.36	0.086	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Anthracene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzidine	ND	0.71	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzoic Acid	ND	1.1	0.63	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Carbazole	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Chloroaniline	ND	0.71	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Chloro-3-methylphenol	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,4-Dichlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dinitrophenol	ND	0.71	0.49	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) | Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1-Methylnaphthalene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Nitrophenol	ND	0.71	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pentachlorophenol	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Phenanthrene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	68.0	30-130		6/19/19 10:09
Phenol-d6	69.4	30-130		6/19/19 10:09
Nitrobenzene-d5	63.4	30-130		6/19/19 10:09
2-Fluorobiphenyl	82.5	30-130		6/19/19 10:09
2,4,6-Tribromophenol	75.9	30-130		6/19/19 10:09
p-Terphenyl-d14	82.4	30-130		6/19/19 10:09

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.7	1.7	0.88	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Barium	47	1.7	0.86	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Cadmium	0.31	0.17	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Chromium	8.8	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Lead	6.4	0.52	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Mercury	0.011	0.026	0.0077	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 11:02	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Silver	ND	0.35	0.20	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) | Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.6		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) | Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.031	0.093	0.0078	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Acrylonitrile	ND	0.0056	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00093	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Benzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromochloromethane	ND	0.0037	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromodichloromethane	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromoform	ND	0.0037	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromomethane	ND	0.0093	0.0010	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2-Butanone (MEK)	ND	0.037	0.0051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	0.0042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
n-Butylbenzene	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
sec-Butylbenzene	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Butylbenzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00093	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Carbon Disulfide	0.0064	0.0056	0.0050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Carbon Tetrachloride	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chlorobenzene	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chlorodibromomethane	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chloroethane	ND	0.019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chloroform	ND	0.0037	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chloromethane	ND	0.0093	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2-Chlorotoluene	ND	0.0019	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
4-Chlorotoluene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dibromoethane (EDB)	ND	0.00093	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Dibromomethane	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dichlorobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3-Dichlorobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,4-Dichlorobenzene	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1-Dichloroethane	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dichloroethane	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1-Dichloroethylene	ND	0.0037	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
cis-1,2-Dichloroethylene	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
trans-1,2-Dichloroethylene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dichloropropane	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3-Dichloropropane	ND	0.00093	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2,2-Dichloropropane	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1-Dichloropropene	ND	0.0037	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
cis-1,3-Dichloropropene	ND	0.00093	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
trans-1,3-Dichloropropene	ND	0.00093	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Diethyl Ether	0.0025	0.019	0.00065	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:33	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) | Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

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	0.00093	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,4-Dioxane	ND	0.093	0.0049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Ethylbenzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Hexachlorobutadiene	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2-Hexanone (MBK)	ND	0.019	0.0019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Isopropylbenzene (Cumene)	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methyl Acetate	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methyl Cyclohexane	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methylene Chloride	0.0029	0.019	0.00093	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:33	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Naphthalene	ND	0.0037	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
n-Propylbenzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Styrene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,2,2-Tetrachloroethane	ND	0.00093	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Tetrachloroethylene	ND	0.0019	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Tetrahydrofuran	ND	0.0093	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Toluene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,3-Trichlorobenzene	ND	0.0019	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,4-Trichlorobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3,5-Trichlorobenzene	ND	0.0019	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,1-Trichloroethane	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,2-Trichloroethane	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Trichloroethylene	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0093	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,3-Trichloropropane	ND	0.0037	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0093	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,4-Trimethylbenzene	ND	0.0019	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3,5-Trimethylbenzene	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Vinyl Chloride	ND	0.0093	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
m+p Xylene	ND	0.0037	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
o-Xylene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.2	70-130		6/13/19 23:33
Toluene-d8	98.3	70-130		6/13/19 23:33
4-Bromofluorobenzene	102	70-130		6/13/19 23:33

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) | Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Aniline	ND	0.37	0.087	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Anthracene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(a)anthracene	0.15	0.18	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(a)pyrene	0.16	0.18	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(b)fluoranthene	0.20	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(g,h,i)perylene	0.15	0.18	0.11	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzoic Acid	ND	1.1	0.64	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-chloroethyl)ether	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Carbazole	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Chrysene	0.17	0.18	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,4-Dichlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dinitrophenol	ND	0.72	0.50	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Fluoranthene	0.32	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) | Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Hexachlorocyclopentadiene	ND	0.37	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1-Methylnaphthalene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Phenanthrene	0.15	0.18	0.098	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pyrene	0.30	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	66.6	30-130		6/19/19 10:37
Phenol-d6	67.2	30-130		6/19/19 10:37
Nitrobenzene-d5	63.4	30-130		6/19/19 10:37
2-Fluorobiphenyl	78.9	30-130		6/19/19 10:37
2,4,6-Tribromophenol	71.3	30-130		6/19/19 10:37
p-Terphenyl-d14	93.8	30-130		6/19/19 10:37

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.7	1.8	0.93	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Barium	39	1.8	0.91	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Cadmium	0.32	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Chromium	11	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Lead	350	0.55	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Mercury	0.034	0.028	0.0084	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 11:04	AJL
Selenium	ND	3.7	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Silver	ND	0.37	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) | Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.2		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) | Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0076	0.069	0.0058	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Acrylonitrile	ND	0.0041	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00069	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Benzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromochloromethane	ND	0.0028	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromodichloromethane	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromoform	ND	0.0028	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromomethane	ND	0.0069	0.00076	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2-Butanone (MEK)	ND	0.028	0.0038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Butyl Alcohol (TBA)	ND	0.028	0.0031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
n-Butylbenzene	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
sec-Butylbenzene	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Butylbenzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00069	0.00014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Carbon Disulfide	ND	0.0041	0.0037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Carbon Tetrachloride	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chlorobenzene	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chlorodibromomethane	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chloroethane	ND	0.014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chloroform	ND	0.0028	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chloromethane	ND	0.0069	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2-Chlorotoluene	ND	0.0014	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
4-Chlorotoluene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dibromoethane (EDB)	ND	0.00069	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Dibromomethane	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dichlorobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3-Dichlorobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,4-Dichlorobenzene	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
trans-1,4-Dichloro-2-butene	ND	0.0028	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.014	0.00076	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1-Dichloroethane	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dichloroethane	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1-Dichloroethylene	ND	0.0028	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
cis-1,2-Dichloroethylene	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
trans-1,2-Dichloroethylene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dichloropropane	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3-Dichloropropane	ND	0.00069	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2,2-Dichloropropane	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1-Dichloropropene	ND	0.0028	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
cis-1,3-Dichloropropene	ND	0.00069	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
trans-1,3-Dichloropropene	ND	0.00069	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Diethyl Ether	0.0013	0.014	0.00048	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) | Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

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	0.00069	0.00014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,4-Dioxane	ND	0.069	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Ethylbenzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Hexachlorobutadiene	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2-Hexanone (MBK)	ND	0.014	0.0014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Isopropylbenzene (Cumene)	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methyl Acetate	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methyl Cyclohexane	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methylene Chloride	0.0021	0.014	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Naphthalene	ND	0.0028	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
n-Propylbenzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Styrene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,2,2-Tetrachloroethane	ND	0.00069	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Tetrachloroethylene	0.0011	0.0014	0.00083	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Tetrahydrofuran	ND	0.0069	0.00076	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Toluene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,3-Trichlorobenzene	ND	0.0014	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,4-Trichlorobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3,5-Trichlorobenzene	ND	0.0014	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,1-Trichloroethane	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,2-Trichloroethane	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Trichloroethylene	0.00078	0.0014	0.00055	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0069	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,3-Trichloropropane	ND	0.0028	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0069	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,4-Trimethylbenzene	ND	0.0014	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3,5-Trimethylbenzene	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Vinyl Chloride	ND	0.0069	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
m+p Xylene	ND	0.0028	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
o-Xylene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	96.3	70-130		6/14/19 0:00
Toluene-d8	98.9	70-130		6/14/19 0:00
4-Bromofluorobenzene	102	70-130		6/14/19 0:00

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) | Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Acenaphthylene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Acetophenone	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Aniline	ND	0.39	0.091	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Anthracene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzidine	ND	0.75	0.21	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(a)anthracene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(a)pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(b)fluoranthene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(g,h,i)perylene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(k)fluoranthene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzoic Acid	ND	1.1	0.67	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-chloroethoxy)methane	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-chloroethyl)ether	ND	0.39	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Bromophenylphenylether	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Butylbenzylphthalate	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Carbazole	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Chloroaniline	ND	0.75	0.16	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Chloro-3-methylphenol	ND	0.75	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Chloronaphthalene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Chlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Chlorophenylphenylether	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Chrysene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Dibenzofuran	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Di-n-butylphthalate	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2-Dichlorobenzene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,3-Dichlorobenzene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,4-Dichlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
3,3-Dichlorobenzidine	ND	0.19	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dichlorophenol	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Diethylphthalate	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dimethylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Dimethylphthalate	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4,6-Dinitro-2-methylphenol	ND	0.39	0.34	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dinitrophenol	ND	0.75	0.53	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,6-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Di-n-octylphthalate	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Fluoranthene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Fluorene	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) | Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Hexachlorobutadiene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Hexachlorocyclopentadiene	ND	0.39	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Hexachloroethane	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Indeno(1,2,3-cd)pyrene	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Isophorone	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1-Methylnaphthalene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Methylnaphthalene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Methylphenol	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
3/4-Methylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Naphthalene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Nitroaniline	ND	0.39	0.23	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
3-Nitroaniline	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Nitroaniline	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Nitrobenzene	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Nitrophenol	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Nitrophenol	ND	0.75	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
N-Nitrosodimethylamine	ND	0.39	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
N-Nitrosodi-n-propylamine	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pentachloronitrobenzene	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pentachlorophenol	ND	0.39	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Phenanthrene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Phenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pyridine	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2,4-Trichlorobenzene	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4,5-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4,6-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	63.5	30-130		6/19/19 11:05
Phenol-d6	68.4	30-130		6/19/19 11:05
Nitrobenzene-d5	62.5	30-130		6/19/19 11:05
2-Fluorobiphenyl	82.0	30-130		6/19/19 11:05
2,4,6-Tribromophenol	75.1	30-130		6/19/19 11:05
p-Terphenyl-d14	97.7	30-130		6/19/19 11:05

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.1	1.9	0.96	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Barium	25	1.9	0.94	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Cadmium	0.26	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Chromium	7.2	0.38	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Lead	7.4	0.57	0.34	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Mercury	0.016	0.029	0.0086	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 11:06	AJL
Selenium	ND	3.8	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Silver	ND	0.38	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) | Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.9		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	0.0086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Acrylonitrile	ND	0.0061	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Benzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromochloromethane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromodichloromethane	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromoform	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromomethane	ND	0.010	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2-Butanone (MEK)	ND	0.041	0.0056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Butyl Alcohol (TBA)	ND	0.041	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
n-Butylbenzene	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
sec-Butylbenzene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Butylbenzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Carbon Disulfide	ND	0.0061	0.0055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Carbon Tetrachloride	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chlorobenzene	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chlorodibromomethane	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chloroethane	ND	0.020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chloroform	ND	0.0041	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chloromethane	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2-Chlorotoluene	ND	0.0020	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
4-Chlorotoluene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Dibromomethane	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
trans-1,4-Dichloro-2-butene	ND	0.0041	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1-Dichloroethane	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dichloroethane	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1-Dichloroethylene	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dichloropropane	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3-Dichloropropane	ND	0.0010	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2,2-Dichloropropane	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1-Dichloropropene	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
cis-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
trans-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Diethyl Ether	0.0015	0.020	0.00072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:29	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

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	0.0010	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,4-Dioxane	ND	0.10	0.0054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Ethylbenzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Hexachlorobutadiene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2-Hexanone (MBK)	ND	0.020	0.0020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methyl Acetate	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methyl Cyclohexane	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methylene Chloride	0.0023	0.020	0.0010	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	0.0026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Naphthalene	ND	0.0041	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
n-Propylbenzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Styrene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Tetrachloroethylene	ND	0.0020	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Tetrahydrofuran	ND	0.010	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Toluene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,1-Trichloroethane	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,2-Trichloroethane	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Trichloroethylene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,3-Trichloropropane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Vinyl Chloride	ND	0.010	0.00092	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
m+p Xylene	ND	0.0041	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
o-Xylene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/14/19 0:29
Toluene-d8	98.7	70-130		6/14/19 0:29
4-Bromofluorobenzene	99.6	70-130		6/14/19 0:29

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Aniline	ND	0.36	0.086	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Anthracene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzidine	ND	0.71	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzoic Acid	ND	1.1	0.63	mg/Kg dry	1	L-04	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Carbazole	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Chloroaniline	ND	0.71	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Chloro-3-methylphenol	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,4-Dichlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dinitrophenol	ND	0.71	0.49	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1-Methylnaphthalene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Nitrophenol	ND	0.71	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pentachlorophenol	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Phenanthrene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	63.4	30-130		6/19/19 11:33
Phenol-d6	66.2	30-130		6/19/19 11:33
Nitrobenzene-d5	59.7	30-130		6/19/19 11:33
2-Fluorobiphenyl	76.9	30-130		6/19/19 11:33
2,4,6-Tribromophenol	76.7	30-130		6/19/19 11:33
p-Terphenyl-d14	90.2	30-130		6/19/19 11:33

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	0.039	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1221 [1]	ND	0.086	0.065	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1232 [1]	ND	0.086	0.078	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1242 [1]	ND	0.086	0.065	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1248 [1]	ND	0.086	0.030	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1254 [1]	ND	0.086	0.035	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1260 [1]	ND	0.086	0.048	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1262 [1]	ND	0.086	0.043	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1268 [1]	ND	0.086	0.069	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	100	30-150		6/18/19 22:56
Decachlorobiphenyl [2]	102	30-150		6/18/19 22:56
Tetrachloro-m-xylene [1]	93.7	30-150		6/18/19 22:56
Tetrachloro-m-xylene [2]	90.9	30-150		6/18/19 22:56

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.8	1.8	0.92	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Barium	23	1.8	0.90	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Cadmium	0.20	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Chromium	7.2	0.36	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Lead	6.2	0.55	0.32	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Mercury	0.013	0.027	0.0080	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 11:07	AJL
Selenium	ND	3.6	3.0	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Silver	ND	0.36	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.1		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19F0630-01 [SB-2 (0-2)]	B233260	06/13/19
19F0630-02 [SB-2 (16-18)]	B233260	06/13/19
19F0630-03 [SB-3 (0-2)]	B233260	06/13/19
19F0630-04 [SB-3 (16-18)]	B233260	06/13/19
19F0630-05 [SB-4 (0-2)]	B233260	06/13/19
19F0630-06 [SB-4 (18-20)]	B233260	06/13/19
19F0630-07 [SB-5 (0-2)]	B233260	06/13/19
19F0630-08 [SB-5 (17-19)]	B233260	06/13/19
19F0630-09 [SB-1 (0-2)]	B233260	06/13/19
19F0630-10 [SB-1 (17.5-19.5)]	B233260	06/13/19
19F0630-11 [SB-6 (0-2)]	B233260	06/13/19
19F0630-12 [SB-6 (16-18)]	B233260	06/13/19
19F0630-13 [SB-7 (0-2)]	B233260	06/13/19
19F0630-14 [SB-7 (18-20)]	B233260	06/13/19
19F0630-15 [SB-8 (0-2)]	B233260	06/13/19
19F0630-16 [SB-8 (18-20)]	B233260	06/13/19
19F0630-17 [SB-Dup]	B233260	06/13/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-01 [SB-2 (0-2)]	B233505	1.49	50.0	06/17/19
19F0630-02 [SB-2 (16-18)]	B233505	1.51	50.0	06/17/19
19F0630-03 [SB-3 (0-2)]	B233505	1.54	50.0	06/17/19
19F0630-04 [SB-3 (16-18)]	B233505	1.52	50.0	06/17/19
19F0630-05 [SB-4 (0-2)]	B233505	1.55	50.0	06/17/19
19F0630-06 [SB-4 (18-20)]	B233505	1.57	50.0	06/17/19
19F0630-07 [SB-5 (0-2)]	B233505	1.51	50.0	06/17/19
19F0630-08 [SB-5 (17-19)]	B233505	1.51	50.0	06/17/19
19F0630-11 [SB-6 (0-2)]	B233505	1.52	50.0	06/17/19
19F0630-12 [SB-6 (16-18)]	B233505	1.52	50.0	06/17/19
19F0630-13 [SB-7 (0-2)]	B233505	1.51	50.0	06/17/19
19F0630-14 [SB-7 (18-20)]	B233505	1.55	50.0	06/17/19
19F0630-15 [SB-8 (0-2)]	B233505	1.48	50.0	06/17/19
19F0630-16 [SB-8 (18-20)]	B233505	1.52	50.0	06/17/19
19F0630-17 [SB-Dup]	B233505	1.51	50.0	06/17/19

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-01 [SB-2 (0-2)]	B233492	0.581	50.0	06/17/19
19F0630-02 [SB-2 (16-18)]	B233492	0.582	50.0	06/17/19
19F0630-03 [SB-3 (0-2)]	B233492	0.624	50.0	06/17/19
19F0630-04 [SB-3 (16-18)]	B233492	0.586	50.0	06/17/19
19F0630-05 [SB-4 (0-2)]	B233492	0.638	50.0	06/17/19
19F0630-06 [SB-4 (18-20)]	B233492	0.636	50.0	06/17/19
19F0630-07 [SB-5 (0-2)]	B233492	0.592	50.0	06/17/19
19F0630-08 [SB-5 (17-19)]	B233492	0.621	50.0	06/17/19
19F0630-11 [SB-6 (0-2)]	B233492	0.616	50.0	06/17/19
19F0630-12 [SB-6 (16-18)]	B233492	0.619	50.0	06/17/19
19F0630-13 [SB-7 (0-2)]	B233492	0.592	50.0	06/17/19
19F0630-14 [SB-7 (18-20)]	B233492	0.635	50.0	06/17/19
19F0630-15 [SB-8 (0-2)]	B233492	0.586	50.0	06/17/19

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Sample Extraction Data

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-16 [SB-8 (18-20)]	B233492	0.602	50.0	06/17/19
19F0630-17 [SB-Dup]	B233492	0.619	50.0	06/17/19

Prep Method: SW-846 3540C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-01 [SB-2 (0-2)]	B233449	10.0	10.0	06/16/19
19F0630-02 [SB-2 (16-18)]	B233449	10.0	10.0	06/16/19
19F0630-03 [SB-3 (0-2)]	B233449	10.3	10.0	06/16/19
19F0630-04 [SB-3 (16-18)]	B233449	10.2	10.0	06/16/19
19F0630-07 [SB-5 (0-2)]	B233449	10.0	10.0	06/16/19
19F0630-08 [SB-5 (17-19)]	B233449	10.3	10.0	06/16/19
19F0630-17 [SB-Dup]	B233449	10.2	10.0	06/16/19

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-01 [SB-2 (0-2)]	B233215	4.88	10.0	06/13/19
19F0630-02 [SB-2 (16-18)]	B233215	7.97	10.0	06/13/19
19F0630-03 [SB-3 (0-2)]	B233215	9.17	10.0	06/13/19
19F0630-04 [SB-3 (16-18)]	B233215	8.03	10.0	06/13/19
19F0630-05 [SB-4 (0-2)]	B233215	6.27	10.0	06/13/19
19F0630-06 [SB-4 (18-20)]	B233215	6.23	10.0	06/13/19
19F0630-07 [SB-5 (0-2)]	B233215	6.22	10.0	06/13/19
19F0630-08 [SB-5 (17-19)]	B233215	5.60	10.0	06/13/19
19F0630-09 [SB-1 (0-2)]	B233215	5.58	10.0	06/13/19

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-10 [SB-1 (17.5-19.5)]	B233252	6.13	10.0	06/13/19
19F0630-11 [SB-6 (0-2)]	B233252	6.21	10.0	06/13/19
19F0630-12 [SB-6 (16-18)]	B233252	6.42	10.0	06/13/19
19F0630-13 [SB-7 (0-2)]	B233252	5.19	10.0	06/13/19
19F0630-14 [SB-7 (18-20)]	B233252	6.26	10.0	06/13/19
19F0630-15 [SB-8 (0-2)]	B233252	5.91	10.0	06/13/19
19F0630-16 [SB-8 (18-20)]	B233252	8.37	10.0	06/13/19
19F0630-17 [SB-Dup]	B233252	5.37	10.0	06/13/19

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-01 [SB-2 (0-2)]	B233189	30.4	1.00	06/13/19
19F0630-02 [SB-2 (16-18)]	B233189	30.5	1.00	06/13/19
19F0630-03 [SB-3 (0-2)]	B233189	30.1	1.00	06/13/19
19F0630-04 [SB-3 (16-18)]	B233189	30.0	1.00	06/13/19
19F0630-05 [SB-4 (0-2)]	B233189	30.1	1.00	06/13/19
19F0630-06 [SB-4 (18-20)]	B233189	30.1	1.00	06/13/19
19F0630-07 [SB-5 (0-2)]	B233189	30.5	1.00	06/13/19
19F0630-08 [SB-5 (17-19)]	B233189	30.1	1.00	06/13/19

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Sample Extraction Data

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F0630-09 [SB-1 (0-2)]	B233189	30.3	1.00	06/13/19
19F0630-10 [SB-1 (17.5-19.5)]	B233189	30.2	1.00	06/13/19
19F0630-11 [SB-6 (0-2)]	B233189	30.6	1.00	06/13/19
19F0630-12 [SB-6 (16-18)]	B233189	30.5	1.00	06/13/19
19F0630-13 [SB-7 (0-2)]	B233189	30.7	1.00	06/13/19
19F0630-14 [SB-7 (18-20)]	B233189	30.2	1.00	06/13/19
19F0630-15 [SB-8 (0-2)]	B233189	30.3	1.00	06/13/19
19F0630-16 [SB-8 (18-20)]	B233189	30.2	1.00	06/13/19
19F0630-17 [SB-Dup]	B233189	30.7	1.00	06/13/19

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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 B233215 - SW-846 5035										
Blank (B233215-BLK1)				Prepared & Analyzed: 06/13/19						
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							

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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 B233215 - SW-846 5035											
Blank (B233215-BLK1)				Prepared & Analyzed: 06/13/19							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet								
Methyl Cyclohexane	ND	0.0020	mg/Kg wet								
Methylene Chloride	ND	0.020	mg/Kg wet								
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet								
Naphthalene	ND	0.0040	mg/Kg wet								
n-Propylbenzene	ND	0.0020	mg/Kg wet								
Styrene	ND	0.0020	mg/Kg wet								
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet								
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet								
Tetrachloroethylene	ND	0.0020	mg/Kg wet								
Tetrahydrofuran	ND	0.010	mg/Kg wet								
Toluene	ND	0.0020	mg/Kg wet								
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet								
Trichloroethylene	ND	0.0020	mg/Kg wet								
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet								
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet								
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet								
Vinyl Chloride	ND	0.010	mg/Kg wet								
m+p Xylene	ND	0.0040	mg/Kg wet								
o-Xylene	ND	0.0020	mg/Kg wet								
Surrogate: 1,2-Dichloroethane-d4	*0.0492*		mg/Kg wet	0.0500		98.3	70-130				
Surrogate: Toluene-d8	*0.0488*		mg/Kg wet	0.0500		97.6	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0506*		mg/Kg wet	0.0500		101	70-130				
LCS (B233215-BS1)				Prepared & Analyzed: 06/13/19							
Acetone	0.210	0.10	mg/Kg wet	0.200		105	70-160			V-35	†
Acrylonitrile	0.0207	0.0060	mg/Kg wet	0.0200		104	70-130				
tert-Amyl Methyl Ether (TAME)	0.0227	0.0010	mg/Kg wet	0.0200		114	70-130				
Benzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130				
Bromobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
Bromochloromethane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130				
Bromodichloromethane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130				
Bromoform	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130				
Bromomethane	0.0138	0.010	mg/Kg wet	0.0200		68.8	40-130			V-34	†
2-Butanone (MEK)	0.204	0.040	mg/Kg wet	0.200		102	70-160				†
tert-Butyl Alcohol (TBA)	0.217	0.040	mg/Kg wet	0.200		109	40-130				†
n-Butylbenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.2	70-130				
sec-Butylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
tert-Butylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.3	70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130				
Carbon Disulfide	0.0211	0.0060	mg/Kg wet	0.0200		106	70-130				
Carbon Tetrachloride	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130				
Chlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130				
Chlorodibromomethane	0.0192	0.0010	mg/Kg wet	0.0200		96.1	70-130				
Chloroethane	0.0187	0.020	mg/Kg wet	0.0200		93.4	70-130			J	
Chloroform	0.0190	0.0040	mg/Kg wet	0.0200		94.9	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 B233215 - SW-846 5035											
LCS (B233215-BS1)				Prepared & Analyzed: 06/13/19							
Chloromethane	0.0168	0.010	mg/Kg wet	0.0200		84.1	70-130				
2-Chlorotoluene	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-130				
4-Chlorotoluene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130				
1,2-Dibromoethane (EDB)	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130				
Dibromomethane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130				
1,2-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.5	70-130				
1,3-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.2	70-130				
1,4-Dichlorobenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130				
trans-1,4-Dichloro-2-butene	0.0198	0.0040	mg/Kg wet	0.0200		99.0	70-130				
Dichlorodifluoromethane (Freon 12)	0.0190	0.020	mg/Kg wet	0.0200		94.8	40-160			J	†
1,1-Dichloroethane	0.0209	0.0020	mg/Kg wet	0.0200		104	70-130				
1,2-Dichloroethane	0.0200	0.0020	mg/Kg wet	0.0200		99.9	70-130				
1,1-Dichloroethylene	0.0195	0.0040	mg/Kg wet	0.0200		97.4	70-130				
cis-1,2-Dichloroethylene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130				
trans-1,2-Dichloroethylene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130				
1,2-Dichloropropane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130				
1,3-Dichloropropane	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130				
2,2-Dichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130				
1,1-Dichloropropene	0.0174	0.0020	mg/Kg wet	0.0200		87.0	70-130				
cis-1,3-Dichloropropene	0.0209	0.0010	mg/Kg wet	0.0200		104	70-130				
trans-1,3-Dichloropropene	0.0198	0.0010	mg/Kg wet	0.0200		99.2	70-130				
Diethyl Ether	0.0200	0.020	mg/Kg wet	0.0200		99.8	70-130			J	
Diisopropyl Ether (DIPE)	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130				
1,4-Dioxane	0.210	0.10	mg/Kg wet	0.200		105	40-160				†
Ethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130				
Hexachlorobutadiene	0.0215	0.0020	mg/Kg wet	0.0200		107	70-160				
2-Hexanone (MBK)	0.209	0.020	mg/Kg wet	0.200		104	70-160				†
Isopropylbenzene (Cumene)	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130				
p-Isopropyltoluene (p-Cymene)	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130				
Methyl Acetate	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0216	0.0040	mg/Kg wet	0.0200		108	70-130				
Methyl Cyclohexane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
Methylene Chloride	0.0191	0.020	mg/Kg wet	0.0200		95.6	40-160			J	†
4-Methyl-2-pentanone (MIBK)	0.205	0.020	mg/Kg wet	0.200		103	70-160				†
Naphthalene	0.0174	0.0040	mg/Kg wet	0.0200		87.0	40-130				†
n-Propylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130				
Styrene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130				
1,1,1,2-Tetrachloroethane	0.0226	0.0020	mg/Kg wet	0.0200		113	70-130				
1,1,2,2-Tetrachloroethane	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130				
Tetrachloroethylene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130				
Tetrahydrofuran	0.0225	0.010	mg/Kg wet	0.0200		113	70-130				
Toluene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130				
1,2,3-Trichlorobenzene	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130				
1,2,4-Trichlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130				
1,3,5-Trichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130				
1,1,1-Trichloroethane	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130				
1,1,2-Trichloroethane	0.0197	0.0020	mg/Kg wet	0.0200		98.6	70-130				
Trichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
Trichlorofluoromethane (Freon 11)	0.0189	0.010	mg/Kg wet	0.0200		94.5	70-130				
1,2,3-Trichloropropane	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130				

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B233215 - SW-846 5035											
LCS (B233215-BS1)				Prepared & Analyzed: 06/13/19							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0214	0.010	mg/Kg wet	0.0200		107	70-130				
1,2,4-Trimethylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130				
1,3,5-Trimethylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
Vinyl Chloride	0.0174	0.010	mg/Kg wet	0.0200		86.8	40-130				†
m+p Xylene	0.0384	0.0040	mg/Kg wet	0.0400		96.1	70-130				
o-Xylene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0497*		mg/Kg wet	0.0500		99.3	70-130				
Surrogate: Toluene-d8	*0.0501*		mg/Kg wet	0.0500		100	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0520*		mg/Kg wet	0.0500		104	70-130				
LCS Dup (B233215-BSD1)				Prepared & Analyzed: 06/13/19							
Acetone	0.216	0.10	mg/Kg wet	0.200		108	70-160	2.85	25	V-35	†
Acrylonitrile	0.0200	0.0060	mg/Kg wet	0.0200		99.8	70-130	3.83	25		
tert-Amyl Methyl Ether (TAME)	0.0219	0.0010	mg/Kg wet	0.0200		110	70-130	3.68	25		
Benzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130	0.938	25		
Bromobenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	4.19	25		
Bromochloromethane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	3.86	25		
Bromodichloromethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	3.00	25		
Bromoform	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-130	0.730	25		
Bromomethane	0.0144	0.010	mg/Kg wet	0.0200		71.9	40-130	4.41	25	V-34	†
2-Butanone (MEK)	0.205	0.040	mg/Kg wet	0.200		103	70-160	0.342	25		†
tert-Butyl Alcohol (TBA)	0.220	0.040	mg/Kg wet	0.200		110	40-130	1.31	25		†
n-Butylbenzene	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130	5.07	25		
sec-Butylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	4.11	25		
tert-Butylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-160	5.97	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0200	0.0010	mg/Kg wet	0.0200		100	70-130	1.59	25		
Carbon Disulfide	0.0207	0.0060	mg/Kg wet	0.0200		103	70-130	2.11	25		
Carbon Tetrachloride	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130	1.12	25		
Chlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130	2.35	25		
Chlorodibromomethane	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	5.66	25		
Chloroethane	0.0195	0.020	mg/Kg wet	0.0200		97.6	70-130	4.40	25	J	
Chloroform	0.0189	0.0040	mg/Kg wet	0.0200		94.4	70-130	0.528	25		
Chloromethane	0.0170	0.010	mg/Kg wet	0.0200		84.8	70-130	0.829	25		
2-Chlorotoluene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	1.63	25		
4-Chlorotoluene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	1.52	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0192	0.0020	mg/Kg wet	0.0200		96.2	70-130	0.725	25		
1,2-Dibromoethane (EDB)	0.0213	0.0010	mg/Kg wet	0.0200		106	70-130	0.188	25		
Dibromomethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	6.32	25		
1,2-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	1.10	25		
1,3-Dichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130	2.14	25		
1,4-Dichlorobenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130	3.29	25		
trans-1,4-Dichloro-2-butene	0.0191	0.0040	mg/Kg wet	0.0200		95.3	70-130	3.81	25		
Dichlorodifluoromethane (Freon 12)	0.0185	0.020	mg/Kg wet	0.0200		92.7	40-160	2.24	25	J	†
1,1-Dichloroethane	0.0207	0.0020	mg/Kg wet	0.0200		103	70-130	1.15	25		
1,2-Dichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		101	70-130	0.698	25		
1,1-Dichloroethylene	0.0197	0.0040	mg/Kg wet	0.0200		98.7	70-130	1.33	25		
cis-1,2-Dichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.789	25		
trans-1,2-Dichloroethylene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	5.74	25		
1,2-Dichloropropane	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	0.682	25		
1,3-Dichloropropane	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130	0.396	25		
2,2-Dichloropropane	0.0180	0.0020	mg/Kg wet	0.0200		90.2	70-130	6.23	25		
1,1-Dichloropropene	0.0185	0.0020	mg/Kg wet	0.0200		92.3	70-130	5.91	25		

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B233215 - SW-846 5035											
LCS Dup (B233215-BSD1)				Prepared & Analyzed: 06/13/19							
cis-1,3-Dichloropropene	0.0219	0.0010	mg/Kg wet	0.0200		110	70-130	4.95	25		
trans-1,3-Dichloropropene	0.0199	0.0010	mg/Kg wet	0.0200		99.7	70-130	0.503	25		
Diethyl Ether	0.0201	0.020	mg/Kg wet	0.0200		100	70-130	0.599	25		
Diisopropyl Ether (DIPE)	0.0203	0.0010	mg/Kg wet	0.0200		102	70-130	0.0983	25		
1,4-Dioxane	0.202	0.10	mg/Kg wet	0.200		101	40-160	3.97	50		† ‡
Ethylbenzene	0.0192	0.0020	mg/Kg wet	0.0200		95.9	70-130	0.312	25		
Hexachlorobutadiene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-160	0.0932	25		
2-Hexanone (MBK)	0.207	0.020	mg/Kg wet	0.200		103	70-160	0.971	25		†
Isopropylbenzene (Cumene)	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130	1.41	25		
p-Isopropyltoluene (p-Cymene)	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130	2.98	25		
Methyl Acetate	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	1.96	25		
Methyl tert-Butyl Ether (MTBE)	0.0212	0.0040	mg/Kg wet	0.0200		106	70-130	1.59	25		
Methyl Cyclohexane	0.0215	0.0020	mg/Kg wet	0.0200		108	70-130	6.33	25		
Methylene Chloride	0.0189	0.020	mg/Kg wet	0.0200		94.6	40-160	1.05	25	J	†
4-Methyl-2-pentanone (MIBK)	0.206	0.020	mg/Kg wet	0.200		103	70-160	0.506	25		†
Naphthalene	0.0169	0.0040	mg/Kg wet	0.0200		84.4	40-130	3.03	25		†
n-Propylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.1	70-130	0.711	25		
Styrene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130	5.39	25		
1,1,1,2-Tetrachloroethane	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	5.82	25		
1,1,2,2-Tetrachloroethane	0.0201	0.0010	mg/Kg wet	0.0200		101	70-130	7.92	25		
Tetrachloroethylene	0.0217	0.0020	mg/Kg wet	0.0200		109	70-130	3.75	25		
Tetrahydrofuran	0.0177	0.010	mg/Kg wet	0.0200		88.3	70-130	24.2	25		
Toluene	0.0190	0.0020	mg/Kg wet	0.0200		95.2	70-130	0.210	25		
1,2,3-Trichlorobenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130	0.0939	25		
1,2,4-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.5	70-130	1.45	25		
1,3,5-Trichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130	4.38	25		
1,1,1-Trichloroethane	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	3.83	25		
1,1,2-Trichloroethane	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	3.78	25		
Trichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.198	25		
Trichlorofluoromethane (Freon 11)	0.0187	0.010	mg/Kg wet	0.0200		93.5	70-130	1.06	25		
1,2,3-Trichloropropane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130	3.25	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0212	0.010	mg/Kg wet	0.0200		106	70-130	0.657	25		
1,2,4-Trimethylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		95.0	70-130	3.86	25		
1,3,5-Trimethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.6	70-130	0.401	25		
Vinyl Chloride	0.0169	0.010	mg/Kg wet	0.0200		84.4	40-130	2.80	25		†
m+p Xylene	0.0386	0.0040	mg/Kg wet	0.0400		96.4	70-130	0.364	25		
o-Xylene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130	3.15	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0477*		mg/Kg wet	0.0500		95.3	70-130				
Surrogate: Toluene-d8	*0.0501*		mg/Kg wet	0.0500		100	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0490*		mg/Kg wet	0.0500		98.0	70-130				
Batch B233252 - SW-846 5035											
Blank (B233252-BLK1)				Prepared & Analyzed: 06/13/19							
Acetone	ND	0.10	mg/Kg wet								
Acrylonitrile	ND	0.0060	mg/Kg wet								
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet								
Benzene	ND	0.0020	mg/Kg wet								
Bromobenzene	ND	0.0020	mg/Kg wet								
Bromochloromethane	ND	0.0020	mg/Kg wet								
Bromodichloromethane	ND	0.0020	mg/Kg wet								
Bromoform	ND	0.0020	mg/Kg wet								

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233252 - SW-846 5035										
Blank (B233252-BLK1)				Prepared & Analyzed: 06/13/19						
Bromomethane	ND	0.010	mg/Kg wet							V-34
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methyl Cyclohexane	ND	0.0020	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							

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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 B233252 - SW-846 5035											
Blank (B233252-BLK1)				Prepared & Analyzed: 06/13/19							
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet								
Tetrachloroethylene	ND	0.0020	mg/Kg wet								
Tetrahydrofuran	ND	0.010	mg/Kg wet								
Toluene	ND	0.0020	mg/Kg wet								
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet								
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet								
Trichloroethylene	ND	0.0020	mg/Kg wet								
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet								
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet								
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet								
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet								
Vinyl Chloride	ND	0.010	mg/Kg wet								
m+p Xylene	ND	0.0040	mg/Kg wet								
o-Xylene	ND	0.0020	mg/Kg wet								
Surrogate: 1,2-Dichloroethane-d4	*0.0482*		mg/Kg wet	0.0500		96.4	70-130				
Surrogate: Toluene-d8	*0.0490*		mg/Kg wet	0.0500		98.0	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0501*		mg/Kg wet	0.0500		100	70-130				
LCS (B233252-BS1)				Prepared & Analyzed: 06/13/19							
Acetone	0.225	0.10	mg/Kg wet	0.200		113	70-160			V-35	†
Acrylonitrile	0.0196	0.0060	mg/Kg wet	0.0200		97.9	70-130				
tert-Amyl Methyl Ether (TAME)	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130				
Benzene	0.0185	0.0020	mg/Kg wet	0.0200		92.5	70-130				
Bromobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130				
Bromochloromethane	0.0203	0.0020	mg/Kg wet	0.0200		101	70-130				
Bromodichloromethane	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130				
Bromoform	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130				
Bromomethane	0.0142	0.010	mg/Kg wet	0.0200		71.1	40-130			V-34	†
2-Butanone (MEK)	0.207	0.040	mg/Kg wet	0.200		104	70-160				†
tert-Butyl Alcohol (TBA)	0.230	0.040	mg/Kg wet	0.200		115	40-130			V-20	†
n-Butylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		90.8	70-130				
sec-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130				
tert-Butylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0187	0.0010	mg/Kg wet	0.0200		93.4	70-130				
Carbon Disulfide	0.0189	0.0060	mg/Kg wet	0.0200		94.5	70-130				
Carbon Tetrachloride	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130				
Chlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.3	70-130				
Chlorodibromomethane	0.0196	0.0010	mg/Kg wet	0.0200		98.2	70-130				
Chloroethane	0.0184	0.020	mg/Kg wet	0.0200		91.8	70-130			J	
Chloroform	0.0187	0.0040	mg/Kg wet	0.0200		93.3	70-130				
Chloromethane	0.0154	0.010	mg/Kg wet	0.0200		77.0	70-130				
2-Chlorotoluene	0.0195	0.0020	mg/Kg wet	0.0200		97.7	70-130				
4-Chlorotoluene	0.0186	0.0020	mg/Kg wet	0.0200		93.1	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0190	0.0020	mg/Kg wet	0.0200		95.1	70-130				
1,2-Dibromoethane (EDB)	0.0206	0.0010	mg/Kg wet	0.0200		103	70-130				
Dibromomethane	0.0188	0.0020	mg/Kg wet	0.0200		93.8	70-130				
1,2-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130				
1,3-Dichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.8	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 B233252 - SW-846 5035											
LCS (B233252-BS1)				Prepared & Analyzed: 06/13/19							
1,4-Dichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.0	70-130				
trans-1,4-Dichloro-2-butene	0.0198	0.0040	mg/Kg wet	0.0200		99.2	70-130				
Dichlorodifluoromethane (Freon 12)	0.0145	0.020	mg/Kg wet	0.0200		72.5	40-160			J	†
1,1-Dichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130				
1,2-Dichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130				
1,1-Dichloroethylene	0.0184	0.0040	mg/Kg wet	0.0200		92.0	70-130				
cis-1,2-Dichloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.7	70-130				
trans-1,2-Dichloroethylene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130				
1,2-Dichloropropane	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130				
1,3-Dichloropropane	0.0187	0.0010	mg/Kg wet	0.0200		93.7	70-130				
2,2-Dichloropropane	0.0177	0.0020	mg/Kg wet	0.0200		88.7	70-130				
1,1-Dichloropropene	0.0181	0.0020	mg/Kg wet	0.0200		90.5	70-130				
cis-1,3-Dichloropropene	0.0207	0.0010	mg/Kg wet	0.0200		104	70-130				
trans-1,3-Dichloropropene	0.0192	0.0010	mg/Kg wet	0.0200		96.1	70-130				
Diethyl Ether	0.0200	0.020	mg/Kg wet	0.0200		100	70-130				
Diisopropyl Ether (DIPE)	0.0197	0.0010	mg/Kg wet	0.0200		98.4	70-130				
1,4-Dioxane	0.204	0.10	mg/Kg wet	0.200		102	40-160				†
Ethylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.0	70-130				
Hexachlorobutadiene	0.0194	0.0020	mg/Kg wet	0.0200		97.1	70-160				
2-Hexanone (MBK)	0.201	0.020	mg/Kg wet	0.200		100	70-160				†
Isopropylbenzene (Cumene)	0.0178	0.0020	mg/Kg wet	0.0200		89.0	70-130				
p-Isopropyltoluene (p-Cymene)	0.0184	0.0020	mg/Kg wet	0.0200		92.1	70-130				
Methyl Acetate	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130				
Methyl Cyclohexane	0.0194	0.0020	mg/Kg wet	0.0200		97.0	70-130				
Methylene Chloride	0.0191	0.020	mg/Kg wet	0.0200		95.5	40-160			J	†
4-Methyl-2-pentanone (MIBK)	0.204	0.020	mg/Kg wet	0.200		102	70-160				†
Naphthalene	0.0173	0.0040	mg/Kg wet	0.0200		86.5	40-130				†
n-Propylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130				
Styrene	0.0193	0.0020	mg/Kg wet	0.0200		96.5	70-130				
1,1,1,2-Tetrachloroethane	0.0207	0.0020	mg/Kg wet	0.0200		104	70-130				
1,1,2,2-Tetrachloroethane	0.0202	0.0010	mg/Kg wet	0.0200		101	70-130				
Tetrachloroethylene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130				
Tetrahydrofuran	0.0180	0.010	mg/Kg wet	0.0200		89.9	70-130				
Toluene	0.0183	0.0020	mg/Kg wet	0.0200		91.5	70-130				
1,2,3-Trichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130				
1,2,4-Trichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130				
1,3,5-Trichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.9	70-130				
1,1,1-Trichloroethane	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130				
1,1,2-Trichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
Trichloroethylene	0.0192	0.0020	mg/Kg wet	0.0200		95.8	70-130				
Trichlorofluoromethane (Freon 11)	0.0168	0.010	mg/Kg wet	0.0200		84.0	70-130				
1,2,3-Trichloropropane	0.0192	0.0020	mg/Kg wet	0.0200		96.1	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0204	0.010	mg/Kg wet	0.0200		102	70-130				
1,2,4-Trimethylbenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.7	70-130				
1,3,5-Trimethylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.6	70-130				
Vinyl Chloride	0.0151	0.010	mg/Kg wet	0.0200		75.4	40-130				†
m+p Xylene	0.0374	0.0040	mg/Kg wet	0.0400		93.5	70-130				
o-Xylene	0.0186	0.0020	mg/Kg wet	0.0200		92.8	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0484*		mg/Kg wet	0.0500		96.8	70-130				
Surrogate: Toluene-d8	*0.0494*		mg/Kg wet	0.0500		98.9	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 B233252 - SW-846 5035												
LCS (B233252-BS1)				Prepared & Analyzed: 06/13/19								
Surrogate: 4-Bromofluorobenzene	*0.0497*		mg/Kg wet	0.0500		99.4		70-130				
LCS Dup (B233252-BSD1)				Prepared & Analyzed: 06/13/19								
Acetone	0.203	0.10	mg/Kg wet	0.200		102		70-160	10.4	25	V-35	†
Acrylonitrile	0.0188	0.0060	mg/Kg wet	0.0200		94.0		70-130	4.06	25		
tert-Amyl Methyl Ether (TAME)	0.0201	0.0010	mg/Kg wet	0.0200		100		70-130	3.14	25		
Benzene	0.0185	0.0020	mg/Kg wet	0.0200		92.3		70-130	0.216	25		
Bromobenzene	0.0184	0.0020	mg/Kg wet	0.0200		92.0		70-130	1.75	25		
Bromochloromethane	0.0194	0.0020	mg/Kg wet	0.0200		97.0		70-130	4.44	25		
Bromodichloromethane	0.0208	0.0020	mg/Kg wet	0.0200		104		70-130	2.19	25		
Bromoform	0.0174	0.0020	mg/Kg wet	0.0200		87.2		70-130	6.87	25		
Bromomethane	0.0145	0.010	mg/Kg wet	0.0200		72.5		40-130	1.95	25	V-34	†
2-Butanone (MEK)	0.199	0.040	mg/Kg wet	0.200		99.5		70-160	3.99	25		†
tert-Butyl Alcohol (TBA)	0.265	0.040	mg/Kg wet	0.200		**133**	*	40-130	14.1	25	L-07, V-20	†
n-Butylbenzene	0.0172	0.0020	mg/Kg wet	0.0200		85.9		70-130	5.55	25		
sec-Butylbenzene	0.0190	0.0020	mg/Kg wet	0.0200		94.9		70-130	2.91	25		
tert-Butylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.4		70-160	3.95	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0182	0.0010	mg/Kg wet	0.0200		90.9		70-130	2.71	25		
Carbon Disulfide	0.0182	0.0060	mg/Kg wet	0.0200		91.0		70-130	3.77	25		
Carbon Tetrachloride	0.0180	0.0020	mg/Kg wet	0.0200		90.0		70-130	7.18	25		
Chlorobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.5		70-130	3.05	25		
Chlorodibromomethane	0.0193	0.0010	mg/Kg wet	0.0200		96.4		70-130	1.85	25		
Chloroethane	0.0169	0.020	mg/Kg wet	0.0200		84.7		70-130	8.05	25	J	
Chloroform	0.0175	0.0040	mg/Kg wet	0.0200		87.4		70-130	6.53	25		
Chloromethane	0.0142	0.010	mg/Kg wet	0.0200		70.8		70-130	8.39	25		
2-Chlorotoluene	0.0182	0.0020	mg/Kg wet	0.0200		91.0		70-130	7.10	25		
4-Chlorotoluene	0.0183	0.0020	mg/Kg wet	0.0200		91.5		70-130	1.73	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0187	0.0020	mg/Kg wet	0.0200		93.7		70-130	1.48	25		
1,2-Dibromoethane (EDB)	0.0202	0.0010	mg/Kg wet	0.0200		101		70-130	1.76	25		
Dibromomethane	0.0191	0.0020	mg/Kg wet	0.0200		95.7		70-130	2.01	25		
1,2-Dichlorobenzene	0.0176	0.0020	mg/Kg wet	0.0200		88.1		70-130	8.27	25		
1,3-Dichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.2		70-130	5.96	25		
1,4-Dichlorobenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.3		70-130	6.32	25		
trans-1,4-Dichloro-2-butene	0.0179	0.0040	mg/Kg wet	0.0200		89.5		70-130	10.3	25		
Dichlorodifluoromethane (Freon 12)	0.0141	0.020	mg/Kg wet	0.0200		70.7		40-160	2.51	25	J	†
1,1-Dichloroethane	0.0190	0.0020	mg/Kg wet	0.0200		95.0		70-130	4.02	25		
1,2-Dichloroethane	0.0183	0.0020	mg/Kg wet	0.0200		91.5		70-130	4.90	25		
1,1-Dichloroethylene	0.0174	0.0040	mg/Kg wet	0.0200		86.8		70-130	5.82	25		
cis-1,2-Dichloroethylene	0.0187	0.0020	mg/Kg wet	0.0200		93.5		70-130	6.42	25		
trans-1,2-Dichloroethylene	0.0181	0.0020	mg/Kg wet	0.0200		90.7		70-130	3.68	25		
1,2-Dichloropropane	0.0183	0.0020	mg/Kg wet	0.0200		91.6		70-130	8.57	25		
1,3-Dichloropropane	0.0185	0.0010	mg/Kg wet	0.0200		92.6		70-130	1.18	25		
2,2-Dichloropropane	0.0172	0.0020	mg/Kg wet	0.0200		86.1		70-130	2.97	25		
1,1-Dichloropropene	0.0183	0.0020	mg/Kg wet	0.0200		91.5		70-130	1.10	25		
cis-1,3-Dichloropropene	0.0197	0.0010	mg/Kg wet	0.0200		98.6		70-130	5.04	25		
trans-1,3-Dichloropropene	0.0180	0.0010	mg/Kg wet	0.0200		90.2		70-130	6.33	25		
Diethyl Ether	0.0200	0.020	mg/Kg wet	0.0200		99.8		70-130	0.200	25	J	
Diisopropyl Ether (DIPE)	0.0191	0.0010	mg/Kg wet	0.0200		95.5		70-130	2.99	25		
1,4-Dioxane	0.190	0.10	mg/Kg wet	0.200		94.8		40-160	7.40	50		† ‡
Ethylbenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6		70-130	4.79	25		
Hexachlorobutadiene	0.0192	0.0020	mg/Kg wet	0.0200		96.1		70-160	1.04	25		
2-Hexanone (MBK)	0.201	0.020	mg/Kg wet	0.200		101		70-160	0.229	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 B233252 - SW-846 5035											
LCS Dup (B233252-BSD1)				Prepared & Analyzed: 06/13/19							
Isopropylbenzene (Cumene)	0.0177	0.0020	mg/Kg wet	0.0200		88.4	70-130	0.676	25		
p-Isopropyltoluene (p-Cymene)	0.0174	0.0020	mg/Kg wet	0.0200		87.1	70-130	5.58	25		
Methyl Acetate	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130	2.00	25		
Methyl tert-Butyl Ether (MTBE)	0.0200	0.0040	mg/Kg wet	0.0200		100	70-130	0.697	25		
Methyl Cyclohexane	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	2.40	25		
Methylene Chloride	0.0184	0.020	mg/Kg wet	0.0200		92.2	40-160	3.52	25	J	†
4-Methyl-2-pentanone (MIBK)	0.203	0.020	mg/Kg wet	0.200		101	70-160	0.493	25		†
Naphthalene	0.0164	0.0040	mg/Kg wet	0.0200		82.2	40-130	5.10	25		†
n-Propylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.0	70-130	4.09	25		
Styrene	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130	6.53	25		
1,1,1,2-Tetrachloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	2.35	25		
1,1,2,2-Tetrachloroethane	0.0212	0.0010	mg/Kg wet	0.0200		106	70-130	4.93	25		
Tetrachloroethylene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	0.487	25		
Tetrahydrofuran	0.0205	0.010	mg/Kg wet	0.0200		102	70-130	13.0	25		
Toluene	0.0172	0.0020	mg/Kg wet	0.0200		86.1	70-130	6.08	25		
1,2,3-Trichlorobenzene	0.0183	0.0020	mg/Kg wet	0.0200		91.4	70-130	2.91	25		
1,2,4-Trichlorobenzene	0.0170	0.0020	mg/Kg wet	0.0200		84.8	70-130	7.38	25		
1,3,5-Trichlorobenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	3.03	25		
1,1,1-Trichloroethane	0.0173	0.0020	mg/Kg wet	0.0200		86.3	70-130	7.26	25		
1,1,2-Trichloroethane	0.0184	0.0020	mg/Kg wet	0.0200		91.8	70-130	9.35	25		
Trichloroethylene	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	1.15	25		
Trichlorofluoromethane (Freon 11)	0.0157	0.010	mg/Kg wet	0.0200		78.3	70-130	7.02	25		
1,2,3-Trichloropropane	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-130	1.26	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0188	0.010	mg/Kg wet	0.0200		93.9	70-130	8.17	25		
1,2,4-Trimethylbenzene	0.0175	0.0020	mg/Kg wet	0.0200		87.4	70-130	4.80	25		
1,3,5-Trimethylbenzene	0.0182	0.0020	mg/Kg wet	0.0200		91.1	70-130	1.63	25		
Vinyl Chloride	0.0148	0.010	mg/Kg wet	0.0200		74.2	40-130	1.60	25		†
m+p Xylene	0.0363	0.0040	mg/Kg wet	0.0400		90.7	70-130	3.10	25		
o-Xylene	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130	3.40	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0481*		mg/Kg wet	0.0500		96.2	70-130				
Surrogate: Toluene-d8	*0.0498*		mg/Kg wet	0.0500		99.7	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0513*		mg/Kg wet	0.0500		103	70-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233189 - SW-846 3546										
Blank (B233189-BLK1)				Prepared: 06/13/19 Analyzed: 06/17/19						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-04, V-05, V-35
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							L-04
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							V-34
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							V-34
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B233189 - SW-846 3546												
Blank (B233189-BLK1)				Prepared: 06/13/19 Analyzed: 06/17/19								
2-Methylphenol	ND	0.34	mg/Kg wet									
3/4-Methylphenol	ND	0.34	mg/Kg wet									
Naphthalene	ND	0.17	mg/Kg wet									
2-Nitroaniline	ND	0.34	mg/Kg wet									
3-Nitroaniline	ND	0.34	mg/Kg wet									
4-Nitroaniline	ND	0.34	mg/Kg wet									
Nitrobenzene	ND	0.34	mg/Kg wet									
2-Nitrophenol	ND	0.34	mg/Kg wet									
4-Nitrophenol	ND	0.66	mg/Kg wet									
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet									
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet									
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet									
Pentachloronitrobenzene	ND	0.34	mg/Kg wet									
Pentachlorophenol	ND	0.34	mg/Kg wet									
Phenanthrene	ND	0.17	mg/Kg wet									
Phenol	ND	0.34	mg/Kg wet									
Pyrene	ND	0.17	mg/Kg wet									
Pyridine	ND	0.34	mg/Kg wet									
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet									
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet									
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet									
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet									
Surrogate: 2-Fluorophenol	*4.77*		mg/Kg wet	6.67		71.6		30-130				
Surrogate: Phenol-d6	*4.83*		mg/Kg wet	6.67		72.5		30-130				
Surrogate: Nitrobenzene-d5	*2.19*		mg/Kg wet	3.33		65.8		30-130				
Surrogate: 2-Fluorobiphenyl	*2.79*		mg/Kg wet	3.33		83.6		30-130				
Surrogate: 2,4,6-Tribromophenol	*5.83*		mg/Kg wet	6.67		87.4		30-130				
Surrogate: p-Terphenyl-d14	*3.22*		mg/Kg wet	3.33		96.5		30-130				
LCS (B233189-BS1)				Prepared: 06/13/19 Analyzed: 06/17/19								
Acenaphthene	1.32	0.17	mg/Kg wet	1.67		79.5		40-140				
Acenaphthylene	1.37	0.17	mg/Kg wet	1.67		82.4		40-140				
Acetophenone	1.01	0.34	mg/Kg wet	1.67		60.8		40-140				
Aniline	0.920	0.34	mg/Kg wet	1.67		55.2		10-140			V-34	†
Anthracene	1.48	0.17	mg/Kg wet	1.67		88.5		40-140				
Benzidine	1.72	0.66	mg/Kg wet	1.67		104		40-140			V-04, V-05, V-35	
Benzo(a)anthracene	1.43	0.17	mg/Kg wet	1.67		86.1		40-140				
Benzo(a)pyrene	1.52	0.17	mg/Kg wet	1.67		91.2		40-140				
Benzo(b)fluoranthene	1.47	0.17	mg/Kg wet	1.67		88.0		40-140				
Benzo(g,h,i)perylene	1.33	0.17	mg/Kg wet	1.67		79.6		40-140				
Benzo(k)fluoranthene	1.50	0.17	mg/Kg wet	1.67		90.1		40-140				
Benzoic Acid	0.354	1.0	mg/Kg wet	1.67		**21.2**	*	30-130			L-04, J	
Bis(2-chloroethoxy)methane	1.45	0.34	mg/Kg wet	1.67		86.8		40-140				
Bis(2-chloroethyl)ether	1.08	0.34	mg/Kg wet	1.67		64.8		40-140				
Bis(2-chloroisopropyl)ether	1.32	0.34	mg/Kg wet	1.67		79.2		40-140				
Bis(2-Ethylhexyl)phthalate	1.24	0.34	mg/Kg wet	1.67		74.6		40-140				
4-Bromophenylphenylether	1.56	0.34	mg/Kg wet	1.67		93.7		40-140				
Butylbenzylphthalate	1.35	0.34	mg/Kg wet	1.67		80.8		40-140				
Carbazole	1.46	0.17	mg/Kg wet	1.67		87.4		40-140				
4-Chloroaniline	1.05	0.66	mg/Kg wet	1.67		63.2		10-140			V-34	†
4-Chloro-3-methylphenol	1.32	0.66	mg/Kg wet	1.67		78.9		30-130				
2-Chloronaphthalene	1.30	0.34	mg/Kg wet	1.67		77.7		40-140				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B233189 - SW-846 3546											
LCS (B233189-BS1)				Prepared: 06/13/19 Analyzed: 06/17/19							
2-Chlorophenol	1.26	0.34	mg/Kg wet	1.67		75.8	30-130				
4-Chlorophenylphenylether	1.49	0.34	mg/Kg wet	1.67		89.2	40-140				
Chrysene	1.40	0.17	mg/Kg wet	1.67		84.3	40-140				
Dibenz(a,h)anthracene	1.26	0.17	mg/Kg wet	1.67		75.4	40-140				
Dibenzofuran	1.40	0.34	mg/Kg wet	1.67		84.0	40-140				
Di-n-butylphthalate	1.39	0.34	mg/Kg wet	1.67		83.7	40-140				
1,2-Dichlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.4	40-140				
1,3-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.67		67.1	40-140				
1,4-Dichlorobenzene	1.14	0.34	mg/Kg wet	1.67		68.1	40-140				
3,3-Dichlorobenzidine	1.24	0.17	mg/Kg wet	1.67		74.3	20-140			V-34	†
2,4-Dichlorophenol	1.51	0.34	mg/Kg wet	1.67		90.6	30-130				
Diethylphthalate	1.35	0.34	mg/Kg wet	1.67		81.1	40-140				
2,4-Dimethylphenol	1.36	0.34	mg/Kg wet	1.67		81.4	30-130				
Dimethylphthalate	1.36	0.34	mg/Kg wet	1.67		81.8	40-140				
4,6-Dinitro-2-methylphenol	1.20	0.34	mg/Kg wet	1.67		72.3	30-130				
2,4-Dinitrophenol	0.695	0.66	mg/Kg wet	1.67		41.7	30-130			V-05	
2,4-Dinitrotoluene	1.43	0.34	mg/Kg wet	1.67		85.8	40-140				
2,6-Dinitrotoluene	1.52	0.34	mg/Kg wet	1.67		91.1	40-140				
Di-n-octylphthalate	1.34	0.34	mg/Kg wet	1.67		80.4	40-140			V-05	
1,2-Diphenylhydrazine/Azobenzene	1.35	0.34	mg/Kg wet	1.67		81.2	40-140				
Fluoranthene	1.47	0.17	mg/Kg wet	1.67		88.5	40-140				
Fluorene	1.41	0.17	mg/Kg wet	1.67		84.8	40-140				
Hexachlorobenzene	1.53	0.34	mg/Kg wet	1.67		91.7	40-140				
Hexachlorobutadiene	1.14	0.34	mg/Kg wet	1.67		68.2	40-140				
Hexachlorocyclopentadiene	1.01	0.34	mg/Kg wet	1.67		60.9	40-140			V-05	
Hexachloroethane	1.01	0.34	mg/Kg wet	1.67		60.4	40-140				
Indeno(1,2,3-cd)pyrene	1.30	0.17	mg/Kg wet	1.67		78.0	40-140				
Isophorone	1.32	0.34	mg/Kg wet	1.67		79.3	40-140				
1-Methylnaphthalene	1.34	0.17	mg/Kg wet	1.67		80.4	40-140				
2-Methylnaphthalene	1.36	0.17	mg/Kg wet	1.67		81.9	40-140				
2-Methylphenol	1.33	0.34	mg/Kg wet	1.67		79.8	30-130				
3/4-Methylphenol	1.24	0.34	mg/Kg wet	1.67		74.5	30-130				
Naphthalene	1.22	0.17	mg/Kg wet	1.67		73.2	40-140				
2-Nitroaniline	1.15	0.34	mg/Kg wet	1.67		68.8	40-140				
3-Nitroaniline	1.32	0.34	mg/Kg wet	1.67		79.2	30-140				†
4-Nitroaniline	1.47	0.34	mg/Kg wet	1.67		88.1	40-140				
Nitrobenzene	1.12	0.34	mg/Kg wet	1.67		66.9	40-140				
2-Nitrophenol	1.29	0.34	mg/Kg wet	1.67		77.2	30-130				
4-Nitrophenol	1.11	0.66	mg/Kg wet	1.67		66.4	30-130				
N-Nitrosodimethylamine	0.983	0.34	mg/Kg wet	1.67		59.0	40-140				
N-Nitrosodiphenylamine/Diphenylamine	1.63	0.34	mg/Kg wet	1.67		98.0	40-140				
N-Nitrosodi-n-propylamine	1.08	0.34	mg/Kg wet	1.67		64.6	40-140				
Pentachloronitrobenzene	1.45	0.34	mg/Kg wet	1.67		86.8	40-140			V-16	
Pentachlorophenol	1.19	0.34	mg/Kg wet	1.67		71.1	30-130				
Phenanthrene	1.50	0.17	mg/Kg wet	1.67		90.2	40-140				
Phenol	1.22	0.34	mg/Kg wet	1.67		73.3	30-130				
Pyrene	1.50	0.17	mg/Kg wet	1.67		90.2	40-140				
Pyridine	0.734	0.34	mg/Kg wet	1.67		44.1	30-140				†
1,2,4,5-Tetrachlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.8	40-140				
1,2,4-Trichlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.7	40-140				
2,4,5-Trichlorophenol	1.47	0.34	mg/Kg wet	1.67		88.2	30-130				
2,4,6-Trichlorophenol	1.45	0.34	mg/Kg wet	1.67		86.8	30-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B233189 - SW-846 3546												
LCS (B233189-BS1)				Prepared: 06/13/19 Analyzed: 06/17/19								
Surrogate: 2-Fluorophenol	*4.62*		mg/Kg wet	6.67		69.3		30-130				
Surrogate: Phenol-d6	*5.09*		mg/Kg wet	6.67		76.3		30-130				
Surrogate: Nitrobenzene-d5	*2.23*		mg/Kg wet	3.33		66.8		30-130				
Surrogate: 2-Fluorobiphenyl	*2.96*		mg/Kg wet	3.33		88.9		30-130				
Surrogate: 2,4,6-Tribromophenol	*6.23*		mg/Kg wet	6.67		93.5		30-130				
Surrogate: p-Terphenyl-d14	*3.13*		mg/Kg wet	3.33		93.8		30-130				
LCS Dup (B233189-BSD1)				Prepared: 06/13/19 Analyzed: 06/17/19								
Acenaphthene	1.44	0.17	mg/Kg wet	1.67		86.3		40-140	8.25	30		
Acenaphthylene	1.53	0.17	mg/Kg wet	1.67		92.0		40-140	11.0	30		
Acetophenone	1.10	0.34	mg/Kg wet	1.67		65.9		40-140	8.18	30		
Aniline	1.01	0.34	mg/Kg wet	1.67		60.5		10-140	9.10	50		† ‡
Anthracene	1.66	0.17	mg/Kg wet	1.67		99.9		40-140	12.0	30		
Benzidine	2.22	0.66	mg/Kg wet	1.67		133		40-140	25.2	30	V-04, V-05, V-35	
Benzo(a)anthracene	1.64	0.17	mg/Kg wet	1.67		98.3		40-140	13.3	30		
Benzo(a)pyrene	1.77	0.17	mg/Kg wet	1.67		106		40-140	15.3	30		
Benzo(b)fluoranthene	1.67	0.17	mg/Kg wet	1.67		100		40-140	13.1	30		
Benzo(g,h,i)perylene	1.57	0.17	mg/Kg wet	1.67		94.2		40-140	16.8	30		
Benzo(k)fluoranthene	1.70	0.17	mg/Kg wet	1.67		102		40-140	12.3	30		
Benzoic Acid	0.333	1.0	mg/Kg wet	1.67		**20.0**	*	30-130	6.12	50	L-04, J	‡
Bis(2-chloroethoxy)methane	1.58	0.34	mg/Kg wet	1.67		94.9		40-140	8.90	30		
Bis(2-chloroethyl)ether	1.23	0.34	mg/Kg wet	1.67		73.7		40-140	12.9	30		
Bis(2-chloroisopropyl)ether	1.46	0.34	mg/Kg wet	1.67		87.5		40-140	9.98	30		
Bis(2-Ethylhexyl)phthalate	1.48	0.34	mg/Kg wet	1.67		88.6		40-140	17.1	30		
4-Bromophenylphenylether	1.77	0.34	mg/Kg wet	1.67		106		40-140	12.7	30		
Butylbenzylphthalate	1.56	0.34	mg/Kg wet	1.67		93.5		40-140	14.6	30		
Carbazole	1.64	0.17	mg/Kg wet	1.67		98.5		40-140	12.0	30		
4-Chloroaniline	1.15	0.66	mg/Kg wet	1.67		69.1		10-140	8.92	30	V-34	†
4-Chloro-3-methylphenol	1.46	0.66	mg/Kg wet	1.67		87.7		30-130	10.5	30		
2-Chloronaphthalene	1.45	0.34	mg/Kg wet	1.67		86.8		40-140	11.0	30		
2-Chlorophenol	1.37	0.34	mg/Kg wet	1.67		82.0		30-130	7.89	30		
4-Chlorophenylphenylether	1.66	0.34	mg/Kg wet	1.67		99.7		40-140	11.1	30		
Chrysene	1.63	0.17	mg/Kg wet	1.67		97.9		40-140	15.0	30		
Dibenz(a,h)anthracene	1.45	0.17	mg/Kg wet	1.67		87.0		40-140	14.2	30		
Dibenzofuran	1.55	0.34	mg/Kg wet	1.67		93.2		40-140	10.4	30		
Di-n-butylphthalate	1.56	0.34	mg/Kg wet	1.67		93.7		40-140	11.3	30		
1,2-Dichlorobenzene	1.29	0.34	mg/Kg wet	1.67		77.4		40-140	11.0	30		
1,3-Dichlorobenzene	1.23	0.34	mg/Kg wet	1.67		74.0		40-140	9.81	30		
1,4-Dichlorobenzene	1.27	0.34	mg/Kg wet	1.67		76.0		40-140	10.9	30		
3,3-Dichlorobenzidine	1.40	0.17	mg/Kg wet	1.67		84.1		20-140	12.4	50	V-34	† ‡
2,4-Dichlorophenol	1.66	0.34	mg/Kg wet	1.67		99.6		30-130	9.40	30		
Diethylphthalate	1.51	0.34	mg/Kg wet	1.67		90.7		40-140	11.2	30		
2,4-Dimethylphenol	1.54	0.34	mg/Kg wet	1.67		92.3		30-130	12.5	30		
Dimethylphthalate	1.55	0.34	mg/Kg wet	1.67		92.8		40-140	12.6	30		
4,6-Dinitro-2-methylphenol	1.29	0.34	mg/Kg wet	1.67		77.2		30-130	6.66	30		
2,4-Dinitrophenol	0.688	0.66	mg/Kg wet	1.67		41.3		30-130	0.916	30		
2,4-Dinitrotoluene	1.64	0.34	mg/Kg wet	1.67		98.1		40-140	13.4	30		
2,6-Dinitrotoluene	1.72	0.34	mg/Kg wet	1.67		103		40-140	12.3	30		
Di-n-octylphthalate	1.52	0.34	mg/Kg wet	1.67		91.3		40-140	12.7	30		
1,2-Diphenylhydrazine/Azobenzene	1.54	0.34	mg/Kg wet	1.67		92.2		40-140	12.7	30		
Fluoranthene	1.69	0.17	mg/Kg wet	1.67		101		40-140	13.7	30		
Fluorene	1.59	0.17	mg/Kg wet	1.67		95.5		40-140	12.0	30		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233189 - SW-846 3546										
LCS Dup (B233189-BSD1)				Prepared: 06/13/19 Analyzed: 06/17/19						
Hexachlorobenzene	1.70	0.34	mg/Kg wet	1.67		102	40-140	10.4	30	
Hexachlorobutadiene	1.24	0.34	mg/Kg wet	1.67		74.7	40-140	9.04	30	
Hexachlorocyclopentadiene	1.16	0.34	mg/Kg wet	1.67		69.5	40-140	13.3	30	
Hexachloroethane	1.13	0.34	mg/Kg wet	1.67		67.7	40-140	11.4	30	
Indeno(1,2,3-cd)pyrene	1.51	0.17	mg/Kg wet	1.67		90.7	40-140	15.2	30	
Isophorone	1.44	0.34	mg/Kg wet	1.67		86.4	40-140	8.57	30	
1-Methylnaphthalene	1.46	0.17	mg/Kg wet	1.67		87.8	40-140	8.80	30	
2-Methylnaphthalene	1.49	0.17	mg/Kg wet	1.67		89.5	40-140	8.89	30	
2-Methylphenol	1.44	0.34	mg/Kg wet	1.67		86.2	30-130	7.71	30	
3/4-Methylphenol	1.39	0.34	mg/Kg wet	1.67		83.5	30-130	11.4	30	
Naphthalene	1.31	0.17	mg/Kg wet	1.67		78.5	40-140	6.96	30	
2-Nitroaniline	1.29	0.34	mg/Kg wet	1.67		77.7	40-140	12.2	30	
3-Nitroaniline	1.48	0.34	mg/Kg wet	1.67		88.9	30-140	11.6	30	†
4-Nitroaniline	1.63	0.34	mg/Kg wet	1.67		97.9	40-140	10.6	30	
Nitrobenzene	1.21	0.34	mg/Kg wet	1.67		72.6	40-140	8.17	30	
2-Nitrophenol	1.39	0.34	mg/Kg wet	1.67		83.5	30-130	7.79	30	
4-Nitrophenol	1.22	0.66	mg/Kg wet	1.67		73.2	30-130	9.83	50	‡
N-Nitrosodimethylamine	1.08	0.34	mg/Kg wet	1.67		64.9	40-140	9.56	30	
N-Nitrosodiphenylamine/Diphenylamine	1.85	0.34	mg/Kg wet	1.67		111	40-140	12.5	30	
N-Nitrosodi-n-propylamine	1.21	0.34	mg/Kg wet	1.67		72.5	40-140	11.6	30	
Pentachloronitrobenzene	1.61	0.34	mg/Kg wet	1.67		96.6	40-140	10.6	30	
Pentachlorophenol	1.27	0.34	mg/Kg wet	1.67		76.5	30-130	7.26	30	
Phenanthrene	1.68	0.17	mg/Kg wet	1.67		101	40-140	10.9	30	
Phenol	1.34	0.34	mg/Kg wet	1.67		80.5	30-130	9.34	30	
Pyrene	1.73	0.17	mg/Kg wet	1.67		104	40-140	14.3	30	
Pyridine	0.812	0.34	mg/Kg wet	1.67		48.7	30-140	10.0	30	†
1,2,4,5-Tetrachlorobenzene	1.31	0.34	mg/Kg wet	1.67		78.6	40-140	11.9	30	
1,2,4-Trichlorobenzene	1.39	0.34	mg/Kg wet	1.67		83.4	40-140	9.65	30	
2,4,5-Trichlorophenol	1.66	0.34	mg/Kg wet	1.67		99.4	30-130	12.0	30	
2,4,6-Trichlorophenol	1.59	0.34	mg/Kg wet	1.67		95.5	30-130	9.54	30	
Surrogate: 2-Fluorophenol	*5.00*		mg/Kg wet	6.67		74.9	30-130			
Surrogate: Phenol-d6	*5.54*		mg/Kg wet	6.67		83.1	30-130			
Surrogate: Nitrobenzene-d5	*2.37*		mg/Kg wet	3.33		71.2	30-130			
Surrogate: 2-Fluorobiphenyl	*3.29*		mg/Kg wet	3.33		98.7	30-130			
Surrogate: 2,4,6-Tribromophenol	*6.81*		mg/Kg wet	6.67		102	30-130			
Surrogate: p-Terphenyl-d14	*3.61*		mg/Kg wet	3.33		108	30-130			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233449 - SW-846 3540C										
Blank (B233449-BLK1)				Prepared: 06/16/19 Analyzed: 06/18/19						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.197*		mg/Kg wet	0.200		98.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.201*		mg/Kg wet	0.200		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.180*		mg/Kg wet	0.200		90.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.170*		mg/Kg wet	0.200		84.9	30-150			
LCS (B233449-BS1)				Prepared: 06/16/19 Analyzed: 06/18/19						
Aroclor-1016	0.18	0.020	mg/Kg wet	0.200		87.6	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		78.6	40-140			
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		85.1	40-140			
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		84.1	40-140			
Surrogate: Decachlorobiphenyl	*0.185*		mg/Kg wet	0.200		92.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.188*		mg/Kg wet	0.200		94.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.168*		mg/Kg wet	0.200		84.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.158*		mg/Kg wet	0.200		78.8	30-150			
LCS Dup (B233449-BSD1)				Prepared: 06/16/19 Analyzed: 06/18/19						
Aroclor-1016	0.17	0.020	mg/Kg wet	0.200		84.4	40-140	3.66	30	
Aroclor-1016 [2C]	0.15	0.020	mg/Kg wet	0.200		77.4	40-140	1.52	30	
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		86.3	40-140	1.36	30	
Aroclor-1260 [2C]	0.17	0.020	mg/Kg wet	0.200		83.6	40-140	0.635	30	
Surrogate: Decachlorobiphenyl	*0.187*		mg/Kg wet	0.200		93.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.190*		mg/Kg wet	0.200		94.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.162*		mg/Kg wet	0.200		80.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.150*		mg/Kg wet	0.200		75.1	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls with 3540 Soxhlet Extraction - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233449 - SW-846 3540C										
Matrix Spike (B233449-MS1)	**Source: 19F0630-01**			Prepared: 06/16/19 Analyzed: 06/18/19						
Aroclor-1016	0.20	0.088	mg/Kg dry	0.221	ND	89.9	40-140			
Aroclor-1016 [2C]	0.18	0.088	mg/Kg dry	0.221	ND	80.3	40-140			
Aroclor-1260	0.19	0.088	mg/Kg dry	0.221	ND	87.6	40-140			
Aroclor-1260 [2C]	0.18	0.088	mg/Kg dry	0.221	ND	81.8	40-140			
Surrogate: Decachlorobiphenyl	*0.181*		mg/Kg dry	0.221		81.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.182*		mg/Kg dry	0.221		82.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.170*		mg/Kg dry	0.221		77.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.166*		mg/Kg dry	0.221		75.1	30-150			
Matrix Spike Dup (B233449-MSD1)	**Source: 19F0630-01**			Prepared: 06/16/19 Analyzed: 06/18/19						
Aroclor-1016	0.21	0.087	mg/Kg dry	0.218	ND	95.1	40-140	4.35	50	
Aroclor-1016 [2C]	0.19	0.087	mg/Kg dry	0.218	ND	85.1	40-140	4.53	50	
Aroclor-1260	0.19	0.087	mg/Kg dry	0.218	ND	88.8	40-140	0.133	50	
Aroclor-1260 [2C]	0.18	0.087	mg/Kg dry	0.218	ND	83.7	40-140	1.04	50	
Surrogate: Decachlorobiphenyl	*0.186*		mg/Kg dry	0.218		85.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.191*		mg/Kg dry	0.218		87.6	30-150			
Surrogate: Tetrachloro-m-xylene	*0.187*		mg/Kg dry	0.218		86.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.183*		mg/Kg dry	0.218		83.8	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 B233492 - SW-846 7471										
Blank (B233492-BLK1)				Prepared: 06/17/19 Analyzed: 06/18/19						
Mercury	ND	0.025	mg/Kg wet							
LCS (B233492-BS1)				Prepared: 06/17/19 Analyzed: 06/18/19						
Mercury	24.5	1.9	mg/Kg wet	27.3		89.6	64-136.5			
LCS Dup (B233492-BSD1)				Prepared: 06/17/19 Analyzed: 06/18/19						
Mercury	25.6	1.9	mg/Kg wet	27.3		93.6	64-136.5	4.35	20	
Duplicate (B233492-DUP1)	**Source: 19F0630-04**			Prepared: 06/17/19 Analyzed: 06/18/19						
Mercury	0.00893	0.027	mg/Kg dry		0.00886			0.824	35	J
Matrix Spike (B233492-MS1)	**Source: 19F0630-04**			Prepared: 06/17/19 Analyzed: 06/18/19						
Mercury	0.410	0.027	mg/Kg dry	0.357	0.00886	112	75-125			
Batch B233505 - SW-846 3050B										
Blank (B233505-BLK1)				Prepared: 06/17/19 Analyzed: 06/18/19						
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
LCS (B233505-BS1)				Prepared: 06/17/19 Analyzed: 06/18/19						
Arsenic	70.4	4.9	mg/Kg wet	77.2		91.3	82.4-117.4			
Barium	383	4.9	mg/Kg wet	391		97.9	82-118			
Cadmium	155	0.49	mg/Kg wet	182		85.1	83.1-117.5			
Chromium	258	0.99	mg/Kg wet	272		94.7	81.5-118.5			
Lead	249	1.5	mg/Kg wet	241		103	81.8-118.2			
Selenium	190	9.9	mg/Kg wet	216		88.1	79-121.5			
Silver	68.1	0.99	mg/Kg wet	66.3		103	79.6-120.4			
LCS Dup (B233505-BSD1)				Prepared: 06/17/19 Analyzed: 06/18/19						
Arsenic	70.0	4.9	mg/Kg wet	77.2		90.7	82.4-117.4	0.581	30	
Barium	384	4.9	mg/Kg wet	391		98.3	82-118	0.381	20	
Cadmium	155	0.49	mg/Kg wet	182		85.2	83.1-117.5	0.0823	20	
Chromium	256	0.98	mg/Kg wet	272		94.0	81.5-118.5	0.716	30	
Lead	232	1.5	mg/Kg wet	241		96.2	81.8-118.2	7.09	30	
Selenium	190	9.8	mg/Kg wet	216		87.8	79-121.5	0.289	30	
Silver	68.9	0.98	mg/Kg wet	66.3		104	79.6-120.4	1.25	30	

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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 B233505 - SW-846 3050B										
Duplicate (B233505-DUP1)	**Source: 19F0630-04**			Prepared: 06/17/19 Analyzed: 06/18/19						
Arsenic	2.41	1.8	mg/Kg dry		2.40			0.225	35	
Barium	30.5	1.8	mg/Kg dry		28.9			5.51	35	
Cadmium	0.183	0.18	mg/Kg dry		0.175			4.17	35	
Chromium	7.02	0.35	mg/Kg dry		6.82			2.86	35	
Lead	6.74	0.53	mg/Kg dry		6.01			11.4	35	
Selenium	ND	3.5	mg/Kg dry		ND			NC	35	
Silver	ND	0.35	mg/Kg dry		ND			NC	35	
MRL Check (B233505-MRL1)				Prepared: 06/17/19 Analyzed: 06/18/19						
Lead	0.485	0.47	mg/Kg wet	0.475		102	80-120			
Matrix Spike (B233505-MS1)	**Source: 19F0630-04**			Prepared: 06/17/19 Analyzed: 06/18/19						
Arsenic	18.6	1.7	mg/Kg dry	17.3	2.40	93.4	75-125			
Barium	46.3	1.7	mg/Kg dry	17.3	28.9	101	75-125			
Cadmium	16.8	0.17	mg/Kg dry	17.3	0.175	95.8	75-125			
Chromium	23.7	0.35	mg/Kg dry	17.3	6.82	97.5	75-125			
Lead	22.7	0.52	mg/Kg dry	17.3	6.01	96.5	75-125			
Selenium	14.5	3.5	mg/Kg dry	17.3	ND	83.7	75-125			
Silver	18.1	0.35	mg/Kg dry	17.3	ND	104	75-125			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B233449-BS1 Date(s) Analyzed: 06/18/2019 06/18/2019

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.18	
	2	0.000	-0.030	0.030	0.16	11.8
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B233449-BSD1 Date(s) Analyzed: 06/18/2019 06/18/2019

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.15	12.5
Aroclor-1260	1	0.000	-0.030	0.030	0.17	
	2	0.000	-0.030	0.030	0.17	0.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B233449-MS1 Date(s) Analyzed: 06/18/2019 06/18/2019

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.20	
	2	0.000	-0.030	0.030	0.18	10.5
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B233449-MSD1 Date(s) Analyzed: 06/18/2019 06/18/2019

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	-0.030	0.030	0.21	
	2	0.000	-0.030	0.030	0.19	10.0
Aroclor-1260	1	0.000	-0.030	0.030	0.19	
	2	0.000	-0.030	0.030	0.18	5.4

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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.
DL-04	Elevated reporting limit due to high concentration of an interfering analyte(s).
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
S-01	The surrogate recovery for this sample is not available due to sample dilution below the surrogate reporting limit required from high analyte concentration and/or matrix interferences.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
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.

con-test® ANALYTICAL LABORATORY
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 Soil	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,ME,NC,VA
Aroclor-1016 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1221	CT,NH,NY,ME,NC,VA
Aroclor-1221 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1232	CT,NH,NY,ME,NC,VA
Aroclor-1232 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1242	CT,NH,NY,ME,NC,VA
Aroclor-1242 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1248	CT,NH,NY,ME,NC,VA
Aroclor-1248 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1254	CT,NH,NY,ME,NC,VA
Aroclor-1254 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1260	CT,NH,NY,ME,NC,VA
Aroclor-1260 [2C]	CT,NH,NY,ME,NC,VA
Aroclor-1262	NY,NC,VA
Aroclor-1262 [2C]	NY,NC,VA
Aroclor-1268	NY,NC,VA
Aroclor-1268 [2C]	NY,NC,VA
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
tert-Butyl Alcohol (TBA)	NY
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA

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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 8260C in Soil	
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
1,2-Dibromo-3-chloropropane (DBCP)	NY
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
trans-1,4-Dichloro-2-butene	NY
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
1,4-Dioxane	NY
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl Acetate	NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methyl Cyclohexane	NY
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA

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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 8260C in Soil	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 8270D in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA

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 8270D in Water	
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2019

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

19F0630

CHAIN OF CUSTODY RECORD

MEK

Company Name: Sampson & Sampson
Address: 55 Walkers Brook Dr, Ste 100, Reading, MA
Phone: 1-800-Sampson
Project Name: 615 Broadway, Kingston Brownfields
Project Location: 615 Broadway, Kingston, NY
Project Number: N2180061
Project Manager: Steve Shaw
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: JKM

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date: 5-day TAT

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 #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	VOCs 8260	VOCs 8260	SVOCs 8270	RCRA 8 metals 6010/7470	PCBs 8082						# of Containers
								1	2	1	1	1						[2] Preservation Code
								V	V	A	A	A						[3] Container Code
1	SB-2 (0-2')	6/11/19	0805		✓	S	U	X	X	X	X	X						
2	SB-2 (16-18')	6/11/19	0815		✓	S	U	X	X	X	X	X						
3	SB-3 (0-2')	6/11/19	0850		✓	S	U	X	X	X	X	X						
4	SB-3 (16-18')	6/11/19	0905		✓	S	U	X	X	X	X	X						
5	SB-4 (0-2')	6/11/19	1030		✓	S	U	X	X	X	X							
6	SB-4 (18-20')	6/11/19	1105		✓	S	U	X	X	X	X							
7	SB-5 (0-2')	6/11/19	1240		✓	S	U	X	X	X	X	X						
8	SB-5 (17-19')	6/11/19	1300		✓	S	U	X	X	X	X	X						
9	SB-1 (0-2')	6/10/19	1450		✓	S	U	X	X	X								
10	SB-1 (17.5-19.5')	6/10/19	1520		✓	S	U	X	X	X								

ANALYSIS REQUESTED

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 email results to: murphy@waseinc.com
shaws@waseinc.com
** Please report to MDL for all compounds

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: 6/12/19 10:35 Am	**Detection Limit Requirements**	**Special Requirements**
Received by: (signature)	Date/Time: 6-12-19 10:35 Am	MA	☐ MA MCP Required
Relinquished by: (signature)	Date/Time: 6-12-19 12:05 Pm		MCP Certification Form Required
Received by: (signature)	Date/Time: 6-12-19 18:05		☐ CT RCP Required
Relinquished by: (signature)	Date/Time: 6-12-19 17:30	CT	RCP Certification Form Required
Received by: (signature)	Date/Time: 6/12/19 17:30		☐ MA State DW Required
		Other:	PWSID #

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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

Table of Contents

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

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http://www.contestlabs.com

Doc # 381 Rev 1_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

MEK

Company Name: Weston & Sampson
Address: 55 Walkers Brook Dr, Ste 100, Reading, MA
Phone: 1-800-Sampson
Project Name: ~~615~~ Kingston Brownfields
Project Location: 615 Broadway, Kingston, NY
Project Number: N2180061
Project Manager: Steve Shaw
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: JKM

Required Turnaround Time
7-Day ☐ 10-Day ☐
Due Date: 5-day TAT

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 #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	VOCs 8260	VOCs 8260	SVOCs 8270	RCRA8 metals 6010/7470	PCBs 8082	# of Containers	[2] Preservation Code	[3] Container Code
								1	2	1	1	1			
								M	B	I	I	I			
								V	V	A	A	A			
11	SB-6 (0-2')	6/11/19	1440		X	S	U	X	X	X	X				
12	SB-6 (16-18')	6/11/19	1500		↓	↓	↓	X	X	X	X				
13	SB-7 (0-2')	6/12/19	0740					X	X	X	X				
14	SB-7 (18-20')	6/12/19	0815					X	X	X	X				
15	SB-8 (0-2')	6/12/19	0855					X	X	X	X				
16	SB-8C	6/12/19	0905					X	X	X	X				
17	SB-DUP	6/11/19			↓	↓	↓	X	X	X	X	X			

ANALYSIS REQUESTED

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

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GW = Ground Water
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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 report to MDL for all compounds

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:
1		6/12/19 10:31		
2				6-12-19 10:35
3		6-12-19 12:05		
4		6/12/19 12:05		
5		6-12-19 17:30		
6	2.6	6/12/19 17:30		

Detection Limit Requirements
MA
Other

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

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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

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client WFS

Received By up Date 6/12/19 Time 17:30

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct from Sampling _____ Ambient _____ Melted Ice _____

By Gun # 1 Actual Temp - 2.6

Were samples within Temperature? 2-6°C T By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	17
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-	17	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-	34	Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

SB-6 containers labeled as SB-5, matched by times

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July 3, 2019

Steve Shaw
Weston & Sampson - Waterbury, VT
98 South Main Street
Waterbury, VT 05676

Project Location: 615 Broadway, Kingston, NY
Client Job Number:
Project Number: N2180061
Laboratory Work Order Number: 19F1500

Enclosed are results of analyses for samples received by the laboratory on June 27, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

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

Weston & Sampson - Waterbury, VT
98 South Main Street
Waterbury, VT 05676
ATTN: Steve Shaw

REPORT DATE: 7/3/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: N2180061

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19F1500

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

PROJECT LOCATION: 615 Broadway, Kingston, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SB-1 (0-2)	19F1500-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
SB-1 (17.5-19.5)	19F1500-02	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	

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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 the Con-Test 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.



Tod E. Kopyscinski
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F1500

Date Received: 6/27/2019

Field Sample #: SB-1 (0-2) Sampled: 6/10/2019 14:50

Sample ID: 19F1500-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	7.8	1.8	0.90	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:39	EJB
Barium	75	1.8	0.88	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:39	EJB
Cadmium	0.89	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:39	EJB
Chromium	16	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:39	EJB
Lead	100	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:39	EJB
Mercury	0.29	0.028	0.0085	mg/Kg dry	1		SW-846 7471B	7/1/19	7/2/19 15:26	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:39	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:39	EJB

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F1500

Date Received: 6/27/2019

Field Sample #: SB-1 (0-2) Sampled: 6/10/2019 14:50

Sample ID: 19F1500-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.7		% Wt	1		SM 2540G	6/28/19	6/28/19 13:17	JDN

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F1500

Date Received: 6/27/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F1500-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.2	1.7	0.86	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:57	MJH
Barium	28	1.7	0.84	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:57	MJH
Cadmium	0.18	0.17	0.10	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:57	MJH
Chromium	8.5	0.34	0.21	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:57	MJH
Lead	6.0	0.51	0.30	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:57	MJH
Mercury	ND	0.026	0.0078	mg/Kg dry	1		SW-846 7471B	7/1/19	7/2/19 15:23	AJL
Selenium	ND	3.4	2.8	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:57	MJH
Silver	ND	0.34	0.20	mg/Kg dry	1		SW-846 6010D	6/27/19	6/28/19 13:57	MJH

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F1500

Date Received: 6/27/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F1500-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.7		% Wt	1		SM 2540G	6/28/19	6/28/19 13:17	JDN

con-test® ANALYTICAL LABORATORY
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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19F1500-01 [SB-1 (0-2)]	B234458	06/28/19
19F1500-02 [SB-1 (17.5-19.5)]	B234458	06/28/19

Prep Method: SW-846 3050B-SW-846 6010D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F1500-01 [SB-1 (0-2)]	B234367	1.55	50.0	06/27/19
19F1500-02 [SB-1 (17.5-19.5)]	B234367	1.54	50.0	06/27/19

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
19F1500-01 [SB-1 (0-2)]	B234567	0.580	50.0	07/01/19
19F1500-02 [SB-1 (17.5-19.5)]	B234567	0.604	50.0	07/01/19

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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 B234367 - SW-846 3050B										
Blank (B234367-BLK1)				Prepared: 06/27/19 Analyzed: 06/28/19						
Arsenic	ND	1.7	mg/Kg wet							
Barium	ND	1.7	mg/Kg wet							
Cadmium	ND	0.17	mg/Kg wet							
Chromium	ND	0.33	mg/Kg wet							
Lead	ND	0.50	mg/Kg wet							
Selenium	ND	3.3	mg/Kg wet							
Silver	ND	0.33	mg/Kg wet							
LCS (B234367-BS1)				Prepared: 06/27/19 Analyzed: 06/28/19						
Arsenic	77.8	4.9	mg/Kg wet	77.2		101	82.4-117.4			
Barium	410	4.9	mg/Kg wet	391		105	82-118			
Cadmium	166	0.49	mg/Kg wet	182		91.4	83.1-117.5			
Chromium	285	0.99	mg/Kg wet	272		105	81.5-118.5			
Lead	258	1.5	mg/Kg wet	241		107	81.8-118.2			
Selenium	219	9.9	mg/Kg wet	216		102	79-121.5			
Silver	79.7	0.99	mg/Kg wet	66.3		120	79.6-120.4			
LCS Dup (B234367-BSD1)				Prepared: 06/27/19 Analyzed: 06/28/19						
Arsenic	75.3	4.7	mg/Kg wet	77.2		97.6	82.4-117.4	3.20	30	
Barium	406	4.7	mg/Kg wet	391		104	82-118	1.08	20	
Cadmium	165	0.47	mg/Kg wet	182		90.6	83.1-117.5	0.952	20	
Chromium	280	0.94	mg/Kg wet	272		103	81.5-118.5	2.11	30	
Lead	252	1.4	mg/Kg wet	241		104	81.8-118.2	2.52	30	
Selenium	210	9.4	mg/Kg wet	216		97.1	79-121.5	4.46	30	
Silver	76.6	0.94	mg/Kg wet	66.3		115	79.6-120.4	3.99	30	
MRL Check (B234367-MRL1)				Prepared: 06/27/19 Analyzed: 06/28/19						
Lead	0.538	0.49	mg/Kg wet	0.494		109	80-120			
Batch B234567 - SW-846 7471										
Blank (B234567-BLK1)				Prepared: 07/01/19 Analyzed: 07/02/19						
Mercury	ND	0.025	mg/Kg wet							
LCS (B234567-BS1)				Prepared: 07/01/19 Analyzed: 07/02/19						
Mercury	20.7	1.9	mg/Kg wet	27.3		75.9	64-136.5			
LCS Dup (B234567-BSD1)				Prepared: 07/01/19 Analyzed: 07/02/19						
Mercury	22.0	1.9	mg/Kg wet	27.3		80.5	64-136.5	5.86	20	
Duplicate (B234567-DUP1)		**Source: 19F1500-02**		Prepared: 07/01/19 Analyzed: 07/02/19						
Mercury	ND	0.026	mg/Kg dry		ND			NC	35	

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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 B234567 - SW-846 7471										
Matrix Spike (B234567-MS1)		**Source: 19F1500-02**		Prepared: 07/01/19 Analyzed: 07/02/19						
Mercury	0.348	0.026	mg/Kg dry	0.342	ND	102	75-125			

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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.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Soil	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2019
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY

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Fax: 413-525-6405
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CHAIN OF CUSTODY RECORD

Doc # 381 Rev 1_03242017

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 2

MAK 6/27/19

19F-0630

MEK

KA1500

Company Name: Weston & Sampson
Address: 55 Walkers Brook Dr, Ste 100, Reading, MA
Phone: 1-800-Sampson
Project Name: 615 Broadway, Kingston Brownfield
Project Location: 615 Broadway, Kingston, NY
Project Number: N7180061
Project Manager: Steve Shaw
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: JKM

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date: 5-day TAT

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 #:

Con-Test Work Order#		Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	VOCs 8260	VOCs 8260	SVOCs 8270	RCRA 8 metals (cadmium to lead)	PCBs 8082	TCLP-8 MetMS							# of Containers
	1	SB-2 (0-2')	6/11/19	0805		✓	S	U	X	X	X	X	X								1
	2	SB-2 (16-18')	6/11/19	0815		✓	S	U	X	X	X	X	X								1
	3	SB-3 (0-2')	6/11/19	0850		✓	S	U	X	X	X	X	X								1
	4	SB-3 (16-18')	6/11/19	0905		✓	S	U	X	X	X	X	X								1
	5	SB-4 (0-2')	6/11/19	1030		✓	S	U	X	X	X	X									1
	6	SB-4 (18-20')	6/11/19	1105		✓	S	U	X	X	X	X									1
	7	SB-5 (0-2')	6/11/19	1240		✓	S	U	X	X	X	X	X								1
	8	SB-5 (17-19')	6/11/19	1300		✓	S	U	X	X	X	X	X								1
-01	9	SB-1 (0-2')	6/10/19	1450		✓	S	U	X	X	X			X							1
-02	10	SB-1 (17.5-19.5')	6/10/19	1520		✓	S	U	X	X	X			X							1

ANALYSIS REQUESTED

																					# of Containers
1	2	1	1	1																	[2] Preservation Code
M	B	I	I	I																	[3] Container Code
V	V	A	A	A																	

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Orthophosphate Samples
○ Field Filtered
○ Lab to Filter

Comments: Please email results to: murphy@wseinc.com
shaws@wseinc.com
** Please report to MDL for all compounds

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

[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)

Relinquished by: (signature)	Date/Time:
	6/12/19 10:35
Received by: (signature)	Date/Time:
	6-12-19 10:35
Relinquished by: (signature)	Date/Time:
	6-12-19 12:05
Received by: (signature)	Date/Time:
Paul Racicot	6-12-19 12:05
Relinquished by: (signature)	Date/Time:
Paul Racicot	6-12-19 17:30
Received by: (signature)	Date/Time:
2.6	6/12/19 17:30

Detection Limit Requirements
MA
GT
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

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

Other
☐ Chromatogram
☐ AIHA-LAP, LLC

PCB ONLY
☒ Soxhlet
☐ Non Soxhlet

Per MCP-5 metals per Chem Suite - MEK 6/27/19

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con-test ANALYTICAL LABORATORY
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Fax: 413-525-6405
Email: info@contestlabs.com

19F0628-p

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

MEK

Company Name: Weston & Sampson
Address: 55 Walkers Brook Dr, Ste 100, Reading, MA
Phone: 1-800-Sampson
Project Name: ~~EPS~~ Kingston Brownfields
Project Location: 615 Broadway, Kingston, NY
Project Number: N2190061
Project Manager: Steve Shaw
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: JKM

Turnaround Time Requested (TAT)
7-Day ☐ 10-Day ☐
Due Date: 5-day TAT

Standard Reporting
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

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	VOCs 8260	VOCs 8260	SVOCs 8270	RCRA8 metals 6010/7471	PCBs 8082
11	SB-#6 (0-2')	6/11/19	1440		X	S	U	X	X	X	X	
12	SB-6 (16-18')	6/11/19	1500					X	X	X	X	
13	SB-7 (0-2')	6/12/19	0740					X	X	X	X	
14	SB-7 (18-20')	6/12/19	0815					X	X	X	X	
15	SB-8 (0-2')	6/12/19	0855					X	X	X	X	
16	SB-BC	6/12/19	0905					X	X	X	X	
17	SB-DUP	6/11/19						X	X	X	X	X

1	M	V
2	B	V
1	I	A
1	I	A
1	I	A

[1] Matrix Codes
[2] Preservation Codes
[3] Container Codes

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Total Phosphorus 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 report to MDL for all compounds

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:
	6/12/19 10:37
Received by: (signature)	Date/Time:
	6-12-19 10:75
Relinquished by: (signature)	Date/Time:
	6-12-19 12:05
Received by: (signature)	Date/Time:
Paul Parent	6/12/19 12:05
Relinquished by: (signature)	Date/Time:
Paul Parent	6-12-19 17:30
Received by: (signature)	Date/Time:
	6/12/19 17:30

Special Requirements
☐ MA MCP Required
☐ MCP Certification Form Required
☐ CT RCP Required
☐ RCP Certification Form Required
☐ MA State DW Required
PWSID #

con-test ANALYTICAL LABORATORY
www.contestlabs.com
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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I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client WTS

Received By MP Date 6/12/19 Time 17:30

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct from Sampling _____ Ambient _____ Melted Ice _____

By Gun # 1 Actual Temp - 2.6

Were samples within Temperature? 2-6°C T By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? N/A MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? F On COC? F

Do all samples have the proper pH? N/A Acid _____ Base _____

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	17
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-	17	250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-	34	Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

SB-6 containers labeled as SB-5, matched by times

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

June 28, 2019

Steve Shaw
Weston & Sampson - Waterbury, VT
98 South Main Street
Waterbury, VT 05676

Project Location: 615 Broadway
Client Job Number:
Project Number: N2180061
Laboratory Work Order Number: 19F1123

Enclosed are results of analyses for samples received by the laboratory on June 20, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

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con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Weston & Sampson - Waterbury, VT
98 South Main Street
Waterbury, VT 05676
ATTN: Steve Shaw

REPORT DATE: 6/28/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: N2180061

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19F1123

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

PROJECT LOCATION: 615 Broadway

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	19F1123-01	Ground Water		SW-846 6020B	
				SW-846 7470A	
				SW-846 8260C	
				SW-846 8270D	
MW-2	19F1123-02	Ground Water		SW-846 6020B	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
MW-3	19F1123-03	Ground Water		SW-846 6020B	
				SW-846 7470A	
				SW-846 8260C	
				SW-846 8270D	
MW-4	19F1123-04	Ground Water		SW-846 6020B	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
MW-5	19F1123-05	Ground Water		SW-846 6020B	
				SW-846 7470A	
				SW-846 8260C	
				SW-846 8270D	
MW-6	19F1123-06	Ground Water		SW-846 6020B	
				SW-846 7470A	
				SW-846 8260C	
				SW-846 8270D	
DUP	19F1123-07	Ground Water		SW-846 6020B	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	
Trip Blank	19F1123-08	Trip Blank Water		SW-846 8260C	

con-test® ANALYTICAL LABORATORY
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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.

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 6020B

Qualifications:

B

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

Analyte & Samples(s) Qualified:

Chromium
19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B234110-BLK1, B234110-DUP1

SW-846 8260C

Qualifications:

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:

Bromomethane
B233900-BS1, B233900-BSD1, S037370-CCV1

Chloromethane
B233900-BS1, B233900-BSD1, S037370-CCV1

SW-846 8270D

Qualifications:

L-04

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

Analyte & Samples(s) Qualified:

Hexachlorocyclopentadiene
19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1, B233869-BS1, B233869-BSD1

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:

Benzidine
19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1, B233869-BS1, B233869-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:

Benzidine
19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1, B233869-BS1, B233869-BSD1, S037414-CCV1, S037429-CCV1

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:

Benzidine
19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], S037429-CCV1

Hexachlorocyclopentadiene
19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1, B233869-BS1, B233869-BSD1, S037414-CCV1, S037429-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:

4-Nitrophenol
B233869-BS1, B233869-BSD1, S037414-CCV1, S037429-CCV1

N-Nitrosodimethylamine
B233869-BS1, B233869-BSD1, S037414-CCV1, S037429-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:

4-Nitrophenol

19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1

N-Nitrosodimethylamine

19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1

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:

4-Chloroaniline

19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1, B233869-BS1, B233869-BSD1, S037414-CCV1, S037429-CCV1

Aniline

19F1123-01[MW-1], 19F1123-02[MW-2], 19F1123-03[MW-3], 19F1123-04[MW-4], 19F1123-05[MW-5], 19F1123-06[MW-6], 19F1123-07[DUP], B233869-BLK1, B233869-BS1, B233869-BSD1, S037414-CCV1, S037429-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test 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® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-1 | Sampled: 6/19/2019 13:40

Sample ID: 19F1123-01

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-1 | Sampled: 6/19/2019 13:40

Sample ID: 19F1123-01

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Tetrachloroethylene	0.60	1.0	0.18	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/21/19 15:19
Toluene-d8	97.6	70-130		6/21/19 15:19
4-Bromofluorobenzene	96.2	70-130		6/21/19 15:19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-1 | Sampled: 6/19/2019 13:40

Sample ID: 19F1123-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Acenaphthylene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Acetophenone	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Aniline	ND	4.7	3.5	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Anthracene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzidine	ND	19	11	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(a)anthracene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(a)pyrene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(b)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(g,h,i)perylene	ND	4.7	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(k)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzoic Acid	ND	9.5	8.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-chloroethoxy)methane	ND	9.5	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-chloroethyl)ether	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-chloroisopropyl)ether	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Bromophenylphenylether	ND	9.5	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Butylbenzylphthalate	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Carbazole	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Chloroaniline	ND	9.5	2.1	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Chloro-3-methylphenol	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Chloronaphthalene	ND	9.5	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Chlorophenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Chlorophenylphenylether	ND	9.5	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Chrysene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Dibenz(a,h)anthracene	ND	4.7	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Dibenzofuran	ND	4.7	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Di-n-butylphthalate	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2-Dichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,3-Dichlorobenzene	ND	4.7	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,4-Dichlorobenzene	ND	4.7	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
3,3-Dichlorobenzidine	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dichlorophenol	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Diethylphthalate	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dimethylphenol	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Dimethylphthalate	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4,6-Dinitro-2-methylphenol	ND	9.5	7.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dinitrophenol	ND	9.5	7.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dinitrotoluene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,6-Dinitrotoluene	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Di-n-octylphthalate	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	9.5	5.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Fluoranthene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Fluorene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-1 | Sampled: 6/19/2019 13:40

Sample ID: 19F1123-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Hexachlorobutadiene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Hexachlorocyclopentadiene	ND	9.5	7.7	µg/L	1	L-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Hexachloroethane	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Indeno(1,2,3-cd)pyrene	ND	4.7	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Isophorone	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1-Methylnaphthalene	ND	4.7	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Methylnaphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
3/4-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Naphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Nitroaniline	ND	9.5	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
3-Nitroaniline	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Nitroaniline	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Nitrobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Nitrophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Nitrophenol	ND	9.5	3.6	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
N-Nitrosodimethylamine	ND	9.5	3.0	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.5	5.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
N-Nitrosodi-n-propylamine	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pentachloronitrobenzene	ND	9.5	4.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pentachlorophenol	ND	9.5	7.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Phenanthrene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Phenol	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pyrene	ND	4.7	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pyridine	ND	4.7	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2,4-Trichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4,5-Trichlorophenol	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4,6-Trichlorophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	38.9	15-110		6/25/19 15:08
Phenol-d6	29.0	15-110		6/25/19 15:08
Nitrobenzene-d5	69.7	30-130		6/25/19 15:08
2-Fluorobiphenyl	73.6	30-130		6/25/19 15:08
2,4,6-Tribromophenol	66.4	15-110		6/25/19 15:08
p-Terphenyl-d14	72.7	30-130		6/25/19 15:08

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-1 | Sampled: 6/19/2019 13:40

Sample ID: 19F1123-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Barium	66	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Cadmium	0.049	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Chromium	1.1	1.0	0.24	µg/L	1	B	SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Lead	0.49	0.50	0.085	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:30	AJL
Selenium	20	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-2 | Sampled: 6/20/2019 09:15

Sample ID: 19F1123-02

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-2 | Sampled: 6/20/2019 09:15

Sample ID: 19F1123-02

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Tetrachloroethylene	7.3	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Trichloroethylene	21	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/21/19 15:45
Toluene-d8	97.7	70-130		6/21/19 15:45
4-Bromofluorobenzene	93.4	70-130		6/21/19 15:45

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-2 | Sampled: 6/20/2019 09:15

Sample ID: 19F1123-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Acenaphthylene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Acetophenone	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Aniline	ND	5.1	3.8	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Anthracene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzidine	ND	20	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(a)anthracene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(a)pyrene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(b)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(g,h,i)perylene	ND	5.1	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(k)fluoranthene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzoic Acid	ND	10	9.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Butylbenzylphthalate	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Chloronaphthalene	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Chlorophenylphenylether	ND	10	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Chrysene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Dibenz(a,h)anthracene	ND	5.1	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Dibenzofuran	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,3-Dichlorobenzene	ND	5.1	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,4-Dichlorobenzene	ND	5.1	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
3,3-Dichlorobenzidine	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Diethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dimethylphenol	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dinitrophenol	ND	10	7.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,6-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Di-n-octylphthalate	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Fluoranthene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Fluorene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-2 | Sampled: 6/20/2019 09:15

Sample ID: 19F1123-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Hexachlorocyclopentadiene	ND	10	8.3	µg/L	1	L-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Hexachloroethane	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Indeno(1,2,3-cd)pyrene	ND	5.1	3.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Isophorone	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1-Methylnaphthalene	ND	5.1	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Methylnaphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Naphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Nitroaniline	ND	10	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
3-Nitroaniline	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Nitrophenol	ND	10	3.8	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
N-Nitrosodimethylamine	ND	10	3.2	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
N-Nitrosodi-n-propylamine	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pentachloronitrobenzene	ND	10	5.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pentachlorophenol	ND	10	8.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Phenanthrene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Phenol	ND	10	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pyrene	ND	5.1	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pyridine	ND	5.1	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2,4-Trichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4,5-Trichlorophenol	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4,6-Trichlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	42.5	15-110		6/25/19 15:33
Phenol-d6	32.5	15-110		6/25/19 15:33
Nitrobenzene-d5	73.2	30-130		6/25/19 15:33
2-Fluorobiphenyl	74.2	30-130		6/25/19 15:33
2,4,6-Tribromophenol	65.8	15-110		6/25/19 15:33
p-Terphenyl-d14	75.3	30-130		6/25/19 15:33

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-2 | Sampled: 6/20/2019 09:15

Sample ID: 19F1123-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.31	0.28	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1221 [1]	ND	0.31	0.25	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1232 [1]	ND	0.31	0.31	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1242 [1]	ND	0.31	0.27	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1248 [1]	ND	0.31	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1254 [1]	ND	0.31	0.16	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1260 [1]	ND	0.31	0.30	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1262 [1]	ND	0.31	0.21	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1268 [1]	ND	0.31	0.19	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.0	30-150		6/25/19 10:19
Decachlorobiphenyl [2]	81.4	30-150		6/25/19 10:19
Tetrachloro-m-xylene [1]	65.5	30-150		6/25/19 10:19
Tetrachloro-m-xylene [2]	72.4	30-150		6/25/19 10:19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-2 | Sampled: 6/20/2019 09:15

Sample ID: 19F1123-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Barium	17	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Cadmium	ND	0.20	0.038	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Chromium	1.0	1.0	0.24	µg/L	1	B	SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Lead	ND	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:32	AJL
Selenium	4.4	5.0	1.6	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-3 | Sampled: 6/20/2019 09:10

Sample ID: 19F1123-03

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-3 | Sampled: 6/20/2019 09:10

Sample ID: 19F1123-03

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Trichloroethylene	1.0	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/21/19 16:11
Toluene-d8	97.6	70-130		6/21/19 16:11
4-Bromofluorobenzene	97.5	70-130		6/21/19 16:11

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-3 | Sampled: 6/20/2019 09:10

Sample ID: 19F1123-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Acenaphthylene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Acetophenone	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Aniline	ND	4.7	3.5	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Anthracene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzidine	ND	19	11	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(a)anthracene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(a)pyrene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(b)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(g,h,i)perylene	ND	4.7	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(k)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzoic Acid	ND	9.5	8.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-chloroethoxy)methane	ND	9.5	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-chloroethyl)ether	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-chloroisopropyl)ether	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Bromophenylphenylether	ND	9.5	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Butylbenzylphthalate	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Carbazole	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Chloroaniline	ND	9.5	2.1	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Chloro-3-methylphenol	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Chloronaphthalene	ND	9.5	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Chlorophenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Chlorophenylphenylether	ND	9.5	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Chrysene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Dibenz(a,h)anthracene	ND	4.7	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Dibenzofuran	ND	4.7	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Di-n-butylphthalate	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2-Dichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,3-Dichlorobenzene	ND	4.7	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,4-Dichlorobenzene	ND	4.7	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
3,3-Dichlorobenzidine	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dichlorophenol	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Diethylphthalate	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dimethylphenol	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Dimethylphthalate	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4,6-Dinitro-2-methylphenol	ND	9.5	7.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dinitrophenol	ND	9.5	7.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dinitrotoluene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,6-Dinitrotoluene	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Di-n-octylphthalate	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	9.5	5.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Fluoranthene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Fluorene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-3 | Sampled: 6/20/2019 09:10

Sample ID: 19F1123-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Hexachlorobutadiene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Hexachlorocyclopentadiene	ND	9.5	7.7	µg/L	1	L-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Hexachloroethane	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Indeno(1,2,3-cd)pyrene	ND	4.7	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Isophorone	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1-Methylnaphthalene	ND	4.7	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Methylnaphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
3/4-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Naphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Nitroaniline	ND	9.5	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
3-Nitroaniline	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Nitroaniline	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Nitrobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Nitrophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Nitrophenol	ND	9.5	3.6	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
N-Nitrosodimethylamine	ND	9.5	3.0	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.5	5.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
N-Nitrosodi-n-propylamine	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pentachloronitrobenzene	ND	9.5	4.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pentachlorophenol	ND	9.5	7.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Phenanthrene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Phenol	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pyrene	ND	4.7	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pyridine	ND	4.7	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2,4-Trichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4,5-Trichlorophenol	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4,6-Trichlorophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	40.1	15-110		6/25/19 15:58
Phenol-d6	28.4	15-110		6/25/19 15:58
Nitrobenzene-d5	72.5	30-130		6/25/19 15:58
2-Fluorobiphenyl	74.8	30-130		6/25/19 15:58
2,4,6-Tribromophenol	67.7	15-110		6/25/19 15:58
p-Terphenyl-d14	74.6	30-130		6/25/19 15:58

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

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-3 | Sampled: 6/20/2019 09:10

Sample ID: 19F1123-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.73	0.80	0.64	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Barium	32	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Cadmium	0.067	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Chromium	2.1	1.0	0.24	µg/L	1	B	SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Lead	0.99	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:34	AJL
Selenium	9.1	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH

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

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4 | Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH

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

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4 | Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Tetrachloroethylene	0.80	1.0	0.18	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Trichloroethylene	1.7	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 16:38
Toluene-d8	98.6	70-130		6/21/19 16:38
4-Bromofluorobenzene	98.1	70-130		6/21/19 16:38

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4 | Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Acenaphthylene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Acetophenone	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Aniline	ND	5.1	3.8	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Anthracene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzidine	ND	20	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(a)anthracene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(a)pyrene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(b)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(g,h,i)perylene	ND	5.1	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(k)fluoranthene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzoic Acid	ND	10	9.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Butylbenzylphthalate	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Chloronaphthalene	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Chlorophenylphenylether	ND	10	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Chrysene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Dibenz(a,h)anthracene	ND	5.1	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Dibenzofuran	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,3-Dichlorobenzene	ND	5.1	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,4-Dichlorobenzene	ND	5.1	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
3,3-Dichlorobenzidine	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Diethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dimethylphenol	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dinitrophenol	ND	10	7.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,6-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Di-n-octylphthalate	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Fluoranthene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Fluorene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4 | Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Hexachlorocyclopentadiene	ND	10	8.3	µg/L	1	L-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Hexachloroethane	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Indeno(1,2,3-cd)pyrene	ND	5.1	3.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Isophorone	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1-Methylnaphthalene	ND	5.1	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Methylnaphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Naphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Nitroaniline	ND	10	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
3-Nitroaniline	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Nitrophenol	ND	10	3.8	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
N-Nitrosodimethylamine	ND	10	3.2	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
N-Nitrosodi-n-propylamine	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pentachloronitrobenzene	ND	10	5.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pentachlorophenol	ND	10	8.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Phenanthrene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Phenol	ND	10	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pyrene	ND	5.1	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pyridine	ND	5.1	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2,4-Trichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4,5-Trichlorophenol	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4,6-Trichlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	39.0	15-110		6/25/19 17:01
Phenol-d6	28.5	15-110		6/25/19 17:01
Nitrobenzene-d5	69.8	30-130		6/25/19 17:01
2-Fluorobiphenyl	72.8	30-130		6/25/19 17:01
2,4,6-Tribromophenol	66.0	15-110		6/25/19 17:01
p-Terphenyl-d14	71.1	30-130		6/25/19 17:01

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4 | Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.30	0.27	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1221 [1]	ND	0.30	0.24	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1232 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1242 [1]	ND	0.30	0.26	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1248 [1]	ND	0.30	0.28	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1254 [1]	ND	0.30	0.16	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1260 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1262 [1]	ND	0.30	0.20	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1268 [1]	ND	0.30	0.19	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.4	30-150		6/25/19 10:32
Decachlorobiphenyl [2]	89.6	30-150		6/25/19 10:32
Tetrachloro-m-xylene [1]	73.9	30-150		6/25/19 10:32
Tetrachloro-m-xylene [2]	81.0	30-150		6/25/19 10:32

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4
Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Barium	33	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Cadmium	0.22	0.20	0.038	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Chromium	0.69	1.0	0.24	µg/L	1	B, J	SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Lead	0.31	0.50	0.085	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:35	AJL
Selenium	14	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-5 | Sampled: 6/18/2019 14:50

Sample ID: 19F1123-05

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chloroform	0.33	2.0	0.17	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-5 | Sampled: 6/18/2019 14:50

Sample ID: 19F1123-05

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Tetrachloroethylene	12	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Trichloroethylene	0.83	1.0	0.24	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 17:04
Toluene-d8	98.6	70-130		6/21/19 17:04
4-Bromofluorobenzene	97.4	70-130		6/21/19 17:04

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-5 | Sampled: 6/18/2019 14:50

Sample ID: 19F1123-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Acenaphthylene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Acetophenone	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Aniline	ND	4.7	3.5	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Anthracene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzidine	ND	19	11	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(a)anthracene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(a)pyrene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(b)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(g,h,i)perylene	ND	4.7	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(k)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzoic Acid	ND	9.5	8.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-chloroethoxy)methane	ND	9.5	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-chloroethyl)ether	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-chloroisopropyl)ether	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Bromophenylphenylether	ND	9.5	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Butylbenzylphthalate	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Carbazole	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Chloroaniline	ND	9.5	2.1	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Chloro-3-methylphenol	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Chloronaphthalene	ND	9.5	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Chlorophenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Chlorophenylphenylether	ND	9.5	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Chrysene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Dibenz(a,h)anthracene	ND	4.7	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Dibenzofuran	ND	4.7	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Di-n-butylphthalate	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2-Dichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,3-Dichlorobenzene	ND	4.7	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,4-Dichlorobenzene	ND	4.7	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
3,3-Dichlorobenzidine	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dichlorophenol	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Diethylphthalate	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dimethylphenol	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Dimethylphthalate	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4,6-Dinitro-2-methylphenol	ND	9.5	7.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dinitrophenol	ND	9.5	7.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dinitrotoluene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,6-Dinitrotoluene	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Di-n-octylphthalate	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	9.5	5.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Fluoranthene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Fluorene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-5 | Sampled: 6/18/2019 14:50

Sample ID: 19F1123-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Hexachlorobutadiene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Hexachlorocyclopentadiene	ND	9.5	7.7	µg/L	1	L-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Hexachloroethane	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Indeno(1,2,3-cd)pyrene	ND	4.7	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Isophorone	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1-Methylnaphthalene	ND	4.7	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Methylnaphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
3/4-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Naphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Nitroaniline	ND	9.5	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
3-Nitroaniline	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Nitroaniline	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Nitrobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Nitrophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Nitrophenol	ND	9.5	3.6	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
N-Nitrosodimethylamine	ND	9.5	3.0	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.5	5.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
N-Nitrosodi-n-propylamine	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pentachloronitrobenzene	ND	9.5	4.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pentachlorophenol	ND	9.5	7.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Phenanthrene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Phenol	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pyrene	ND	4.7	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pyridine	ND	4.7	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2,4-Trichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4,5-Trichlorophenol	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4,6-Trichlorophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	35.9	15-110		6/25/19 17:26
Phenol-d6	25.6	15-110		6/25/19 17:26
Nitrobenzene-d5	60.6	30-130		6/25/19 17:26
2-Fluorobiphenyl	64.9	30-130		6/25/19 17:26
2,4,6-Tribromophenol	59.8	15-110		6/25/19 17:26
p-Terphenyl-d14	69.7	30-130		6/25/19 17:26

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-5 | Sampled: 6/18/2019 14:50

Sample ID: 19F1123-05

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.74	0.80	0.64	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Barium	81	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Cadmium	0.060	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Chromium	0.89	1.0	0.24	µg/L	1	B, J	SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Lead	0.87	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:37	AJL
Selenium	6.6	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH

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

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Tetrachloroethylene	14	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Trichloroethylene	12	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	104	70-130		6/21/19 17:31
Toluene-d8	98.3	70-130		6/21/19 17:31
4-Bromofluorobenzene	97.7	70-130		6/21/19 17:31

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Acenaphthylene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Acetophenone	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Aniline	ND	5.1	3.8	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Anthracene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzidine	ND	21	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(a)anthracene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(a)pyrene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(b)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(g,h,i)perylene	ND	5.1	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(k)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzoic Acid	ND	10	9.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Butylbenzylphthalate	ND	10	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Chloronaphthalene	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Chlorophenylphenylether	ND	10	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Chrysene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Dibenz(a,h)anthracene	ND	5.1	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Dibenzofuran	ND	5.1	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,3-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,4-Dichlorobenzene	ND	5.1	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
3,3-Dichlorobenzidine	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Diethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dimethylphenol	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dinitrophenol	ND	10	8.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,6-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Di-n-octylphthalate	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Fluoranthene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Fluorene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Hexachlorocyclopentadiene	ND	10	8.4	µg/L	1	L-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Hexachloroethane	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Indeno(1,2,3-cd)pyrene	ND	5.1	3.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Isophorone	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1-Methylnaphthalene	ND	5.1	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Methylnaphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Methylphenol	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Naphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Nitroaniline	ND	10	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
3-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Nitrophenol	ND	10	3.9	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
N-Nitrosodimethylamine	ND	10	3.3	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
N-Nitrosodi-n-propylamine	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pentachloronitrobenzene	ND	10	5.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pentachlorophenol	ND	10	8.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Phenanthrene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Phenol	ND	10	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pyrene	ND	5.1	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pyridine	ND	5.1	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2,4-Trichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4,5-Trichlorophenol	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4,6-Trichlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	39.5	15-110		6/25/19 17:52
Phenol-d6	29.5	15-110		6/25/19 17:52
Nitrobenzene-d5	66.9	30-130		6/25/19 17:52
2-Fluorobiphenyl	69.1	30-130		6/25/19 17:52
2,4,6-Tribromophenol	62.3	15-110		6/25/19 17:52
p-Terphenyl-d14	71.9	30-130		6/25/19 17:52

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Barium	59	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Cadmium	0.092	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Chromium	0.96	1.0	0.24	µg/L	1	B, J	SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Lead	0.98	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:38	AJL
Selenium	2.3	5.0	1.6	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Tetrachloroethylene	0.69	1.0	0.18	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Trichloroethylene	1.5	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 17:57
Toluene-d8	97.2	70-130		6/21/19 17:57
4-Bromofluorobenzene	97.0	70-130		6/21/19 17:57

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Acenaphthylene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Acetophenone	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Aniline	ND	5.0	3.7	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Anthracene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzidine	ND	20	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(a)anthracene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(a)pyrene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(b)fluoranthene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(g,h,i)perylene	ND	5.0	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(k)fluoranthene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzoic Acid	ND	10	8.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Butylbenzylphthalate	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Chloronaphthalene	ND	10	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Chlorophenylphenylether	ND	10	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Chrysene	ND	5.0	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Dibenz(a,h)anthracene	ND	5.0	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Dibenzofuran	ND	5.0	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2-Dichlorobenzene	ND	5.0	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,3-Dichlorobenzene	ND	5.0	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,4-Dichlorobenzene	ND	5.0	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
3,3-Dichlorobenzidine	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Diethylphthalate	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dimethylphenol	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dinitrophenol	ND	10	7.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,6-Dinitrotoluene	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Di-n-octylphthalate	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Fluoranthene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Fluorene	ND	5.0	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Hexachlorocyclopentadiene	ND	10	8.2	µg/L	1	L-04, V-05	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Hexachloroethane	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Indeno(1,2,3-cd)pyrene	ND	5.0	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Isophorone	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1-Methylnaphthalene	ND	5.0	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Methylnaphthalene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Naphthalene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Nitroaniline	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
3-Nitroaniline	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Nitrophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Nitrophenol	ND	10	3.8	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
N-Nitrosodimethylamine	ND	10	3.2	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
N-Nitrosodi-n-propylamine	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pentachloronitrobenzene	ND	10	5.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pentachlorophenol	ND	10	8.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Phenanthrene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Phenol	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pyrene	ND	5.0	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pyridine	ND	5.0	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2,4-Trichlorobenzene	ND	5.0	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4,5-Trichlorophenol	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4,6-Trichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	39.0	15-110		6/25/19 18:18
Phenol-d6	28.9	15-110		6/25/19 18:18
Nitrobenzene-d5	68.6	30-130		6/25/19 18:18
2-Fluorobiphenyl	70.5	30-130		6/25/19 18:18
2,4,6-Tribromophenol	63.2	15-110		6/25/19 18:18
p-Terphenyl-d14	72.9	30-130		6/25/19 18:18

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.30	0.27	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1221 [1]	ND	0.30	0.24	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1232 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1242 [1]	ND	0.30	0.26	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1248 [1]	ND	0.30	0.28	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1254 [1]	ND	0.30	0.16	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1260 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1262 [1]	ND	0.30	0.20	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1268 [1]	ND	0.30	0.19	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.4	30-150		6/25/19 10:45
Decachlorobiphenyl [2]	86.9	30-150		6/25/19 10:45
Tetrachloro-m-xylene [1]	73.9	30-150		6/25/19 10:45
Tetrachloro-m-xylene [2]	80.4	30-150		6/25/19 10:45

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Barium	35	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Cadmium	0.25	0.20	0.038	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Chromium	0.91	1.0	0.24	µg/L	1	B, J	SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Lead	0.35	0.50	0.085	µg/L	1	J	SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:44	AJL
Selenium	15	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: Trip Blank | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-08

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH

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Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: Trip Blank | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-08

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 12:14
Toluene-d8	97.5	70-130		6/21/19 12:14
4-Bromofluorobenzene	101	70-130		6/21/19 12:14

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Sample Extraction Data

Prep Method: SW-846 3005A-SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F1123-01 [MW-1]	B234110	50.0	50.0	06/25/19
19F1123-02 [MW-2]	B234110	50.0	50.0	06/25/19
19F1123-03 [MW-3]	B234110	50.0	50.0	06/25/19
19F1123-04 [MW-4]	B234110	50.0	50.0	06/25/19
19F1123-05 [MW-5]	B234110	50.0	50.0	06/25/19
19F1123-06 [MW-6]	B234110	50.0	50.0	06/25/19
19F1123-07 [DUP]	B234110	50.0	50.0	06/25/19

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F1123-01 [MW-1]	B234222	6.00	6.00	06/26/19
19F1123-02 [MW-2]	B234222	6.00	6.00	06/26/19
19F1123-03 [MW-3]	B234222	6.00	6.00	06/26/19
19F1123-04 [MW-4]	B234222	6.00	6.00	06/26/19
19F1123-05 [MW-5]	B234222	6.00	6.00	06/26/19
19F1123-06 [MW-6]	B234222	6.00	6.00	06/26/19
19F1123-07 [DUP]	B234222	6.00	6.00	06/26/19

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F1123-02 [MW-2]	B233911	130	2.00	06/21/19
19F1123-04 [MW-4]	B233911	135	2.00	06/21/19
19F1123-07 [DUP]	B233911	135	2.00	06/21/19

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F1123-01 [MW-1]	B233900	5	5.00	06/21/19
19F1123-02 [MW-2]	B233900	5	5.00	06/21/19
19F1123-03 [MW-3]	B233900	5	5.00	06/21/19
19F1123-04 [MW-4]	B233900	5	5.00	06/21/19
19F1123-05 [MW-5]	B233900	5	5.00	06/21/19
19F1123-06 [MW-6]	B233900	5	5.00	06/21/19
19F1123-07 [DUP]	B233900	5	5.00	06/21/19
19F1123-08 [Trip Blank]	B233900	5	5.00	06/21/19

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19F1123-01 [MW-1]	B233869	1060	1.00	06/21/19
19F1123-02 [MW-2]	B233869	985	1.00	06/21/19
19F1123-03 [MW-3]	B233869	1060	1.00	06/21/19
19F1123-04 [MW-4]	B233869	985	1.00	06/21/19
19F1123-05 [MW-5]	B233869	1060	1.00	06/21/19
19F1123-06 [MW-6]	B233869	975	1.00	06/21/19
19F1123-07 [DUP]	B233869	1000	1.00	06/21/19

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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 B233900 - SW-846 5030B										
Blank (B233900-BLK1)				Prepared & Analyzed: 06/21/19						
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							
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							
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 B233900 - SW-846 5030B											
Blank (B233900-BLK1)				Prepared & Analyzed: 06/21/19							
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	*25.5*		µg/L	25.0		102	70-130				
Surrogate: Toluene-d8	*24.4*		µg/L	25.0		97.5	70-130				
Surrogate: 4-Bromofluorobenzene	*24.8*		µg/L	25.0		99.1	70-130				
LCS (B233900-BS1)				Prepared & Analyzed: 06/21/19							
Acetone	103	50	µg/L	100		103	70-160				†
Acrylonitrile	9.81	5.0	µg/L	10.0		98.1	70-130				
tert-Amyl Methyl Ether (TAME)	10.0	0.50	µg/L	10.0		100	70-130				
Benzene	10.4	1.0	µg/L	10.0		104	70-130				
Bromobenzene	10.8	1.0	µg/L	10.0		108	70-130				
Bromochloromethane	11.0	1.0	µg/L	10.0		110	70-130				
Bromodichloromethane	11.2	0.50	µg/L	10.0		112	70-130				
Bromoform	11.6	1.0	µg/L	10.0		116	70-130				
Bromomethane	6.84	2.0	µg/L	10.0		68.4	40-160			V-20	†
2-Butanone (MEK)	100	20	µg/L	100		100	40-160				†
tert-Butyl Alcohol (TBA)	102	20	µg/L	100		102	40-160				†
n-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130				
sec-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130				
tert-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130				
tert-Butyl Ethyl Ether (TBEE)	9.43	0.50	µg/L	10.0		94.3	70-130				
Carbon Disulfide	12.0	5.0	µg/L	10.0		120	70-130				
Carbon Tetrachloride	10.1	5.0	µg/L	10.0		101	70-130				
Chlorobenzene	11.4	1.0	µg/L	10.0		114	70-130				
Chlorodibromomethane	11.1	0.50	µg/L	10.0		111	70-130				
Chloroethane	11.2	2.0	µg/L	10.0		112	70-130				
Chloroform	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 B233900 - SW-846 5030B											
LCS (B233900-BS1)				Prepared & Analyzed: 06/21/19							
Chloromethane	9.51	2.0	µg/L	10.0		95.1	40-160			V-20	†
2-Chlorotoluene	11.2	1.0	µg/L	10.0		112	70-130				
4-Chlorotoluene	11.4	1.0	µg/L	10.0		114	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	10.9	5.0	µg/L	10.0		109	70-130				
1,2-Dibromoethane (EDB)	11.6	0.50	µg/L	10.0		116	70-130				
Dibromomethane	11.2	1.0	µg/L	10.0		112	70-130				
1,2-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130				
1,3-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130				
1,4-Dichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130				
trans-1,4-Dichloro-2-butene	12.5	2.0	µg/L	10.0		125	70-130				
Dichlorodifluoromethane (Freon 12)	9.74	2.0	µg/L	10.0		97.4	40-160				†
1,1-Dichloroethane	10.5	1.0	µg/L	10.0		105	70-130				
1,2-Dichloroethane	10.7	1.0	µg/L	10.0		107	70-130				
1,1-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130				
cis-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130				
trans-1,2-Dichloroethylene	10.2	1.0	µg/L	10.0		102	70-130				
1,2-Dichloropropane	10.6	1.0	µg/L	10.0		106	70-130				
1,3-Dichloropropane	10.3	0.50	µg/L	10.0		103	70-130				
2,2-Dichloropropane	10.3	1.0	µg/L	10.0		103	40-130				†
1,1-Dichloropropene	10.3	2.0	µg/L	10.0		103	70-130				
cis-1,3-Dichloropropene	10.4	0.50	µg/L	10.0		104	70-130				
trans-1,3-Dichloropropene	10.9	0.50	µg/L	10.0		109	70-130				
Diethyl Ether	10.3	2.0	µg/L	10.0		103	70-130				
Diisopropyl Ether (DIPE)	9.89	0.50	µg/L	10.0		98.9	70-130				
1,4-Dioxane	106	50	µg/L	100		106	40-130				†
Ethylbenzene	11.1	1.0	µg/L	10.0		111	70-130				
Hexachlorobutadiene	11.8	0.60	µg/L	10.0		118	70-130				
2-Hexanone (MBK)	102	10	µg/L	100		102	70-160				†
Isopropylbenzene (Cumene)	11.0	1.0	µg/L	10.0		110	70-130				
p-Isopropyltoluene (p-Cymene)	10.8	1.0	µg/L	10.0		108	70-130				
Methyl Acetate	10.9	1.0	µg/L	10.0		109	70-130				
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130				
Methyl Cyclohexane	10.9	1.0	µg/L	10.0		109	70-130				
Methylene Chloride	10.5	5.0	µg/L	10.0		105	70-130				
4-Methyl-2-pentanone (MIBK)	103	10	µg/L	100		103	70-160				†
Naphthalene	10.9	2.0	µg/L	10.0		109	40-130				†
n-Propylbenzene	11.4	1.0	µg/L	10.0		114	70-130				
Styrene	11.1	1.0	µg/L	10.0		111	70-130				
1,1,1,2-Tetrachloroethane	11.9	1.0	µg/L	10.0		119	70-130				
1,1,2,2-Tetrachloroethane	12.2	0.50	µg/L	10.0		122	70-130				
Tetrachloroethylene	11.7	1.0	µg/L	10.0		117	70-130				
Tetrahydrofuran	10.8	10	µg/L	10.0		108	70-130				
Toluene	10.9	1.0	µg/L	10.0		109	70-130				
1,2,3-Trichlorobenzene	11.0	5.0	µg/L	10.0		110	70-130				
1,2,4-Trichlorobenzene	11.1	1.0	µg/L	10.0		111	70-130				
1,3,5-Trichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130				
1,1,1-Trichloroethane	10.7	1.0	µg/L	10.0		107	70-130				
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130				
Trichloroethylene	11.0	1.0	µg/L	10.0		110	70-130				
Trichlorofluoromethane (Freon 11)	9.94	2.0	µg/L	10.0		99.4	70-130				
1,2,3-Trichloropropane	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 B233900 - SW-846 5030B											
LCS (B233900-BS1)				Prepared & Analyzed: 06/21/19							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.4	1.0	µg/L	10.0		114	70-130				
1,2,4-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130				
1,3,5-Trimethylbenzene	10.9	1.0	µg/L	10.0		109	70-130				
Vinyl Chloride	9.39	2.0	µg/L	10.0		93.9	40-160				†
m+p Xylene	22.5	2.0	µg/L	20.0		112	70-130				
o-Xylene	11.2	1.0	µg/L	10.0		112	70-130				
Surrogate: 1,2-Dichloroethane-d4	*24.3*		µg/L	25.0		97.2	70-130				
Surrogate: Toluene-d8	*24.8*		µg/L	25.0		99.2	70-130				
Surrogate: 4-Bromofluorobenzene	*24.9*		µg/L	25.0		99.7	70-130				
LCS Dup (B233900-BSD1)				Prepared & Analyzed: 06/21/19							
Acetone	101	50	µg/L	100		101	70-160	1.87	25		†
Acrylonitrile	9.78	5.0	µg/L	10.0		97.8	70-130	0.306	25		
tert-Amyl Methyl Ether (TAME)	10.2	0.50	µg/L	10.0		102	70-130	1.88	25		
Benzene	10.2	1.0	µg/L	10.0		102	70-130	1.65	25		
Bromobenzene	10.5	1.0	µg/L	10.0		105	70-130	3.09	25		
Bromochloromethane	11.0	1.0	µg/L	10.0		110	70-130	0.909	25		
Bromodichloromethane	11.2	0.50	µg/L	10.0		112	70-130	0.178	25		
Bromoform	11.6	1.0	µg/L	10.0		116	70-130	0.173	25		
Bromomethane	7.41	2.0	µg/L	10.0		74.1	40-160	8.00	25	V-20	†
2-Butanone (MEK)	97.9	20	µg/L	100		97.9	40-160	2.38	25		†
tert-Butyl Alcohol (TBA)	96.3	20	µg/L	100		96.3	40-160	5.40	25		†
n-Butylbenzene	10.7	1.0	µg/L	10.0		107	70-130	1.57	25		
sec-Butylbenzene	11.1	1.0	µg/L	10.0		111	70-130	1.09	25		
tert-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130	1.25	25		
tert-Butyl Ethyl Ether (TBEE)	9.52	0.50	µg/L	10.0		95.2	70-130	0.950	25		
Carbon Disulfide	11.3	5.0	µg/L	10.0		113	70-130	5.49	25		
Carbon Tetrachloride	10.2	5.0	µg/L	10.0		102	70-130	0.394	25		
Chlorobenzene	11.3	1.0	µg/L	10.0		113	70-130	0.440	25		
Chlorodibromomethane	11.2	0.50	µg/L	10.0		112	70-130	0.898	25		
Chloroethane	9.96	2.0	µg/L	10.0		99.6	70-130	11.6	25		
Chloroform	10.5	2.0	µg/L	10.0		105	70-130	0.381	25		
Chloromethane	9.42	2.0	µg/L	10.0		94.2	40-160	0.951	25	V-20	†
2-Chlorotoluene	11.2	1.0	µg/L	10.0		112	70-130	0.0896	25		
4-Chlorotoluene	11.2	1.0	µg/L	10.0		112	70-130	1.76	25		
1,2-Dibromo-3-chloropropane (DBCP)	11.2	5.0	µg/L	10.0		112	70-130	2.63	25		
1,2-Dibromoethane (EDB)	11.5	0.50	µg/L	10.0		115	70-130	0.955	25		
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130	2.34	25		
1,2-Dichlorobenzene	11.1	1.0	µg/L	10.0		111	70-130	2.27	25		
1,3-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130	0.790	25		
1,4-Dichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130	0.625	25		
trans-1,4-Dichloro-2-butene	12.7	2.0	µg/L	10.0		127	70-130	1.27	25		
Dichlorodifluoromethane (Freon 12)	9.64	2.0	µg/L	10.0		96.4	40-160	1.03	25		†
1,1-Dichloroethane	10.2	1.0	µg/L	10.0		102	70-130	3.09	25		
1,2-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130	0.842	25		
1,1-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130	0.0926	25		
cis-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130	3.95	25		
trans-1,2-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130	1.67	25		
1,2-Dichloropropane	10.6	1.0	µg/L	10.0		106	70-130	0.755	25		
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104	70-130	0.290	25		
2,2-Dichloropropane	9.91	1.0	µg/L	10.0		99.1	40-130	4.25	25		†
1,1-Dichloropropene	10.2	2.0	µg/L	10.0		102	70-130	0.781	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 B233900 - SW-846 5030B										
LCS Dup (B233900-BSD1)				Prepared & Analyzed: 06/21/19						
cis-1,3-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130	1.43	25	
trans-1,3-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130	4.11	25	
Diethyl Ether	11.0	2.0	µg/L	10.0		110	70-130	6.37	25	
Diisopropyl Ether (DIPE)	9.86	0.50	µg/L	10.0		98.6	70-130	0.304	25	
1,4-Dioxane	106	50	µg/L	100		106	40-130	0.688	50	† ‡
Ethylbenzene	10.8	1.0	µg/L	10.0		108	70-130	2.37	25	
Hexachlorobutadiene	11.9	0.60	µg/L	10.0		119	70-130	0.932	25	
2-Hexanone (MBK)	97.6	10	µg/L	100		97.6	70-160	4.39	25	†
Isopropylbenzene (Cumene)	10.9	1.0	µg/L	10.0		109	70-130	1.73	25	
p-Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105	70-130	2.63	25	
Methyl Acetate	10.3	1.0	µg/L	10.0		103	70-130	5.95	25	
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130	0.292	25	
Methyl Cyclohexane	10.3	1.0	µg/L	10.0		103	70-130	6.13	25	
Methylene Chloride	10.7	5.0	µg/L	10.0		107	70-130	1.79	25	
4-Methyl-2-pentanone (MIBK)	100	10	µg/L	100		100	70-160	2.43	25	†
Naphthalene	10.9	2.0	µg/L	10.0		109	40-130	0.275	25	†
n-Propylbenzene	11.2	1.0	µg/L	10.0		112	70-130	1.42	25	
Styrene	11.0	1.0	µg/L	10.0		110	70-130	0.813	25	
1,1,1,2-Tetrachloroethane	11.8	1.0	µg/L	10.0		118	70-130	1.02	25	
1,1,2,2-Tetrachloroethane	12.1	0.50	µg/L	10.0		121	70-130	1.24	25	
Tetrachloroethylene	11.2	1.0	µg/L	10.0		112	70-130	4.20	25	
Tetrahydrofuran	10.2	10	µg/L	10.0		102	70-130	5.79	25	
Toluene	10.6	1.0	µg/L	10.0		106	70-130	2.97	25	
1,2,3-Trichlorobenzene	10.8	5.0	µg/L	10.0		108	70-130	1.38	25	
1,2,4-Trichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130	1.82	25	
1,3,5-Trichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130	0.953	25	
1,1,1-Trichloroethane	10.8	1.0	µg/L	10.0		108	70-130	0.650	25	
1,1,2-Trichloroethane	11.2	1.0	µg/L	10.0		112	70-130	1.32	25	
Trichloroethylene	10.6	1.0	µg/L	10.0		106	70-130	3.60	25	
Trichlorofluoromethane (Freon 11)	9.76	2.0	µg/L	10.0		97.6	70-130	1.83	25	
1,2,3-Trichloropropane	11.0	2.0	µg/L	10.0		110	70-130	2.59	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.0	1.0	µg/L	10.0		110	70-130	3.30	25	
1,2,4-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130	0.294	25	
1,3,5-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130	2.98	25	
Vinyl Chloride	9.52	2.0	µg/L	10.0		95.2	40-160	1.37	25	†
m+p Xylene	21.9	2.0	µg/L	20.0		110	70-130	2.57	25	
o-Xylene	11.0	1.0	µg/L	10.0		110	70-130	1.71	25	
Surrogate: 1,2-Dichloroethane-d4	*24.5*		µg/L	25.0		98.1	70-130			
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	*25.0*		µg/L	25.0		100	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233869 - SW-846 3510C										
Blank (B233869-BLK1)				Prepared: 06/21/19 Analyzed: 06/24/19						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							V-34
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							R-05, V-04
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Benzoic Acid	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
Carbazole	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							V-34
4-Chloro-3-methylphenol	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine/Azobenzene	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							L-04, V-05
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
1-Methylnaphthalene	ND	5.0	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233869 - SW-846 3510C										
Blank (B233869-BLK1)				Prepared: 06/21/19 Analyzed: 06/24/19						
2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
2-Nitroaniline	ND	10	µg/L							
3-Nitroaniline	ND	10	µg/L							
4-Nitroaniline	ND	10	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							V-20
N-Nitrosodimethylamine	ND	10	µg/L							V-20
N-Nitrosodiphenylamine/Diphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachloronitrobenzene	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							
Phenanthrene	ND	5.0	µg/L							
Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
Pyridine	ND	5.0	µg/L							
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	*81.8*		µg/L	200		40.9	15-110			
Surrogate: Phenol-d6	*59.6*		µg/L	200		29.8	15-110			
Surrogate: Nitrobenzene-d5	*67.6*		µg/L	100		67.6	30-130			
Surrogate: 2-Fluorobiphenyl	*70.2*		µg/L	100		70.2	30-130			
Surrogate: 2,4,6-Tribromophenol	*134*		µg/L	200		66.8	15-110			
Surrogate: p-Terphenyl-d14	*69.0*		µg/L	100		69.0	30-130			
LCS (B233869-BS1)				Prepared: 06/21/19 Analyzed: 06/24/19						
Acenaphthene	32.3	5.0	µg/L	50.0		64.7	40-140			
Acenaphthylene	35.6	5.0	µg/L	50.0		71.2	40-140			
Acetophenone	33.7	10	µg/L	50.0		67.4	40-140			
Aniline	37.5	5.0	µg/L	50.0		74.9	40-140			V-34
Anthracene	35.9	5.0	µg/L	50.0		71.7	40-140			
Benzidine	41.9	20	µg/L	50.0		83.8	40-140			R-05, V-04
Benzo(a)anthracene	38.1	5.0	µg/L	50.0		76.2	40-140			
Benzo(a)pyrene	38.1	5.0	µg/L	50.0		76.2	40-140			
Benzo(b)fluoranthene	36.3	5.0	µg/L	50.0		72.6	40-140			
Benzo(g,h,i)perylene	30.9	5.0	µg/L	50.0		61.9	40-140			
Benzo(k)fluoranthene	37.1	5.0	µg/L	50.0		74.1	40-140			
Benzoic Acid	14.7	10	µg/L	50.0		29.4	10-130			†
Bis(2-chloroethoxy)methane	38.9	10	µg/L	50.0		77.7	40-140			
Bis(2-chloroethyl)ether	32.6	10	µg/L	50.0		65.2	40-140			
Bis(2-chloroisopropyl)ether	34.0	10	µg/L	50.0		68.1	40-140			
Bis(2-Ethylhexyl)phthalate	33.3	10	µg/L	50.0		66.6	40-140			
4-Bromophenylphenylether	33.3	10	µg/L	50.0		66.6	40-140			
Butylbenzylphthalate	35.2	10	µg/L	50.0		70.4	40-140			
Carbazole	36.7	10	µg/L	50.0		73.3	40-140			
4-Chloroaniline	36.0	10	µg/L	50.0		72.0	40-140			V-34
4-Chloro-3-methylphenol	36.1	10	µg/L	50.0		72.3	30-130			
2-Chloronaphthalene	31.9	10	µg/L	50.0		63.7	40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B233869 - SW-846 3510C												
LCS (B233869-BS1)				Prepared: 06/21/19 Analyzed: 06/24/19								
2-Chlorophenol	32.5	10	µg/L	50.0		65.0		30-130				
4-Chlorophenylphenylether	35.5	10	µg/L	50.0		71.0		40-140				
Chrysene	39.9	5.0	µg/L	50.0		79.7		40-140				
Dibenz(a,h)anthracene	33.5	5.0	µg/L	50.0		67.0		40-140				
Dibenzofuran	34.3	5.0	µg/L	50.0		68.7		40-140				
Di-n-butylphthalate	32.5	10	µg/L	50.0		65.0		40-140				
1,2-Dichlorobenzene	32.1	5.0	µg/L	50.0		64.3		40-140				
1,3-Dichlorobenzene	31.5	5.0	µg/L	50.0		63.0		40-140				
1,4-Dichlorobenzene	31.9	5.0	µg/L	50.0		63.7		40-140				
3,3-Dichlorobenzidine	41.4	10	µg/L	50.0		82.7		40-140				
2,4-Dichlorophenol	35.4	10	µg/L	50.0		70.7		30-130				
Diethylphthalate	35.4	10	µg/L	50.0		70.9		40-140				
2,4-Dimethylphenol	31.3	10	µg/L	50.0		62.5		30-130				
Dimethylphthalate	34.9	10	µg/L	50.0		69.7		40-140				
4,6-Dinitro-2-methylphenol	33.4	10	µg/L	50.0		66.9		30-130				
2,4-Dinitrophenol	31.4	10	µg/L	50.0		62.8		30-130				
2,4-Dinitrotoluene	39.4	10	µg/L	50.0		78.7		40-140				
2,6-Dinitrotoluene	39.2	10	µg/L	50.0		78.3		40-140				
Di-n-octylphthalate	32.6	10	µg/L	50.0		65.1		40-140				
1,2-Diphenylhydrazine/Azobenzene	32.8	10	µg/L	50.0		65.6		40-140				
Fluoranthene	38.2	5.0	µg/L	50.0		76.3		40-140				
Fluorene	35.8	5.0	µg/L	50.0		71.5		40-140				
Hexachlorobenzene	35.0	10	µg/L	50.0		70.1		40-140				
Hexachlorobutadiene	35.1	10	µg/L	50.0		70.2		40-140				
Hexachlorocyclopentadiene	12.7	10	µg/L	50.0		**25.4**	*	30-140			L-04, V-05	†
Hexachloroethane	31.4	10	µg/L	50.0		62.9		40-140				
Indeno(1,2,3-cd)pyrene	34.0	5.0	µg/L	50.0		68.1		40-140				
Isophorone	37.3	10	µg/L	50.0		74.7		40-140				
1-Methylnaphthalene	35.1	5.0	µg/L	50.0		70.3		40-140				
2-Methylnaphthalene	34.5	5.0	µg/L	50.0		69.1		40-140				
2-Methylphenol	29.7	10	µg/L	50.0		59.5		30-130				
3/4-Methylphenol	31.6	10	µg/L	50.0		63.2		30-130				
Naphthalene	34.1	5.0	µg/L	50.0		68.3		40-140				
2-Nitroaniline	36.8	10	µg/L	50.0		73.6		40-140				
3-Nitroaniline	37.0	10	µg/L	50.0		74.0		40-140				
4-Nitroaniline	39.5	10	µg/L	50.0		79.1		40-140				
Nitrobenzene	36.6	10	µg/L	50.0		73.2		40-140				
2-Nitrophenol	34.9	10	µg/L	50.0		69.7		30-130				
4-Nitrophenol	27.3	10	µg/L	50.0		54.6		10-130			V-06	†
N-Nitrosodimethylamine	26.3	10	µg/L	50.0		52.5		40-140			V-06	
N-Nitrosodiphenylamine/Diphenylamine	33.3	10	µg/L	50.0		66.7		40-140				
N-Nitrosodi-n-propylamine	32.7	10	µg/L	50.0		65.3		40-140				
Pentachloronitrobenzene	32.6	10	µg/L	50.0		65.1		40-140				
Pentachlorophenol	28.6	10	µg/L	50.0		57.1		30-130				
Phenanthrene	36.2	5.0	µg/L	50.0		72.4		40-140				
Phenol	16.5	10	µg/L	50.0		33.0		20-130				†
Pyrene	35.7	5.0	µg/L	50.0		71.4		40-140				
Pyridine	15.5	5.0	µg/L	50.0		31.0		10-140				†
1,2,4,5-Tetrachlorobenzene	33.9	10	µg/L	50.0		67.9		40-140				
1,2,4-Trichlorobenzene	35.2	5.0	µg/L	50.0		70.4		40-140				
2,4,5-Trichlorophenol	37.1	10	µg/L	50.0		74.2		30-130				
2,4,6-Trichlorophenol	34.8	10	µg/L	50.0		69.5		30-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes	
Batch B233869 - SW-846 3510C												
LCS (B233869-BS1)				Prepared: 06/21/19 Analyzed: 06/24/19								
Surrogate: 2-Fluorophenol	*89.8*		µg/L	200		44.9	15-110					
Surrogate: Phenol-d6	*66.9*		µg/L	200		33.4	15-110					
Surrogate: Nitrobenzene-d5	*72.0*		µg/L	100		72.0	30-130					
Surrogate: 2-Fluorobiphenyl	*74.0*		µg/L	100		74.0	30-130					
Surrogate: 2,4,6-Tribromophenol	*143*		µg/L	200		71.5	15-110					
Surrogate: p-Terphenyl-d14	*75.0*		µg/L	100		75.0	30-130					
LCS Dup (B233869-BSD1)				Prepared: 06/21/19 Analyzed: 06/24/19								
Acenaphthene	33.3	5.0	µg/L	50.0		66.7	40-140	3.05		20		
Acenaphthylene	36.0	5.0	µg/L	50.0		72.1	40-140	1.23		20		
Acetophenone	33.7	10	µg/L	50.0		67.3	40-140	0.0891		20		
Aniline	36.2	5.0	µg/L	50.0		72.5	40-140	3.31		50	V-34	‡
Anthracene	37.1	5.0	µg/L	50.0		74.3	40-140	3.51		20		
Benzidine	65.4	20	µg/L	50.0		131	40-140	**43.7**	*	20	R-05, V-04	
Benzo(a)anthracene	37.4	5.0	µg/L	50.0		74.9	40-140	1.69		20		
Benzo(a)pyrene	36.9	5.0	µg/L	50.0		73.9	40-140	3.07		20		
Benzo(b)fluoranthene	35.8	5.0	µg/L	50.0		71.6	40-140	1.47		20		
Benzo(g,h,i)perylene	30.8	5.0	µg/L	50.0		61.6	40-140	0.486		20		
Benzo(k)fluoranthene	36.9	5.0	µg/L	50.0		73.8	40-140	0.378		20		
Benzoic Acid	12.4	10	µg/L	50.0		24.8	10-130	17.1		50		† ‡
Bis(2-chloroethoxy)methane	38.6	10	µg/L	50.0		77.2	40-140	0.697		20		
Bis(2-chloroethyl)ether	33.5	10	µg/L	50.0		67.0	40-140	2.78		20		
Bis(2-chloroisopropyl)ether	33.9	10	µg/L	50.0		67.9	40-140	0.294		20		
Bis(2-Ethylhexyl)phthalate	32.8	10	µg/L	50.0		65.5	40-140	1.67		20		
4-Bromophenylphenylether	33.6	10	µg/L	50.0		67.3	40-140	1.05		20		
Butylbenzylphthalate	34.8	10	µg/L	50.0		69.7	40-140	0.971		20		
Carbazole	37.0	10	µg/L	50.0		73.9	40-140	0.815		20		
4-Chloroaniline	36.4	10	µg/L	50.0		72.8	40-140	1.13		20	V-34	
4-Chloro-3-methylphenol	38.4	10	µg/L	50.0		76.9	30-130	6.17		20		
2-Chloronaphthalene	31.5	10	µg/L	50.0		63.0	40-140	1.10		20		
2-Chlorophenol	33.2	10	µg/L	50.0		66.4	30-130	2.25		20		
4-Chlorophenylphenylether	36.0	10	µg/L	50.0		72.0	40-140	1.40		20		
Chrysene	39.8	5.0	µg/L	50.0		79.7	40-140	0.0753		20		
Dibenz(a,h)anthracene	33.7	5.0	µg/L	50.0		67.4	40-140	0.476		20		
Dibenzofuran	35.7	5.0	µg/L	50.0		71.3	40-140	3.80		20		
Di-n-butylphthalate	33.6	10	µg/L	50.0		67.3	40-140	3.48		20		
1,2-Dichlorobenzene	32.2	5.0	µg/L	50.0		64.5	40-140	0.311		20		
1,3-Dichlorobenzene	31.2	5.0	µg/L	50.0		62.3	40-140	1.15		20		
1,4-Dichlorobenzene	32.2	5.0	µg/L	50.0		64.3	40-140	0.906		20		
3,3-Dichlorobenzidine	40.5	10	µg/L	50.0		81.0	40-140	2.10		20		
2,4-Dichlorophenol	35.2	10	µg/L	50.0		70.4	30-130	0.482		20		
Diethylphthalate	35.7	10	µg/L	50.0		71.4	40-140	0.703		20		
2,4-Dimethylphenol	33.1	10	µg/L	50.0		66.1	30-130	5.63		20		
Dimethylphthalate	36.2	10	µg/L	50.0		72.3	40-140	3.63		50		‡
4,6-Dinitro-2-methylphenol	34.6	10	µg/L	50.0		69.2	30-130	3.44		50		‡
2,4-Dinitrophenol	32.3	10	µg/L	50.0		64.5	30-130	2.70		50		‡
2,4-Dinitrotoluene	40.8	10	µg/L	50.0		81.7	40-140	3.74		20		
2,6-Dinitrotoluene	40.2	10	µg/L	50.0		80.4	40-140	2.65		20		
Di-n-octylphthalate	31.2	10	µg/L	50.0		62.4	40-140	4.36		20		
1,2-Diphenylhydrazine/Azobenzene	33.9	10	µg/L	50.0		67.8	40-140	3.36		20		
Fluoranthene	38.2	5.0	µg/L	50.0		76.4	40-140	0.105		20		
Fluorene	36.6	5.0	µg/L	50.0		73.1	40-140	2.24		20		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B233869 - SW-846 3510C												
LCS Dup (B233869-BSD1)				Prepared: 06/21/19 Analyzed: 06/24/19								
Hexachlorobenzene	35.5	10	µg/L	50.0		71.0		40-140	1.25	20		
Hexachlorobutadiene	34.6	10	µg/L	50.0		69.1		40-140	1.49	20		
Hexachlorocyclopentadiene	13.6	10	µg/L	50.0		**27.1**	*	30-140	6.40	50	L-04, V-05	† ‡
Hexachloroethane	30.0	10	µg/L	50.0		60.0		40-140	4.65	50		‡
Indeno(1,2,3-cd)pyrene	33.1	5.0	µg/L	50.0		66.2		40-140	2.86	50		‡
Isophorone	37.8	10	µg/L	50.0		75.5		40-140	1.12	20		
1-Methylnaphthalene	34.9	5.0	µg/L	50.0		69.8		40-140	0.628	20		
2-Methylnaphthalene	35.7	5.0	µg/L	50.0		71.4		40-140	3.25	20		
2-Methylphenol	29.9	10	µg/L	50.0		59.8		30-130	0.570	20		
3/4-Methylphenol	30.9	10	µg/L	50.0		61.8		30-130	2.30	20		
Naphthalene	34.4	5.0	µg/L	50.0		68.7		40-140	0.701	20		
2-Nitroaniline	37.5	10	µg/L	50.0		74.9		40-140	1.80	20		
3-Nitroaniline	37.5	10	µg/L	50.0		75.1		40-140	1.42	20		
4-Nitroaniline	43.4	10	µg/L	50.0		86.9		40-140	9.42	20		
Nitrobenzene	36.1	10	µg/L	50.0		72.3		40-140	1.29	20		
2-Nitrophenol	35.2	10	µg/L	50.0		70.5		30-130	1.11	20		
4-Nitrophenol	25.7	10	µg/L	50.0		51.4		10-130	6.04	50	V-06	† ‡
N-Nitrosodimethylamine	28.2	10	µg/L	50.0		56.5		40-140	7.19	20	V-06	
N-Nitrosodiphenylamine/Diphenylamine	34.3	10	µg/L	50.0		68.6		40-140	2.78	20		
N-Nitrosodi-n-propylamine	32.9	10	µg/L	50.0		65.8		40-140	0.762	20		
Pentachloronitrobenzene	33.6	10	µg/L	50.0		67.1		40-140	2.99	20		
Pentachlorophenol	28.2	10	µg/L	50.0		56.4		30-130	1.16	50		‡
Phenanthrene	36.6	5.0	µg/L	50.0		73.2		40-140	1.15	20		
Phenol	16.9	10	µg/L	50.0		33.8		20-130	2.33	20		†
Pyrene	35.8	5.0	µg/L	50.0		71.6		40-140	0.308	20		
Pyridine	18.2	5.0	µg/L	50.0		36.4		10-140	16.2	50		† ‡
1,2,4,5-Tetrachlorobenzene	33.8	10	µg/L	50.0		67.6		40-140	0.413	20		
1,2,4-Trichlorobenzene	34.6	5.0	µg/L	50.0		69.2		40-140	1.83	20		
2,4,5-Trichlorophenol	36.0	10	µg/L	50.0		71.9		30-130	3.12	20		
2,4,6-Trichlorophenol	35.4	10	µg/L	50.0		70.9		30-130	1.99	50		‡
Surrogate: 2-Fluorophenol	*91.8*		µg/L	200		45.9		15-110				
Surrogate: Phenol-d6	*66.7*		µg/L	200		33.3		15-110				
Surrogate: Nitrobenzene-d5	*74.2*		µg/L	100		74.2		30-130				
Surrogate: 2-Fluorobiphenyl	*73.8*		µg/L	100		73.8		30-130				
Surrogate: 2,4,6-Tribromophenol	*150*		µg/L	200		75.0		15-110				
Surrogate: p-Terphenyl-d14	*78.0*		µg/L	100		78.0		30-130				

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233911 - SW-846 3510C										
Blank (B233911-BLK1)				Prepared: 06/21/19 Analyzed: 06/25/19						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.66*		µg/L	2.00		82.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.64*		µg/L	2.00		82.2	30-150			
Surrogate: Tetrachloro-m-xylene	*1.57*		µg/L	2.00		78.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.68*		µg/L	2.00		83.9	30-150			
LCS (B233911-BS1)				Prepared: 06/21/19 Analyzed: 06/25/19						
Aroclor-1016	0.44	0.20	µg/L	0.500		88.4	40-140			
Aroclor-1016 [2C]	0.50	0.20	µg/L	0.500		100	40-140			
Aroclor-1260	0.43	0.20	µg/L	0.500		85.1	40-140			
Aroclor-1260 [2C]	0.48	0.20	µg/L	0.500		96.4	40-140			
Surrogate: Decachlorobiphenyl	*1.65*		µg/L	2.00		82.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.66*		µg/L	2.00		83.1	30-150			
Surrogate: Tetrachloro-m-xylene	*1.58*		µg/L	2.00		78.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.68*		µg/L	2.00		83.9	30-150			
LCS Dup (B233911-BSD1)				Prepared: 06/21/19 Analyzed: 06/25/19						
Aroclor-1016	0.46	0.20	µg/L	0.500		92.3	40-140	4.32	20	
Aroclor-1016 [2C]	0.53	0.20	µg/L	0.500		106	40-140	5.17	20	
Aroclor-1260	0.45	0.20	µg/L	0.500		90.0	40-140	5.53	20	
Aroclor-1260 [2C]	0.52	0.20	µg/L	0.500		103	40-140	6.81	20	
Surrogate: Decachlorobiphenyl	*1.79*		µg/L	2.00		89.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.82*		µg/L	2.00		91.1	30-150			
Surrogate: Tetrachloro-m-xylene	*1.66*		µg/L	2.00		82.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.78*		µg/L	2.00		89.0	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 B234110 - SW-846 3005A										
Blank (B234110-BLK1)				Prepared: 06/25/19 Analyzed: 06/26/19						
Arsenic	ND	0.80	µg/L							
Barium	ND	10	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	0.25	1.0	µg/L							B, J
Lead	ND	0.50	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
LCS (B234110-BS1)				Prepared: 06/25/19 Analyzed: 06/26/19						
Arsenic	502	8.0	µg/L	500		100	80-120			
Barium	485	100	µg/L	500		96.9	80-120			
Cadmium	491	2.0	µg/L	500		98.1	80-120			
Chromium	511	10	µg/L	500		102	80-120			
Lead	513	5.0	µg/L	500		103	80-120			
Selenium	498	50	µg/L	500		99.6	80-120			
Silver	490	2.0	µg/L	500		97.9	80-120			
LCS Dup (B234110-BSD1)				Prepared: 06/25/19 Analyzed: 06/26/19						
Arsenic	473	8.0	µg/L	500		94.5	80-120	5.97	20	
Barium	447	100	µg/L	500		89.4	80-120	8.09	20	
Cadmium	465	2.0	µg/L	500		93.0	80-120	5.32	20	
Chromium	471	10	µg/L	500		94.3	80-120	8.17	20	
Lead	484	5.0	µg/L	500		96.8	80-120	5.77	20	
Selenium	466	50	µg/L	500		93.2	80-120	6.67	20	
Silver	462	2.0	µg/L	500		92.3	80-120	5.86	20	
Duplicate (B234110-DUP1)	**Source: 19F1123-01**			Prepared: 06/25/19 Analyzed: 06/27/19						
Arsenic	ND	0.80	µg/L		ND			NC	20	
Barium	65.4	10	µg/L		65.5			0.142	20	
Cadmium	0.0501	0.20	µg/L		0.0491			1.91	20	J
Chromium	1.09	1.0	µg/L		1.13			4.06	20	B
Lead	0.495	0.50	µg/L		0.494			0.0305	20	J
Selenium	19.7	5.0	µg/L		19.6			0.275	20	
Silver	ND	0.20	µg/L		ND			NC	20	
Matrix Spike (B234110-MS1)	**Source: 19F1123-01**			Prepared: 06/25/19 Analyzed: 06/26/19						
Arsenic	508	8.0	µg/L	500	ND	102	75-125			
Barium	552	100	µg/L	500	65.5	97.2	75-125			
Cadmium	489	2.0	µg/L	500	ND	97.7	75-125			
Chromium	502	10	µg/L	500	ND	100	75-125			
Lead	514	5.0	µg/L	500	ND	103	75-125			
Selenium	519	50	µg/L	500	19.6	99.8	75-125			
Silver	455	2.0	µg/L	500	ND	91.0	75-125			

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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 B234222 - SW-846 7470A Prep										
Blank (B234222-BLK1)				Prepared & Analyzed: 06/26/19						
Mercury	ND	0.00010	mg/L							
LCS (B234222-BS1)				Prepared & Analyzed: 06/26/19						
Mercury	0.00405	0.00010	mg/L	0.00400		101	80-120			
LCS Dup (B234222-BSD1)				Prepared & Analyzed: 06/26/19						
Mercury	0.00404	0.00010	mg/L	0.00400		101	80-120	0.0993	20	
Duplicate (B234222-DUP1)		**Source: 19F1123-01**		Prepared & Analyzed: 06/26/19						
Mercury	ND	0.00010	mg/L		ND			NC	20	
Matrix Spike (B234222-MS1)		**Source: 19F1123-01**		Prepared & Analyzed: 06/26/19						
Mercury	0.00390	0.00010	mg/L	0.00400	ND	97.5	75-125			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B233911-BS1 Date(s) Analyzed: 06/25/2019 06/25/2019

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.50	12.8
Aroclor-1260	1	0.000	0.000	0.000	0.43	
	2	0.000	0.000	0.000	0.48	11.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B233911-BSD1 Date(s) Analyzed: 06/25/2019 06/25/2019

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.53	14.1
Aroclor-1260	1	0.000	0.000	0.000	0.45	
	2	0.000	0.000	0.000	0.52	14.4

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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).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
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 6020B in Water	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,RI,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8260C 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	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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
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)	NY
1,2-Dibromoethane (EDB)	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	NY
Diisopropyl Ether (DIPE)	ME,NH,VA,NY
1,4-Dioxane	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	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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
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
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 8270D in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2019
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2019
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com Doc # 381 Rev 1_03242017

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Company Name: Weston & Sampson
Address: 55 Walkers Brook Dr, Ste 100, Reading, MA
Phone: 1-800-Sampson
Project Name: Kingston Brownfields
Project Location: 615 Broadway
Project Number: N2180061
Project Manager: Steve Shaw
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: JKM

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date: 5-day TAT

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 #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	# of Containers	Preservation Code	Container Code	VOCs	SVOCs	RCRA 8 Total metals	PCBs
								3	2	1	2			
								H	I	N	I			
								V	A	P	A			
01	MW-1	6/19/19	1340		X	GW	U				X	X	X	
02	MW-2	6/20/19	0915								X	X	X	X
03	MW-3	6/20/19	0910								X	X	X	
04	MW-4	6/19/19	1350								X	X	X	X
05	MW-5	6/18/19	1450								X	X	X	
06	MW-6	6/18/19	1455								X	X	X	
07	Dup	6/19/19									X	X	X	X
08	Trip Blank										X			

ANALYSIS REQUESTED

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 email results to: murphy@wseinc.com
shaws@wseinc.com
** Please report to MDL for all compounds

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: 6-20-19 1105	Detection Limit Requirements	Special Requirements
Received by: (signature)	Date/Time: 6-20-19 1105	MA	☐ MA MCP Required
Relinquished by: (signature)	Date/Time: 6.20.19 12:30		MCP Certification Form Required
Received by: (signature)	Date/Time: 6/20/19 1230	CT	☐ CT RCP Required
Relinquished by: (signature)	Date/Time: 6/20/19 1600	PM	RCP Certification Form Required
Received by: (signature)	Date/Time: 6/20/2019 1600		☐ MA State DW Required
		Other	PWSID #

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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

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I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client Weston + Sampson

Received By CS Date 6/20/2019 Time 1600

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____
By Gun # 1 Actual Temp - 5.6 + 2.8

Were samples within Temperature? 2-6°C T By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampered with? N/A
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? F Who was notified? _____
Is there enough Volume? T
Is there Headspace where applicable? F MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? T On COC? F
Do all samples have the proper pH? Acid T Base _____

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	14	1 Liter Plastic		16 oz Amb.	
HCL-	23	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	7	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass	6	Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-	3	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

November 15, 2019

Cailyn Locci
Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867

Project Location: Kingston Brownfield
Client Job Number:
Project Number: N2180061
Laboratory Work Order Number: 19K0535

Enclosed are results of analyses for samples received by the laboratory on November 8, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Meghan E. Kelley
Project Manager

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

Weston & Sampson Engineers MA
55 Walkers Brook Drive
Reading, MA 01867
ATTN: Cailyn Locci

REPORT DATE: 11/15/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: N2180061

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 19K0535

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

PROJECT LOCATION: Kingston Brownfield

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	19K0535-01	Ground Water		SW-846 8260C-D	
MW-2	19K0535-02	Ground Water		SW-846 8260C-D	
MW-3	19K0535-03	Ground Water		SW-846 8260C-D	
MW-4	19K0535-04	Ground Water		SW-846 8260C-D	
MW-5	19K0535-05	Ground Water		SW-846 8260C-D	
MW-6	19K0535-06	Ground Water		SW-846 8260C-D	
DUP	19K0535-07	Ground Water		SW-846 8260C-D	
615 Broadway soil	19K0535-08	Soil		SM 2540G	
				SW-846 6010D	
Trip Blank	19K0535-09	Trip Blank Water		SW-846 8260C-D	

con-test® ANALYTICAL LABORATORY

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.

SW-846 8260C-D

Qualifications:

L-04

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

Analyte & Samples(s) Qualified:

1,2,3-Trichlorobenzene

19K0535-02[MW-2], 19K0535-04[MW-4], 19K0535-05[MW-5], 19K0535-06[MW-6], 19K0535-07[DUP], 19K0535-09[Trip Blank], B245767-BLK1, B245767-BS1, B245767-BSD1

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:

1,2,3-Trichlorobenzene

19K0535-02[MW-2], 19K0535-04[MW-4], 19K0535-05[MW-5], 19K0535-06[MW-6], 19K0535-07[DUP], 19K0535-09[Trip Blank], B245767-BLK1, B245767-BS1, B245767-BSD1, S042572-CCV1

1,2,4-Trichlorobenzene

19K0535-02[MW-2], 19K0535-04[MW-4], 19K0535-05[MW-5], 19K0535-06[MW-6], 19K0535-07[DUP], 19K0535-09[Trip Blank], B245767-BLK1, B245767-BS1, B245767-BSD1, S042572-CCV1

Naphthalene

19K0535-01[MW-1], 19K0535-02[MW-2], 19K0535-03[MW-3], 19K0535-04[MW-4], 19K0535-05[MW-5], 19K0535-06[MW-6], 19K0535-07[DUP], 19K0535-09[Trip Blank], B245767-BLK1, B245767-BS1, B245767-BSD1, B245874-BLK1, B245874-BS1, B245874-BSD1, S042572-CCV1, S042591-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:

Bromomethane

B245767-BS1, B245767-BSD1, B245874-BS1, B245874-BSD1, S042572-CCV1, S042591-CCV1

Chloromethane

B245767-BS1, B245767-BSD1, B245874-BS1, B245874-BSD1, S042572-CCV1, S042591-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test 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® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-1 | Sampled: 11/5/2019 13:58

Sample ID: 19K0535-01

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	3.8	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-1 | Sampled: 11/5/2019 13:58

Sample ID: 19K0535-01

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	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Tetrachloroethylene	1.0	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Trichloroethylene	0.24	1.0	0.24	µg/L	1	J	SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.2	70-130		11/13/19 15:12
Toluene-d8	99.3	70-130		11/13/19 15:12
4-Bromofluorobenzene	97.4	70-130		11/13/19 15:12

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-2 | Sampled: 11/6/2019 09:00

Sample ID: 19K0535-02

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-2 | Sampled: 11/6/2019 09:00

Sample ID: 19K0535-02

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Tetrachloroethylene	6.6	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Trichloroethylene	14	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.2	70-130		11/13/19 5:29
Toluene-d8	97.3	70-130		11/13/19 5:29
4-Bromofluorobenzene	91.3	70-130		11/13/19 5:29

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-3 | Sampled: 11/6/2019 09:55

Sample ID: 19K0535-03

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	3.8	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-3 | Sampled: 11/6/2019 09:55

Sample ID: 19K0535-03

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	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Trichloroethylene	1.9	1.0	0.24	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	96.7	70-130		11/13/19 15:38
Toluene-d8	97.3	70-130		11/13/19 15:38
4-Bromofluorobenzene	95.0	70-130		11/13/19 15:38

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-4 | Sampled: 11/6/2019 11:15

Sample ID: 19K0535-04

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-4 | Sampled: 11/6/2019 11:15

Sample ID: 19K0535-04

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Tetrachloroethylene	0.92	1.0	0.18	µg/L	1	J	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Trichloroethylene	1.2	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.7	70-130		11/13/19 6:22
Toluene-d8	98.8	70-130		11/13/19 6:22
4-Bromofluorobenzene	90.9	70-130		11/13/19 6:22

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-5 | Sampled: 11/6/2019 12:35

Sample ID: 19K0535-05

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-5 | Sampled: 11/6/2019 12:35

Sample ID: 19K0535-05

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Tetrachloroethylene	1.3	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.1	70-130		11/13/19 6:48
Toluene-d8	98.0	70-130		11/13/19 6:48
4-Bromofluorobenzene	94.8	70-130		11/13/19 6:48

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-6 | Sampled: 11/5/2019 14:45

Sample ID: 19K0535-06

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chloroform	0.24	2.0	0.17	µg/L	1	J	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-6 | Sampled: 11/5/2019 14:45

Sample ID: 19K0535-06

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Tetrachloroethylene	12	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Trichloroethylene	12	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	94.8	70-130		11/13/19 7:15
Toluene-d8	99.9	70-130		11/13/19 7:15
4-Bromofluorobenzene	96.6	70-130		11/13/19 7:15

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: DUP | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-07

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: DUP | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-07

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Tetrachloroethylene	1.1	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	92.1	70-130		11/13/19 7:41
Toluene-d8	96.8	70-130		11/13/19 7:41
4-Bromofluorobenzene	92.1	70-130		11/13/19 7:41

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

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: 615 Broadway soil | Sampled: 11/6/2019 13:11

Sample ID: 19K0535-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/12/19	11/12/19 16:14	adb

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

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: 615 Broadway soil | Sampled: 11/6/2019 13:11

Sample ID: 19K0535-08

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	ND	0.10	0.0060	mg/L	1		SW-846 6010D	11/13/19	11/13/19 21:15	TBC

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

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: Trip Blank | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-09

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: Trip Blank | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-09

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.6	70-130		11/13/19 1:57
Toluene-d8	98.2	70-130		11/13/19 1:57
4-Bromofluorobenzene	91.3	70-130		11/13/19 1:57

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Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
19K0535-08 [615 Broadway soil]	B245791	11/12/19

Prep Method: SW-846 3010A-SW-846 6010D **Leachates were extracted on 11/12/2019 per SW-846 1311 in Batch B245827**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19K0535-08 [615 Broadway soil]	B245947	50.0	50.0	11/13/19

Prep Method: SW-846 5030B-SW-846 8260C-D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19K0535-02 [MW-2]	B245767	5	5.00	11/12/19
19K0535-04 [MW-4]	B245767	5	5.00	11/12/19
19K0535-05 [MW-5]	B245767	5	5.00	11/12/19
19K0535-06 [MW-6]	B245767	5	5.00	11/12/19
19K0535-07 [DUP]	B245767	5	5.00	11/12/19
19K0535-09 [Trip Blank]	B245767	5	5.00	11/12/19

Prep Method: SW-846 5030B-SW-846 8260C-D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
19K0535-01 [MW-1]	B245874	5	5.00	11/13/19
19K0535-03 [MW-3]	B245874	5	5.00	11/13/19

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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 B245767 - SW-846 5030B										
Blank (B245767-BLK1)				Prepared: 11/12/19 Analyzed: 11/13/19						
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							
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							
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 B245767 - SW-846 5030B											
Blank (B245767-BLK1)				Prepared: 11/12/19 Analyzed: 11/13/19							
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							L-04, V-05	
1,2,4-Trichlorobenzene	ND	1.0	µg/L							V-05	
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	*23.4*		µg/L	25.0		93.8	70-130				
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		99.9	70-130				
Surrogate: 4-Bromofluorobenzene	*22.5*		µg/L	25.0		89.9	70-130				
LCS (B245767-BS1)				Prepared: 11/12/19 Analyzed: 11/13/19							
Acetone	119	50	µg/L	100		119	70-160				†
Acrylonitrile	9.53	5.0	µg/L	10.0		95.3	70-130				
tert-Amyl Methyl Ether (TAME)	8.70	0.50	µg/L	10.0		87.0	70-130				
Benzene	11.1	1.0	µg/L	10.0		111	70-130				
Bromobenzene	10.5	1.0	µg/L	10.0		105	70-130				
Bromochloromethane	11.0	1.0	µg/L	10.0		110	70-130				
Bromodichloromethane	10.7	0.50	µg/L	10.0		107	70-130				
Bromoform	10.5	1.0	µg/L	10.0		105	70-130				
Bromomethane	9.22	2.0	µg/L	10.0		92.2	40-160			V-20	†
2-Butanone (MEK)	101	20	µg/L	100		101	40-160				†
tert-Butyl Alcohol (TBA)	108	20	µg/L	100		108	40-160				†
n-Butylbenzene	9.81	1.0	µg/L	10.0		98.1	70-130				
sec-Butylbenzene	11.6	1.0	µg/L	10.0		116	70-130				
tert-Butylbenzene	11.6	1.0	µg/L	10.0		116	70-130				
tert-Butyl Ethyl Ether (TBEE)	8.84	0.50	µg/L	10.0		88.4	70-130				
Carbon Disulfide	12.0	5.0	µg/L	10.0		120	70-130				
Carbon Tetrachloride	11.0	5.0	µg/L	10.0		110	70-130				
Chlorobenzene	11.9	1.0	µg/L	10.0		119	70-130				
Chlorodibromomethane	10.7	0.50	µg/L	10.0		107	70-130				
Chloroethane	10.8	2.0	µg/L	10.0		108	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 B245767 - SW-846 5030B												
LCS (B245767-BS1)				Prepared: 11/12/19 Analyzed: 11/13/19								
Chloromethane	9.02	2.0	µg/L	10.0		90.2		40-160			V-20	†
2-Chlorotoluene	11.0	1.0	µg/L	10.0		110		70-130				
4-Chlorotoluene	10.5	1.0	µg/L	10.0		105		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	9.33	5.0	µg/L	10.0		93.3		70-130				
1,2-Dibromoethane (EDB)	10.9	0.50	µg/L	10.0		109		70-130				
Dibromomethane	11.2	1.0	µg/L	10.0		112		70-130				
1,2-Dichlorobenzene	11.4	1.0	µg/L	10.0		114		70-130				
1,3-Dichlorobenzene	12.0	1.0	µg/L	10.0		120		70-130				
1,4-Dichlorobenzene	11.8	1.0	µg/L	10.0		118		70-130				
trans-1,4-Dichloro-2-butene	9.48	2.0	µg/L	10.0		94.8		70-130				
Dichlorodifluoromethane (Freon 12)	8.13	2.0	µg/L	10.0		81.3		40-160				†
1,1-Dichloroethane	11.2	1.0	µg/L	10.0		112		70-130				
1,2-Dichloroethane	10.5	1.0	µg/L	10.0		105		70-130				
1,1-Dichloroethylene	11.1	1.0	µg/L	10.0		111		70-130				
cis-1,2-Dichloroethylene	11.0	1.0	µg/L	10.0		110		70-130				
trans-1,2-Dichloroethylene	10.9	1.0	µg/L	10.0		109		70-130				
1,2-Dichloropropane	10.9	1.0	µg/L	10.0		109		70-130				
1,3-Dichloropropane	10.6	0.50	µg/L	10.0		106		70-130				
2,2-Dichloropropane	8.85	1.0	µg/L	10.0		88.5		40-130				†
1,1-Dichloropropene	11.1	2.0	µg/L	10.0		111		70-130				
cis-1,3-Dichloropropene	10.4	0.50	µg/L	10.0		104		70-130				
trans-1,3-Dichloropropene	9.98	0.50	µg/L	10.0		99.8		70-130				
Diethyl Ether	10.7	2.0	µg/L	10.0		107		70-130				
Diisopropyl Ether (DIPE)	10.5	0.50	µg/L	10.0		105		70-130				
1,4-Dioxane	84.4	50	µg/L	100		84.4		40-130				†
Ethylbenzene	11.1	1.0	µg/L	10.0		111		70-130				
Hexachlorobutadiene	9.61	0.60	µg/L	10.0		96.1		70-130				
2-Hexanone (MBK)	90.0	10	µg/L	100		90.0		70-160				†
Isopropylbenzene (Cumene)	11.2	1.0	µg/L	10.0		112		70-130				
p-Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105		70-130				
Methyl Acetate	10.5	1.0	µg/L	10.0		105		70-130				
Methyl tert-Butyl Ether (MTBE)	10.5	1.0	µg/L	10.0		105		70-130				
Methyl Cyclohexane	11.1	1.0	µg/L	10.0		111		70-130				
Methylene Chloride	11.5	5.0	µg/L	10.0		115		70-130				
4-Methyl-2-pentanone (MIBK)	92.8	10	µg/L	100		92.8		70-160				†
Naphthalene	6.17	2.0	µg/L	10.0		61.7		40-130			V-05	†
n-Propylbenzene	10.5	1.0	µg/L	10.0		105		70-130				
Styrene	10.5	1.0	µg/L	10.0		105		70-130				
1,1,1,2-Tetrachloroethane	11.9	1.0	µg/L	10.0		119		70-130				
1,1,2,2-Tetrachloroethane	11.1	0.50	µg/L	10.0		111		70-130				
Tetrachloroethylene	11.9	1.0	µg/L	10.0		119		70-130				
Tetrahydrofuran	10.4	10	µg/L	10.0		104		70-130				
Toluene	11.1	1.0	µg/L	10.0		111		70-130				
1,2,3-Trichlorobenzene	6.65	5.0	µg/L	10.0		**66.5**	*	70-130			L-04, V-05	
1,2,4-Trichlorobenzene	7.09	1.0	µg/L	10.0		70.9		70-130			V-05	
1,3,5-Trichlorobenzene	8.76	1.0	µg/L	10.0		87.6		70-130				
1,1,1-Trichloroethane	10.9	1.0	µg/L	10.0		109		70-130				
1,1,2-Trichloroethane	11.5	1.0	µg/L	10.0		115		70-130				
Trichloroethylene	11.8	1.0	µg/L	10.0		118		70-130				
Trichlorofluoromethane (Freon 11)	9.72	2.0	µg/L	10.0		97.2		70-130				
1,2,3-Trichloropropane	9.26	2.0	µg/L	10.0		92.6		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 B245767 - SW-846 5030B											
LCS (B245767-BS1)				Prepared: 11/12/19 Analyzed: 11/13/19							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.8	1.0	µg/L	10.0		118	70-130				
1,2,4-Trimethylbenzene	11.0	1.0	µg/L	10.0		110	70-130				
1,3,5-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130				
Vinyl Chloride	9.36	2.0	µg/L	10.0		93.6	40-160				†
m+p Xylene	21.4	2.0	µg/L	20.0		107	70-130				
o-Xylene	11.3	1.0	µg/L	10.0		113	70-130				
Surrogate: 1,2-Dichloroethane-d4	*23.5*		µg/L	25.0		94.1	70-130				
Surrogate: Toluene-d8	*24.8*		µg/L	25.0		99.2	70-130				
Surrogate: 4-Bromofluorobenzene	*24.1*		µg/L	25.0		96.3	70-130				
LCS Dup (B245767-BSD1)				Prepared: 11/12/19 Analyzed: 11/13/19							
Acetone	138	50	µg/L	100		138	70-160	14.4	25		†
Acrylonitrile	8.99	5.0	µg/L	10.0		89.9	70-130	5.83	25		
tert-Amyl Methyl Ether (TAME)	8.68	0.50	µg/L	10.0		86.8	70-130	0.230	25		
Benzene	11.0	1.0	µg/L	10.0		110	70-130	1.18	25		
Bromobenzene	10.4	1.0	µg/L	10.0		104	70-130	0.287	25		
Bromochloromethane	11.2	1.0	µg/L	10.0		112	70-130	1.08	25		
Bromodichloromethane	11.0	0.50	µg/L	10.0		110	70-130	2.76	25		
Bromoform	10.6	1.0	µg/L	10.0		106	70-130	1.33	25		
Bromomethane	10.1	2.0	µg/L	10.0		101	40-160	8.71	25	V-20	†
2-Butanone (MEK)	107	20	µg/L	100		107	40-160	5.02	25		†
tert-Butyl Alcohol (TBA)	95.3	20	µg/L	100		95.3	40-160	12.3	25		†
n-Butylbenzene	9.30	1.0	µg/L	10.0		93.0	70-130	5.34	25		
sec-Butylbenzene	11.5	1.0	µg/L	10.0		115	70-130	0.347	25		
tert-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130	2.09	25		
tert-Butyl Ethyl Ether (TBEE)	8.77	0.50	µg/L	10.0		87.7	70-130	0.795	25		
Carbon Disulfide	10.9	5.0	µg/L	10.0		109	70-130	9.32	25		
Carbon Tetrachloride	11.1	5.0	µg/L	10.0		111	70-130	0.271	25		
Chlorobenzene	11.9	1.0	µg/L	10.0		119	70-130	0.505	25		
Chlorodibromomethane	10.3	0.50	µg/L	10.0		103	70-130	3.61	25		
Chloroethane	10.9	2.0	µg/L	10.0		109	70-130	1.20	25		
Chloroform	11.1	2.0	µg/L	10.0		111	70-130	1.09	25		
Chloromethane	9.00	2.0	µg/L	10.0		90.0	40-160	0.222	25	V-20	†
2-Chlorotoluene	10.7	1.0	µg/L	10.0		107	70-130	2.30	25		
4-Chlorotoluene	10.4	1.0	µg/L	10.0		104	70-130	0.575	25		
1,2-Dibromo-3-chloropropane (DBCP)	8.59	5.0	µg/L	10.0		85.9	70-130	8.26	25		
1,2-Dibromoethane (EDB)	11.2	0.50	µg/L	10.0		112	70-130	2.98	25		
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130	1.80	25		
1,2-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130	0.350	25		
1,3-Dichlorobenzene	11.9	1.0	µg/L	10.0		119	70-130	0.669	25		
1,4-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130	3.72	25		
trans-1,4-Dichloro-2-butene	9.17	2.0	µg/L	10.0		91.7	70-130	3.32	25		
Dichlorodifluoromethane (Freon 12)	8.15	2.0	µg/L	10.0		81.5	40-160	0.246	25		†
1,1-Dichloroethane	11.0	1.0	µg/L	10.0		110	70-130	1.62	25		
1,2-Dichloroethane	10.7	1.0	µg/L	10.0		107	70-130	1.88	25		
1,1-Dichloroethylene	11.4	1.0	µg/L	10.0		114	70-130	2.48	25		
cis-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130	1.84	25		
trans-1,2-Dichloroethylene	10.7	1.0	µg/L	10.0		107	70-130	1.58	25		
1,2-Dichloropropane	11.3	1.0	µg/L	10.0		113	70-130	3.50	25		
1,3-Dichloropropane	10.7	0.50	µg/L	10.0		107	70-130	0.753	25		
2,2-Dichloropropane	8.65	1.0	µg/L	10.0		86.5	40-130	2.29	25		†
1,1-Dichloropropene	10.9	2.0	µg/L	10.0		109	70-130	1.73	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 B245767 - SW-846 5030B												
LCS Dup (B245767-BSD1)				Prepared: 11/12/19 Analyzed: 11/13/19								
cis-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101		70-130	2.73	25		
trans-1,3-Dichloropropene	9.86	0.50	µg/L	10.0		98.6		70-130	1.21	25		
Diethyl Ether	10.9	2.0	µg/L	10.0		109		70-130	1.76	25		
Diisopropyl Ether (DIPE)	10.4	0.50	µg/L	10.0		104		70-130	1.25	25		
1,4-Dioxane	88.4	50	µg/L	100		88.4		40-130	4.56	50		† ‡
Ethylbenzene	11.2	1.0	µg/L	10.0		112		70-130	0.180	25		
Hexachlorobutadiene	9.38	0.60	µg/L	10.0		93.8		70-130	2.42	25		
2-Hexanone (MBK)	94.0	10	µg/L	100		94.0		70-160	4.41	25		†
Isopropylbenzene (Cumene)	11.0	1.0	µg/L	10.0		110		70-130	1.53	25		
p-Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105		70-130	0.285	25		
Methyl Acetate	10.3	1.0	µg/L	10.0		103		70-130	1.35	25		
Methyl tert-Butyl Ether (MTBE)	10.1	1.0	µg/L	10.0		101		70-130	3.40	25		
Methyl Cyclohexane	10.9	1.0	µg/L	10.0		109		70-130	1.09	25		
Methylene Chloride	11.4	5.0	µg/L	10.0		114		70-130	0.701	25		
4-Methyl-2-pentanone (MIBK)	91.2	10	µg/L	100		91.2		70-160	1.77	25		†
Naphthalene	6.18	2.0	µg/L	10.0		61.8		40-130	0.162	25	V-05	†
n-Propylbenzene	10.5	1.0	µg/L	10.0		105		70-130	0.0950	25		
Styrene	10.5	1.0	µg/L	10.0		105		70-130	0.285	25		
1,1,1,2-Tetrachloroethane	12.0	1.0	µg/L	10.0		120		70-130	0.587	25		
1,1,2,2-Tetrachloroethane	10.7	0.50	µg/L	10.0		107		70-130	3.68	25		
Tetrachloroethylene	11.9	1.0	µg/L	10.0		119		70-130	0.336	25		
Tetrahydrofuran	9.85	10	µg/L	10.0		98.5		70-130	5.34	25	J	
Toluene	11.2	1.0	µg/L	10.0		112		70-130	1.07	25		
1,2,3-Trichlorobenzene	6.47	5.0	µg/L	10.0		**64.7**	*	70-130	2.74	25	L-04, V-05	
1,2,4-Trichlorobenzene	7.23	1.0	µg/L	10.0		72.3		70-130	1.96	25	V-05	
1,3,5-Trichlorobenzene	8.90	1.0	µg/L	10.0		89.0		70-130	1.59	25		
1,1,1-Trichloroethane	10.9	1.0	µg/L	10.0		109		70-130	0.183	25		
1,1,2-Trichloroethane	11.7	1.0	µg/L	10.0		117		70-130	1.38	25		
Trichloroethylene	12.6	1.0	µg/L	10.0		126		70-130	6.53	25		
Trichlorofluoromethane (Freon 11)	9.73	2.0	µg/L	10.0		97.3		70-130	0.103	25		
1,2,3-Trichloropropane	9.86	2.0	µg/L	10.0		98.6		70-130	6.28	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.7	1.0	µg/L	10.0		117		70-130	0.681	25		
1,2,4-Trimethylbenzene	10.7	1.0	µg/L	10.0		107		70-130	2.31	25		
1,3,5-Trimethylbenzene	10.1	1.0	µg/L	10.0		101		70-130	0.689	25		
Vinyl Chloride	9.40	2.0	µg/L	10.0		94.0		40-160	0.426	25		†
m+p Xylene	21.7	2.0	µg/L	20.0		108		70-130	1.21	25		
o-Xylene	11.1	1.0	µg/L	10.0		111		70-130	2.05	25		
Surrogate: 1,2-Dichloroethane-d4	*23.3*		µg/L	25.0		93.3		70-130				
Surrogate: Toluene-d8	*25.3*		µg/L	25.0		101		70-130				
Surrogate: 4-Bromofluorobenzene	*24.2*		µg/L	25.0		96.6		70-130				
Batch B245874 - SW-846 5030B												
Blank (B245874-BLK1)				Prepared & Analyzed: 11/13/19								
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									

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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 B245874 - SW-846 5030B										
Blank (B245874-BLK1)				Prepared & Analyzed: 11/13/19						
Bromomethane	ND	2.0	µg/L							
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							
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							
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							

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B245874 - SW-846 5030B											
Blank (B245874-BLK1)				Prepared & Analyzed: 11/13/19							
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	*23.9*		µg/L	25.0		95.7	70-130				
Surrogate: Toluene-d8	*24.2*		µg/L	25.0		97.0	70-130				
Surrogate: 4-Bromofluorobenzene	*24.2*		µg/L	25.0		96.7	70-130				
LCS (B245874-BS1)				Prepared & Analyzed: 11/13/19							
Acetone	112	50	µg/L	100		112	70-160				†
Acrylonitrile	8.98	5.0	µg/L	10.0		89.8	70-130				
tert-Amyl Methyl Ether (TAME)	9.39	0.50	µg/L	10.0		93.9	70-130				
Benzene	11.1	1.0	µg/L	10.0		111	70-130				
Bromobenzene	10.9	1.0	µg/L	10.0		109	70-130				
Bromochloromethane	11.1	1.0	µg/L	10.0		111	70-130				
Bromodichloromethane	11.0	0.50	µg/L	10.0		110	70-130				
Bromoform	10.6	1.0	µg/L	10.0		106	70-130				
Bromomethane	9.79	2.0	µg/L	10.0		97.9	40-160			V-20	†
2-Butanone (MEK)	97.8	20	µg/L	100		97.8	40-160				†
tert-Butyl Alcohol (TBA)	95.0	20	µg/L	100		95.0	40-160				†
n-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130				
sec-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130				
tert-Butylbenzene	11.1	1.0	µg/L	10.0		111	70-130				
tert-Butyl Ethyl Ether (TBEE)	9.22	0.50	µg/L	10.0		92.2	70-130				
Carbon Disulfide	11.5	5.0	µg/L	10.0		115	70-130				
Carbon Tetrachloride	11.4	5.0	µg/L	10.0		114	70-130				
Chlorobenzene	12.0	1.0	µg/L	10.0		120	70-130				
Chlorodibromomethane	10.6	0.50	µg/L	10.0		106	70-130				
Chloroethane	11.7	2.0	µg/L	10.0		117	70-130				
Chloroform	10.9	2.0	µg/L	10.0		109	70-130				
Chloromethane	8.91	2.0	µg/L	10.0		89.1	40-160			V-20	†
2-Chlorotoluene	11.2	1.0	µg/L	10.0		112	70-130				
4-Chlorotoluene	10.9	1.0	µg/L	10.0		109	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	8.90	5.0	µg/L	10.0		89.0	70-130				
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111	70-130				
Dibromomethane	10.7	1.0	µg/L	10.0		107	70-130				
1,2-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130				
1,3-Dichlorobenzene	12.1	1.0	µg/L	10.0		121	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 B245874 - SW-846 5030B											
LCS (B245874-BS1)				Prepared & Analyzed: 11/13/19							
1,4-Dichlorobenzene	11.3	1.0	µg/L	10.0		113	70-130				
trans-1,4-Dichloro-2-butene	9.31	2.0	µg/L	10.0		93.1	70-130				
Dichlorodifluoromethane (Freon 12)	7.59	2.0	µg/L	10.0		75.9	40-160				†
1,1-Dichloroethane	11.1	1.0	µg/L	10.0		111	70-130				
1,2-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130				
1,1-Dichloroethylene	11.2	1.0	µg/L	10.0		112	70-130				
cis-1,2-Dichloroethylene	11.3	1.0	µg/L	10.0		113	70-130				
trans-1,2-Dichloroethylene	11.0	1.0	µg/L	10.0		110	70-130				
1,2-Dichloropropane	11.2	1.0	µg/L	10.0		112	70-130				
1,3-Dichloropropane	10.9	0.50	µg/L	10.0		109	70-130				
2,2-Dichloropropane	10.4	1.0	µg/L	10.0		104	40-130				†
1,1-Dichloropropene	11.0	2.0	µg/L	10.0		110	70-130				
cis-1,3-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130				
trans-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101	70-130				
Diethyl Ether	10.8	2.0	µg/L	10.0		108	70-130				
Diisopropyl Ether (DIPE)	10.6	0.50	µg/L	10.0		106	70-130				
1,4-Dioxane	84.7	50	µg/L	100		84.7	40-130				†
Ethylbenzene	11.5	1.0	µg/L	10.0		115	70-130				
Hexachlorobutadiene	10.9	0.60	µg/L	10.0		109	70-130				
2-Hexanone (MBK)	91.6	10	µg/L	100		91.6	70-160				†
Isopropylbenzene (Cumene)	11.5	1.0	µg/L	10.0		115	70-130				
p-Isopropyltoluene (p-Cymene)	11.1	1.0	µg/L	10.0		111	70-130				
Methyl Acetate	9.45	1.0	µg/L	10.0		94.5	70-130				
Methyl tert-Butyl Ether (MTBE)	10.4	1.0	µg/L	10.0		104	70-130				
Methyl Cyclohexane	11.2	1.0	µg/L	10.0		112	70-130				
Methylene Chloride	11.5	5.0	µg/L	10.0		115	70-130				
4-Methyl-2-pentanone (MIBK)	89.6	10	µg/L	100		89.6	70-160				†
Naphthalene	7.31	2.0	µg/L	10.0		73.1	40-130			V-05	†
n-Propylbenzene	11.2	1.0	µg/L	10.0		112	70-130				
Styrene	11.1	1.0	µg/L	10.0		111	70-130				
1,1,1,2-Tetrachloroethane	12.4	1.0	µg/L	10.0		124	70-130				
1,1,2,2-Tetrachloroethane	11.5	0.50	µg/L	10.0		115	70-130				
Tetrachloroethylene	12.1	1.0	µg/L	10.0		121	70-130				
Tetrahydrofuran	9.75	10	µg/L	10.0		97.5	70-130			J	
Toluene	11.3	1.0	µg/L	10.0		113	70-130				
1,2,3-Trichlorobenzene	8.06	5.0	µg/L	10.0		80.6	70-130				
1,2,4-Trichlorobenzene	8.76	1.0	µg/L	10.0		87.6	70-130				
1,3,5-Trichlorobenzene	9.82	1.0	µg/L	10.0		98.2	70-130				
1,1,1-Trichloroethane	11.1	1.0	µg/L	10.0		111	70-130				
1,1,2-Trichloroethane	11.5	1.0	µg/L	10.0		115	70-130				
Trichloroethylene	11.7	1.0	µg/L	10.0		117	70-130				
Trichlorofluoromethane (Freon 11)	10.1	2.0	µg/L	10.0		101	70-130				
1,2,3-Trichloropropane	10.3	2.0	µg/L	10.0		103	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	12.2	1.0	µg/L	10.0		122	70-130				
1,2,4-Trimethylbenzene	10.9	1.0	µg/L	10.0		109	70-130				
1,3,5-Trimethylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
Vinyl Chloride	9.64	2.0	µg/L	10.0		96.4	40-160				†
m+p Xylene	22.8	2.0	µg/L	20.0		114	70-130				
o-Xylene	11.5	1.0	µg/L	10.0		115	70-130				
Surrogate: 1,2-Dichloroethane-d4	*23.5*		µg/L	25.0		94.1	70-130				
Surrogate: Toluene-d8	*25.3*		µg/L	25.0		101	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 B245874 - SW-846 5030B											
LCS (B245874-BS1)				Prepared & Analyzed: 11/13/19							
Surrogate: 4-Bromofluorobenzene	*25.1*		µg/L	25.0		101	70-130				
LCS Dup (B245874-BSD1)				Prepared & Analyzed: 11/13/19							
Acetone	90.2	50	µg/L	100		90.2	70-160	21.3	25		†
Acrylonitrile	9.07	5.0	µg/L	10.0		90.7	70-130	0.997	25		
tert-Amyl Methyl Ether (TAME)	9.39	0.50	µg/L	10.0		93.9	70-130	0.00	25		
Benzene	10.9	1.0	µg/L	10.0		109	70-130	1.92	25		
Bromobenzene	10.7	1.0	µg/L	10.0		107	70-130	1.85	25		
Bromochloromethane	11.4	1.0	µg/L	10.0		114	70-130	2.49	25		
Bromodichloromethane	11.0	0.50	µg/L	10.0		110	70-130	0.455	25		
Bromoform	10.8	1.0	µg/L	10.0		108	70-130	1.77	25		
Bromomethane	9.96	2.0	µg/L	10.0		99.6	40-160	1.72	25	V-20	†
2-Butanone (MEK)	91.8	20	µg/L	100		91.8	40-160	6.43	25		†
tert-Butyl Alcohol (TBA)	98.3	20	µg/L	100		98.3	40-160	3.46	25		†
n-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	1.57	25		
sec-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130	1.77	25		
tert-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130	1.18	25		
tert-Butyl Ethyl Ether (TBEE)	9.29	0.50	µg/L	10.0		92.9	70-130	0.756	25		
Carbon Disulfide	10.6	5.0	µg/L	10.0		106	70-130	8.24	25		
Carbon Tetrachloride	10.9	5.0	µg/L	10.0		109	70-130	4.58	25		
Chlorobenzene	11.7	1.0	µg/L	10.0		117	70-130	2.78	25		
Chlorodibromomethane	10.6	0.50	µg/L	10.0		106	70-130	0.660	25		
Chloroethane	10.5	2.0	µg/L	10.0		105	70-130	10.5	25		
Chloroform	10.8	2.0	µg/L	10.0		108	70-130	1.29	25		
Chloromethane	8.78	2.0	µg/L	10.0		87.8	40-160	1.47	25	V-20	†
2-Chlorotoluene	10.8	1.0	µg/L	10.0		108	70-130	3.37	25		
4-Chlorotoluene	10.6	1.0	µg/L	10.0		106	70-130	2.14	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.41	5.0	µg/L	10.0		94.1	70-130	5.57	25		
1,2-Dibromoethane (EDB)	11.2	0.50	µg/L	10.0		112	70-130	0.898	25		
Dibromomethane	10.6	1.0	µg/L	10.0		106	70-130	0.749	25		
1,2-Dichlorobenzene	11.3	1.0	µg/L	10.0		113	70-130	0.883	25		
1,3-Dichlorobenzene	12.0	1.0	µg/L	10.0		120	70-130	0.832	25		
1,4-Dichlorobenzene	11.6	1.0	µg/L	10.0		116	70-130	1.83	25		
trans-1,4-Dichloro-2-butene	8.70	2.0	µg/L	10.0		87.0	70-130	6.77	25		
Dichlorodifluoromethane (Freon 12)	7.64	2.0	µg/L	10.0		76.4	40-160	0.657	25		†
1,1-Dichloroethane	10.8	1.0	µg/L	10.0		108	70-130	2.65	25		
1,2-Dichloroethane	10.7	1.0	µg/L	10.0		107	70-130	0.470	25		
1,1-Dichloroethylene	10.8	1.0	µg/L	10.0		108	70-130	2.91	25		
cis-1,2-Dichloroethylene	11.1	1.0	µg/L	10.0		111	70-130	1.70	25		
trans-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130	5.91	25		
1,2-Dichloropropane	11.2	1.0	µg/L	10.0		112	70-130	0.0889	25		
1,3-Dichloropropane	10.9	0.50	µg/L	10.0		109	70-130	0.459	25		
2,2-Dichloropropane	9.84	1.0	µg/L	10.0		98.4	40-130	5.82	25		†
1,1-Dichloropropene	10.9	2.0	µg/L	10.0		109	70-130	0.456	25		
cis-1,3-Dichloropropene	10.4	0.50	µg/L	10.0		104	70-130	0.383	25		
trans-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101	70-130	0.693	25		
Diethyl Ether	10.5	2.0	µg/L	10.0		105	70-130	2.90	25		
Diisopropyl Ether (DIPE)	10.4	0.50	µg/L	10.0		104	70-130	1.33	25		
1,4-Dioxane	82.4	50	µg/L	100		82.4	40-130	2.66	50		† ‡
Ethylbenzene	11.2	1.0	µg/L	10.0		112	70-130	2.29	25		
Hexachlorobutadiene	10.6	0.60	µg/L	10.0		106	70-130	2.14	25		
2-Hexanone (MBK)	90.3	10	µg/L	100		90.3	70-160	1.50	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 B245874 - SW-846 5030B											
LCS Dup (B245874-BSD1)				Prepared & Analyzed: 11/13/19							
Isopropylbenzene (Cumene)	11.0	1.0	µg/L	10.0		110	70-130	4.27	25		
p-Isopropyltoluene (p-Cymene)	10.8	1.0	µg/L	10.0		108	70-130	3.02	25		
Methyl Acetate	9.68	1.0	µg/L	10.0		96.8	70-130	2.40	25		
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103	70-130	0.580	25		
Methyl Cyclohexane	11.1	1.0	µg/L	10.0		111	70-130	0.986	25		
Methylene Chloride	11.2	5.0	µg/L	10.0		112	70-130	2.46	25		
4-Methyl-2-pentanone (MIBK)	91.4	10	µg/L	100		91.4	70-160	1.99	25		†
Naphthalene	7.31	2.0	µg/L	10.0		73.1	40-130	0.00	25	V-05	†
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130	5.05	25		
Styrene	10.8	1.0	µg/L	10.0		108	70-130	2.46	25		
1,1,1,2-Tetrachloroethane	12.0	1.0	µg/L	10.0		120	70-130	3.29	25		
1,1,2,2-Tetrachloroethane	11.4	0.50	µg/L	10.0		114	70-130	0.175	25		
Tetrachloroethylene	11.9	1.0	µg/L	10.0		119	70-130	1.08	25		
Tetrahydrofuran	10.1	10	µg/L	10.0		101	70-130	3.63	25		
Toluene	11.2	1.0	µg/L	10.0		112	70-130	0.802	25		
1,2,3-Trichlorobenzene	7.80	5.0	µg/L	10.0		78.0	70-130	3.28	25		
1,2,4-Trichlorobenzene	8.61	1.0	µg/L	10.0		86.1	70-130	1.73	25		
1,3,5-Trichlorobenzene	9.35	1.0	µg/L	10.0		93.5	70-130	4.90	25		
1,1,1-Trichloroethane	10.8	1.0	µg/L	10.0		108	70-130	2.93	25		
1,1,2-Trichloroethane	11.2	1.0	µg/L	10.0		112	70-130	3.44	25		
Trichloroethylene	11.5	1.0	µg/L	10.0		115	70-130	2.07	25		
Trichlorofluoromethane (Freon 11)	9.44	2.0	µg/L	10.0		94.4	70-130	6.95	25		
1,2,3-Trichloropropane	9.84	2.0	µg/L	10.0		98.4	70-130	4.76	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.5	1.0	µg/L	10.0		115	70-130	5.99	25		
1,2,4-Trimethylbenzene	10.8	1.0	µg/L	10.0		108	70-130	1.11	25		
1,3,5-Trimethylbenzene	10.3	1.0	µg/L	10.0		103	70-130	4.83	25		
Vinyl Chloride	9.31	2.0	µg/L	10.0		93.1	40-160	3.48	25		†
m+p Xylene	22.1	2.0	µg/L	20.0		110	70-130	3.21	25		
o-Xylene	11.1	1.0	µg/L	10.0		111	70-130	3.80	25		
Surrogate: 1,2-Dichloroethane-d4	*23.6*		µg/L	25.0		94.2	70-130				
Surrogate: Toluene-d8	*24.9*		µg/L	25.0		99.7	70-130				
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.5	70-130				

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QUALITY CONTROL

TCLP - Metals Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B245947 - SW-846 3010A										
Blank (B245947-BLK1)				Prepared & Analyzed: 11/13/19						
Lead	ND	0.10	mg/L							
LCS (B245947-BS1)				Prepared & Analyzed: 11/13/19						
Lead	0.488	0.10	mg/L	0.500		97.6	80-120			
LCS Dup (B245947-BSD1)				Prepared & Analyzed: 11/13/19						
Lead	0.511	0.10	mg/L	0.500		102	80-120	4.63	20	

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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.

J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are 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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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Water	
Lead	NY,CT,ME,NC,NH,VA
SW-846 8260C-D 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
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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C-D in Water	
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
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

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The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2019
NC	North Carolina Div. of Water Quality	652	12/31/2019
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2019
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 2_06262019

Page 1 of 1

Sampler Name: Weston; Sampson
Address: 55 Walkers Brook Dr, Reading, MA
Phone: 1-800-SAMPSON
Project Name: Kingston Brownfields
Project Location: 615 Broadway
Project Number: N2180001
Project Manager: Cailyn Locci
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: JWW / EMG

Requested Turnaround Time: 7-Day ☐ 10-Day ☐ PFAS 10-Day (std) ☐ Due Date: 5-day
RUSH Approval Required: 1-Day ☐ 2-Day ☐ 3-Day ☐ 4-Day ☐
Data Delivery: Format: PDF ☒ EXCEL ☒ Other: CLP Like Data Pkg Required: ☐
Email To: LOCCI.CAILYN@WSEINC.COM
Fax To #: MURPHYJ@WSEINC.COM
Dissolved Metals Samples: ○ Field Filtered ○ Lab to Filter
Orthophosphate Samples: ○ Field Filtered ○ Lab to Filter

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1] Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	H	I	VOCs 8260	TCLP Lead													
1	MW-1	11/5/19	1350	GRAB	GW	U	3					X																
2	MW-2	11/6/19	0900				3					X																
3	MW-3	11/6/19	0955				3					X																
4	MW-4	11/6/19	1115				3					X																
5	MW-5	11/6/19	1235				3					X																
6	MW-6	11/5/19	1445				3					X																
7	DUP						3					X																
8	615 Broadway Soil	11/6/19	1311		S			1					X															
9	Trip Blank											X																

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Contest is not responsible for missing samples from prepacked coolers

[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)

Relinquished by: (signature)	Date/Time:
	11/6/19 5:50pm
Received by: (signature)	Date/Time:
	11-7-19 8:35AM
Relinquished by: (signature)	Date/Time:
	11-7-19 1630
Received by: (signature)	Date/Time:
	11-8-19
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: Detection limits: TOGS for GW, & TCLP for soil sample. NY

Detection Limit Requirements: MA; RCP; Other
Special Requirements: ☐ MA MCP Required; MCP Certification Form Required; ☐ CT RCP Required; RCP Certification Form Required; ☐ MA State DW Required; PWSID #

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

NELAC and AIHA-LAP, LLC Accredited

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

Other: ☐ Chromatogram ☐ AIHA-LAP,LLC

PCB ONLY: ☐ Soxhlet ☐ Non Soxhlet

Comments:

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con Test values your partnership on each project and will try to assist with missing information, but will not b held accountable.

Table of Contents

FedEx

776931730904

Delivered
Friday 11/08/2019 at 9:59 am

DELIVERED

Signed for by: R.PETRAITIS

GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM
ALBANY, NY US

TO
EAST LONGMEADOW, MA US

Shipment Facts

TRACKING NUMBER
776931730904

SERVICE
FedEx Priority Overnight

WEIGHT
48 lbs / 21.77 kgs

DIMENSIONS
24x14x13 in.

DELIVERED TO
Shipping/Receiving

TOTAL PIECES
1

TOTAL SHIPMENT WEIGHT
48 lbs / 21.77 kgs

TERMS
Recipient

SHIPPER REFERENCE
85

PACKAGING
Your Packaging

SPECIAL HANDLING SECTION
Deliver Weekday

STANDARD TRANSIT
11/08/2019 by 10:30 am

SHIP DATE
Thu 11/07/2019

ACTUAL DELIVERY
Fri 11/08/2019 9:59 am

Travel History

Local Scan Time

Friday , 11/08/2019

9:59 am	EAST LONGMEADOW, MA	Delivered
7:31 am	WINDSOR LOCKS, CT	On FedEx vehicle for delivery

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

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

Client Weston & Sampson

Received By SA Date 11/8 Time 0959

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # _____ Actual Temp - 4.5

By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis ID's T Sampler Name T

Project T T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? T On COC? T

Do all samples have the proper pH? Acid NA Base NA

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		~~16 oz~~ Amb.	
HCL-	25	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	1
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

APPENDIX E
Waste Disposal Manifests

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	n/a	2	800-451-8984	031720 - D1

5. Generator's Name and Mailing Address
City of Kingston
c/o Brenna Robinson - 420 Broadway
Kingston, NY 12401

Generator's Site Address (if different than mailing address)
80 Albert Street
Kingston, NY 12401

Generator's Phone: 845-334-3924

6. Transporter 1 Company Name: MC Environmental Services, Inc.
U.S. EPA ID Number: NYR000021071

7. Transporter 2 Company Name: Veolia ES Technical Solutions
U.S. EPA ID Number: NJD080631769

8. Designated Facility Name and Site Address
Veolia ES Technical Solutions, LLC
4301 Infirmary Road
West Carrollton, OH 45449 USA
U.S. EPA ID Number: OHD093945293

Facility's Phone: 937-859-2207-169

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non RCRA, Non DOT-Regulated None None	1	DM	20	G
2.	Non-RCRA Non DOT-Regulated None None	1	DM	200	P
3.					
4.					

13. Special Handling Instructions and Additional Information
9.1 IDW Purge Water - WIP #: 818711 Approval #: SRRLFLIQ-NH
9.2 IDW Soils - WIP #: 818707 Approval #: SRRLFSOLID-NH
Emergency Contact: M. Craft - 800-451-8984

GENERATOR

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Bill Hayman
Signature: Bill Hayman
Month: 3 Day: 17 Year: 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S.
Port of entry/exit:
Transporter Signature (for exports only):
Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brian Flanagan
Signature:
Month: 3 Day: 17 Year: 20

Transporter 2 Printed/Typed Name: John Kudziolka
Signature:
Month: 3 Day: 17 Year: 20

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

1. H141 2. H141

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Bon Harry Blankenship
Signature:
Month: 3 Day: 20 Year: 20

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	n/a	2	800-451-8984	031720 - D2

GENERATOR

5. Generator's Name and Mailing Address
City of Kingston
c/o Brenna Robinson - 420 Broadway
Kingston, NY 12401

Generator's Site Address (if different than mailing address)
615 Broadway
Kingston, NY 12401

Generator's Phone: 845-334-3924

6. Transporter 1 Company Name: MC Environmental Services, Inc. — U.S. EPA ID Number: NYR000021071

7. Transporter 2 Company Name: Veolia ES Technical Solutions — U.S. EPA ID Number: NJD080631767

8. Designated Facility Name and Site Address
Veolia ES Technical Solutions, LLC
4301 Infirmary Road
West Carrollton, OH 45449 USA

U.S. EPA ID Number: OHD093945293

Facility's Phone: 937-859-2207-169

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non RCRA, Non DOT-Regulated None None	~~1~~ BPO	DM	NA	G	
2.	Non-RCRA Non DOT-Regulated None None	1	DM	300	P	
3.						
4.						

13. Special Handling Instructions and Additional Information
9.1 IDW Purge Water - WIP # 818644 Approval #: SRRLFLIQ-NH
9.2 IDW Solis - WIP # 818643 Approval #: SRRLFSOLID-NH
Emergency Contact: M. Craft - 800-451-8984

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Bill Haymah — Signature: Bill Hay — Month 3 Day 17 Year 20

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Brian Flanagan — Signature: [signature] — Month 3 Day 17 Year 20

Transporter 2 Printed/Typed Name: John Kudziok — Signature: [signature] — Month 3 Day 17 Year 20

FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

APPENDIX F

Data Usability Summary Reports (DUSRs) – June 2019

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October 9, 2019

Ms. Cailyn Locci, P.G.
Senior Project Manager
Weston & Sampson
1 Winners Circle, Suite 130
Albany, New York 12205

Re: Data Validation Report
615 Broadway, Kingston, NY
June 2019 Soil and Ground Water Sampling Events

Dear Ms. Locci:

The data usability summary report (DUSR) and data validation summaries are attached to this letter for the 615 Broadway, June 2019 soil and ground water sampling events. The data for Con-Test Analytical Laboratory work order numbers 19F0630 and 19F1123 are acceptable with some minor issues that are identified and discussed in the validation summaries. There are no data that are qualified as rejected, unusable (R) in the data packs.

A list of common data validation acronyms is attached to this letter to assist you in interpreting the validation summaries. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist Weston & Sampson.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

DCA/bms
Via email

z:\projects\2019\19600-19620\19616-615 broadway\615 broadway-191.ltr.docx

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

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Data Usability Summary Report
for Con-Test Analytical Laboratory
Work Order No: 19F0630

16 Soil Samples and 1 Field Duplicate
Collected June 10-12, 2019

Prepared by: Donald Anné
October 9, 2019

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results of volatile and semi-volatile analyses for 16 soil samples and 1 field duplicate; PCB analyses for 6 soil samples and 1 field duplicate; and metal analyses for 14 soil samples and 1 field duplicate.

The overall performances of the analyses are acceptable. Con-Test Analytical Laboratory did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The "not detected" semi-volatile results for benzoic acid were qualified as "estimated" (UJ) in all 16 soil samples and the field duplicate because 2 of 2 percent recoveries for benzoic acid below control limits, but not below 10% in the soil LCS/LCSD.

- The positive metal results for arsenic, barium, cadmium, chromium, and lead were qualified as "estimated" (J) in samples SB-5 (0-2) and SB-Dup because the relative percent differences for arsenic, barium, cadmium, chromium, and lead were above the allowable maximum in soil field duplicate pair SB-5 (0-2)/SB-Dup.

All data are considered usable with estimated (J or UJ) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Method 8260C Volatiles Data for
Con-Test Analytical Laboratory, Work Order No: 19F0630

16 Soil Samples and 1 Field Duplicate
Collected June 10-12, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for bromodichloromethane, tetrachloroethylene, and trichloroethylene were below the method minimums, but not below 0.010 for GCMSVOA4 on 06-03-19. No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The average RRFs for target compounds were below the allowable minimum (0.001 for 1,4-dioxane, 0.010 for all other compounds) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The %Ds for applicable compounds were below the method maximum, as required. The RRFs for bromodichloromethane, tetrachloroethylene, and trichloroethylene were below the method minimums, but not below 0.010 on 06-13-19 (S037092-CCV1). The RRFs for bromodichloromethane, tetrachloroethylene, and trichloroethylene were below the method minimums, but not below 0.010 on 06-13-19 (S037093-CCV1). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.0005 for 1,4-dioxane, 0.010 for all other compounds) and the %Ds were below the allowable maximum (25%), as required.

Blanks: The analyses of the method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

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Surrogate Recovery: The surrogate recoveries were within control limits for the soil samples.

Laboratory Control Sample: The relative percent differences (RPDs) for target compounds were below the allowable maximum and the percent recoveries (%Rs) were within QC limits for soil samples B233215-BS1 and B233215-BSD1.

The RPDs for target compounds were below the allowable maximum, but 1 of 2 %Rs for tert-butyl alcohol (TBA) was above QC limits for soil samples B233252-BS1 and B233252-BSD1. Positive results for TBA should be considered estimated, biased high (J+) in associated soil samples.

Field Duplicate: The analyses of soil field duplicate pair SB-5 (0-2)/SB-Dup reported target compounds as either not detected or below the lowest standard; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compounds were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B233252	Laboratory ID:	B233252-BS1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
Acetone	0.200	0.225	113	70 - 160
Acrylonitrile	0.0200	0.0196	97.9	70 - 130
tert-Amyl Methyl Ether (TAME)	0.0200	0.0207	104	70 - 130
Benzene	0.0200	0.0185	92.5	70 - 130
Bromobenzene	0.0200	0.0181	90.4	70 - 130
Bromochloromethane	0.0200	0.0203	101	70 - 130
Bromodichloromethane	0.0200	0.0213	106	70 - 130
Bromoform	0.0200	0.0187	93.4	70 - 130
Bromomethane	0.0200	0.0142	71.1	40 - 130
2-Butanone (MEK)	0.200	0.207	104	70 - 160
tert-Butyl Alcohol (TBA)	0.200	0.230	115	40 - 130
n-Butylbenzene	0.0200	0.0182	90.8	70 - 130
sec-Butylbenzene	0.0200	0.0195	97.7	70 - 130
tert-Butylbenzene	0.0200	0.0186	93.0	70 - 160
tert-Butyl Ethyl Ether (TBEE)	0.0200	0.0187	93.4	70 - 130
Carbon Disulfide	0.0200	0.0189	94.5	70 - 130
Carbon Tetrachloride	0.0200	0.0193	96.7	70 - 130
Chlorobenzene	0.0200	0.0187	93.3	70 - 130
Chlorodibromomethane	0.0200	0.0196	98.2	70 - 130
Chloroethane	0.0200	0.0184	91.8	70 - 130
Chloroform	0.0200	0.0187	93.3	70 - 130
Chloromethane	0.0200	0.0154	77.0	70 - 130
2-Chlorotoluene	0.0200	0.0195	97.7	70 - 130
4-Chlorotoluene	0.0200	0.0186	93.1	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	0.0200	0.0190	95.1	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.0206	103	70 - 130
Dibromomethane	0.0200	0.0188	93.8	70 - 130
1,2-Dichlorobenzene	0.0200	0.0191	95.7	70 - 130
1,3-Dichlorobenzene	0.0200	0.0194	96.8	70 - 130
1,4-Dichlorobenzene	0.0200	0.0186	93.0	70 - 130
trans-1,4-Dichloro-2-butene	0.0200	0.0198	99.2	70 - 130
Dichlorodifluoromethane (Freon 12)	0.0200	0.0145	72.5	40 - 160
1,1-Dichloroethane	0.0200	0.0198	98.9	70 - 130
1,2-Dichloroethane	0.0200	0.0192	96.1	70 - 130
1,1-Dichloroethylene	0.0200	0.0184	92.0	70 - 130
cis-1,2-Dichloroethylene	0.0200	0.0199	99.7	70 - 130
trans-1,2-Dichloroethylene	0.0200	0.0188	94.1	70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B233252	Laboratory ID:	B233252-BS1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
1,2-Dichloropropane	0.0200	0.0200	99.8	70 - 130
1,3-Dichloropropane	0.0200	0.0187	93.7	70 - 130
2,2-Dichloropropane	0.0200	0.0177	88.7	70 - 130
1,1-Dichloropropene	0.0200	0.0181	90.5	70 - 130
cis-1,3-Dichloropropene	0.0200	0.0207	104	70 - 130
trans-1,3-Dichloropropene	0.0200	0.0192	96.1	70 - 130
Diethyl Ether	0.0200	0.0200	100	70 - 130
Diisopropyl Ether (DIPE)	0.0200	0.0197	98.4	70 - 130
1,4-Dioxane	0.200	0.204	102	40 - 160
Ethylbenzene	0.0200	0.0188	94.0	70 - 130
Hexachlorobutadiene	0.0200	0.0194	97.1	70 - 160
2-Hexanone (MBK)	0.200	0.201	100	70 - 160
Isopropylbenzene (Cumene)	0.0200	0.0178	89.0	70 - 130
p-Isopropyltoluene (p-Cymene)	0.0200	0.0184	92.1	70 - 130
Methyl Acetate	0.0200	0.0208	104	70 - 130
Methyl tert-Butyl Ether (MTBE)	0.0200	0.0202	101	70 - 130
Methyl Cyclohexane	0.0200	0.0194	97.0	70 - 130
Methylene Chloride	0.0200	0.0191	95.5	40 - 160
4-Methyl-2-pentanone (MIBK)	0.200	0.204	102	70 - 160
Naphthalene	0.0200	0.0173	86.5	40 - 130
n-Propylbenzene	0.0200	0.0190	94.8	70 - 130
Styrene	0.0200	0.0193	96.5	70 - 130
1,1,1,2-Tetrachloroethane	0.0200	0.0207	104	70 - 130
1,1,2,2-Tetrachloroethane	0.0200	0.0202	101	70 - 130
Tetrachloroethylene	0.0200	0.0206	103	70 - 130
Tetrahydrofuran	0.0200	0.0180	89.9	70 - 130
Toluene	0.0200	0.0183	91.5	70 - 130
1,2,3-Trichlorobenzene	0.0200	0.0188	94.1	70 - 130
1,2,4-Trichlorobenzene	0.0200	0.0183	91.3	70 - 130
1,3,5-Trichlorobenzene	0.0200	0.0188	93.9	70 - 130
1,1,1-Trichloroethane	0.0200	0.0186	92.8	70 - 130
1,1,2-Trichloroethane	0.0200	0.0202	101	70 - 130
Trichloroethylene	0.0200	0.0192	95.8	70 - 130
Trichlorofluoromethane (Freon 11)	0.0200	0.0168	84.0	70 - 130
1,2,3-Trichloropropane	0.0200	0.0192	96.1	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0200	0.0204	102	70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B233252	Laboratory ID:	B233252-BS1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
1,2,4-Trimethylbenzene	0.0200	0.0183	91.7	70 - 130
1,3,5-Trimethylbenzene	0.0200	0.0185	92.6	70 - 130
Vinyl Chloride	0.0200	0.0151	75.4	40 - 130
m+p Xylene	0.0400	0.0374	93.5	70 - 130
o-Xylene	0.0200	0.0186	92.8	70 - 130

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #		% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acetone	0.200	0.203	102		10.4	25	70 - 160
Acrylonitrile	0.0200	0.0188	94.0		4.06	25	70 - 130
tert-Amyl Methyl Ether (TAME)	0.0200	0.0201	100		3.14	25	70 - 130
Benzene	0.0200	0.0185	92.3		0.216	25	70 - 130
Bromobenzene	0.0200	0.0184	92.0		1.75	25	70 - 130
Bromochloromethane	0.0200	0.0194	97.0		4.44	25	70 - 130
Bromodichloromethane	0.0200	0.0208	104		2.19	25	70 - 130
Bromoform	0.0200	0.0174	87.2		6.87	25	70 - 130
Bromomethane	0.0200	0.0145	72.5		1.95	25	40 - 130
2-Butanone (MEK)	0.200	0.199	99.5		3.99	25	70 - 160
tert-Butyl Alcohol (TBA)	0.200	0.265	133	*	14.1	25	40 - 130
n-Butylbenzene	0.0200	0.0172	85.9		5.55	25	70 - 130
sec-Butylbenzene	0.0200	0.0190	94.9		2.91	25	70 - 130
tert-Butylbenzene	0.0200	0.0179	89.4		3.95	25	70 - 160
tert-Butyl Ethyl Ether (TBEE)	0.0200	0.0182	90.9		2.71	25	70 - 130
Carbon Disulfide	0.0200	0.0182	91.0		3.77	25	70 - 130
Carbon Tetrachloride	0.0200	0.0180	90.0		7.18	25	70 - 130
Chlorobenzene	0.0200	0.0181	90.5		3.05	25	70 - 130
Chlorodibromomethane	0.0200	0.0193	96.4		1.85	25	70 - 130
Chloroethane	0.0200	0.0169	84.7		8.05	25	70 - 130
Chloroform	0.0200	0.0175	87.4		6.53	25	70 - 130
Chloromethane	0.0200	0.0142	70.8		8.39	25	70 - 130
2-Chlorotoluene	0.0200	0.0182	91.0		7.10	25	70 - 130
4-Chlorotoluene	0.0200	0.0183	91.5		1.73	25	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	0.0200	0.0187	93.7		1.48	25	70 - 130
1,2-Dibromoethane (EDB)	0.0200	0.0202	101		1.76	25	70 - 130
Dibromomethane	0.0200	0.0191	95.7		2.01	25	70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B233252	Laboratory ID:	B233252-BSD1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,2-Dichlorobenzene	0.0200	0.0176	88.1	8.27	25	70 - 130
1,3-Dichlorobenzene	0.0200	0.0182	91.2	5.96	25	70 - 130
1,4-Dichlorobenzene	0.0200	0.0175	87.3	6.32	25	70 - 130
trans-1,4-Dichloro-2-butene	0.0200	0.0179	89.5	10.3	25	70 - 130
Dichlorodifluoromethane (Freon 12)	0.0200	0.0141	70.7	2.51	25	40 - 160
1,1-Dichloroethane	0.0200	0.0190	95.0	4.02	25	70 - 130
1,2-Dichloroethane	0.0200	0.0183	91.5	4.90	25	70 - 130
1,1-Dichloroethylene	0.0200	0.0174	86.8	5.82	25	70 - 130
cis-1,2-Dichloroethylene	0.0200	0.0187	93.5	6.42	25	70 - 130
trans-1,2-Dichloroethylene	0.0200	0.0181	90.7	3.68	25	70 - 130
1,2-Dichloropropane	0.0200	0.0183	91.6	8.57	25	70 - 130
1,3-Dichloropropane	0.0200	0.0185	92.6	1.18	25	70 - 130
2,2-Dichloropropane	0.0200	0.0172	86.1	2.97	25	70 - 130
1,1-Dichloropropene	0.0200	0.0183	91.5	1.10	25	70 - 130
cis-1,3-Dichloropropene	0.0200	0.0197	98.6	5.04	25	70 - 130
trans-1,3-Dichloropropene	0.0200	0.0180	90.2	6.33	25	70 - 130
Diethyl Ether	0.0200	0.0200	99.8	0.200	25	70 - 130
Diisopropyl Ether (DIPE)	0.0200	0.0191	95.5	2.99	25	70 - 130
1,4-Dioxane	0.200	0.190	94.8	7.40	50	40 - 160
Ethylbenzene	0.0200	0.0179	89.6	4.79	25	70 - 130
Hexachlorobutadiene	0.0200	0.0192	96.1	1.04	25	70 - 160
2-Hexanone (MBK)	0.200	0.201	101	0.229	25	70 - 160
Isopropylbenzene (Cumene)	0.0200	0.0177	88.4	0.676	25	70 - 130
p-Isopropyltoluene (p-Cymene)	0.0200	0.0174	87.1	5.58	25	70 - 130
Methyl Acetate	0.0200	0.0213	106	2.00	25	70 - 130
Methyl tert-Butyl Ether (MTBE)	0.0200	0.0200	100	0.697	25	70 - 130
Methyl Cyclohexane	0.0200	0.0189	94.7	2.40	25	70 - 130
Methylene Chloride	0.0200	0.0184	92.2	3.52	25	40 - 160
4-Methyl-2-pentanone (MIBK)	0.200	0.203	101	0.493	25	70 - 160
Naphthalene	0.0200	0.0164	82.2	5.10	25	40 - 130
n-Propylbenzene	0.0200	0.0182	91.0	4.09	25	70 - 130
Styrene	0.0200	0.0181	90.4	6.53	25	70 - 130
1,1,1,2-Tetrachloroethane	0.0200	0.0202	101	2.35	25	70 - 130
1,1,2,2-Tetrachloroethane	0.0200	0.0212	106	4.93	25	70 - 130
Tetrachloroethylene	0.0200	0.0205	102	0.487	25	70 - 130
Tetrahydrofuran	0.0200	0.0205	102	13.0	25	70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 5035
Batch:	B233252	Laboratory ID:	B233252-BSD1
Column:		Initial/Final:	5 g / 10 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Toluene	0.0200	0.0172	86.1	6.08	25	70 - 130
1,2,3-Trichlorobenzene	0.0200	0.0183	91.4	2.91	25	70 - 130
1,2,4-Trichlorobenzene	0.0200	0.0170	84.8	7.38	25	70 - 130
1,3,5-Trichlorobenzene	0.0200	0.0182	91.1	3.03	25	70 - 130
1,1,1-Trichloroethane	0.0200	0.0173	86.3	7.26	25	70 - 130
1,1,2-Trichloroethane	0.0200	0.0184	91.8	9.35	25	70 - 130
Trichloroethylene	0.0200	0.0189	94.7	1.15	25	70 - 130
Trichlorofluoromethane (Freon 11)	0.0200	0.0157	78.3	7.02	25	70 - 130
1,2,3-Trichloropropane	0.0200	0.0190	94.9	1.26	25	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0200	0.0188	93.9	8.17	25	70 - 130
1,2,4-Trimethylbenzene	0.0200	0.0175	87.4	4.80	25	70 - 130
1,3,5-Trimethylbenzene	0.0200	0.0182	91.1	1.63	25	70 - 130
Vinyl Chloride	0.0200	0.0148	74.2	1.60	25	40 - 130
m+p Xylene	0.0400	0.0363	90.7	3.10	25	70 - 130
o-Xylene	0.0200	0.0179	89.7	3.40	25	70 - 130

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Calibration:	1900195	Instrument:	GCMSVOA4
		Calibration Date:	6/3/2019 6:37:02AM

COMPOUND	Mean RF	RF RSD	Linear r^2	Quad COD	LIMIT	Q
Acetone	0.1323334	4.9			15	
Acrylonitrile	0.1827163	8.1			15	
tert-Amyl Methyl Ether (TAME)	0.6020929	10.8			15	
Benzene	1.016513	7.5			15	
Bromobenzene	0.6797344	6.0			15	
Bromochloromethane	0.1491653	6.5			15	
Bromodichloromethane	0.1607757	13.8			15	
Bromoform	0.2842803	10.5			15	
Bromomethane	0.2646063	65.1				
2-Butanone (MEK)	0.2505012	9.2			15	
tert-Butyl Alcohol (TBA)	5.389341E-02	10.7			15	
n-Butylbenzene	1.498723	9.8			15	
sec-Butylbenzene	0.3753634	13.6			15	
tert-Butylbenzene	1.279774	6.4			15	
tert-Butyl Ethyl Ether (TBEE)	0.9715114	7.0			15	
Carbon Disulfide	0.5850267	5.6			15	
Carbon Tetrachloride	0.3674599	11.3			15	
Chlorobenzene	1.129254	3.6			15	
Chlorodibromomethane	0.1469712	9.8			15	
Chloroethane	0.1633779	13.0			15	
Chloroform	0.479242	8.0			15	
Chloromethane	0.6473569	11.6			15	
2-Chlorotoluene	1.266486	8.1			15	
4-Chlorotoluene	1.490309	6.8			15	
Cyclohexane	0.907092	59.6				
1,2-Dibromo-3-chloropropane (DBCP)	8.602283E-02	10.2			15	
1,2-Dibromoethane (EDB)	0.1271825	5.8			15	
Dibromomethane	8.579724E-02	9.8			15	
1,2-Dichlorobenzene	0.8696371	7.7			15	
1,3-Dichlorobenzene	0.8855599	5.5			15	
1,4-Dichlorobenzene	0.9441266	6.0			15	

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Calibration:	1900195	Instrument:	GCMSVOA4
		Calibration Date:	6/3/2019 6:37:02AM

COMPOUND	Mean RF	RF RSD	Linear r^2	Quad COD	LIMIT	Q
trans-1,4-Dichloro-2-butene	0.228071	11.1			15	
Dichlorodifluoromethane (Freon 12)	0.2966425	8.9			15	
1,1-Dichloroethane	0.5196352	7.8			15	
1,2-Dichloroethane	0.2849078	6.1			15	
1,1-Dichloroethylene	0.4249356	10.2			15	
cis-1,2-Dichloroethylene	0.5271954	7.0			15	
trans-1,2-Dichloroethylene	0.4656926	9.1			15	
1,2-Dichloropropane	0.1591117	6.6			15	
1,3-Dichloropropane	0.1972388	11.5			15	
2,2-Dichloropropane	0.4089595	7.7			15	
1,1-Dichloropropene	0.1097013	7.1			15	
cis-1,3-Dichloropropene	0.1953963	12.6			15	
trans-1,3-Dichloropropene	0.182882	9.1			15	
Diethyl Ether	0.1162305	10.3			15	
Diisopropyl Ether (DIPE)	1.564535	6.6			15	
1,4-Dioxane	1.687871E-03	29.8				
Ethanol	8.937206E-03	21.6				
Ethylbenzene	1.830223	7.0			15	
Hexachlorobutadiene	0.2996889	6.7			15	
2-Hexanone (MBK)	0.1875641	6.2			15	
Iodomethane	0.3237621	10.9			15	
Isopropylbenzene (Cumene)	0.4793733	11.8			15	
p-Isopropyltoluene (p-Cymene)	1.635366	6.0			15	
Methyl Acetate	0.459939	6.6			15	
Methyl tert-Butyl Ether (MTBE)	0.6663357	2.6			15	
Methyl Cyclohexane	0.2274408	6.4			15	
Methylene Chloride	0.6275776	8.4			15	
4-Methyl-2-pentanone (MIBK)	0.2626805	5.7			15	
Naphthalene	1.12205	28.0	0.999		0.99	
n-Propylbenzene	2.160499	6.5			15	
Styrene	1.187896	8.0			15	

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Calibration:	1900195	Instrument:	GCMSVOA4
		Calibration Date:	6/3/2019 6:37:02AM

COMPOUND	Mean RF	RF RSD	Linear r^2	Quad COD	LIMIT	Q
1,1,1,2-Tetrachloroethane	0.3827312	11.3			15	
1,1,2,2-Tetrachloroethane	0.4839699	6.0			15	
Tetrachloroethylene	0.1491042	11.8			15	
Tetrahydrofuran	3.974057E-02	9.1			15	
Toluene	0.5932424	11.6			15	
1,2,3-Trichlorobenzene	0.4740036	13.4			15	
1,2,4-Trichlorobenzene	0.5480734	11.1			15	
1,3,5-Trichlorobenzene	0.5963089	11.2			15	
1,1,1-Trichloroethane	0.420453	6.5			15	
1,1,2-Trichloroethane	0.1017094	5.5			15	
Trichloroethylene	0.1815761	11.7			15	
Trichlorofluoromethane (Freon 11)	0.3755337	8.2			15	
1,2,3-Trichloropropane	0.152503	5.4			15	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1	0.2071194	6.4			15	
1,2,4-Trimethylbenzene	1.509402	6.0			15	
1,3,5-Trimethylbenzene	1.542252	6.2			15	
Vinyl Acetate	1.155388	5.5			15	
Vinyl Chloride	0.3506729	5.9			15	
m+p Xylene	1.430983	8.0			15	
o-Xylene	1.479893	9.7			15	
1,2-Dichloroethane-d4	0.5093199	1.7			15	
Toluene-d8	0.8222333	0.5			15	
4-Bromofluorobenzene	0.9207177	1.2			15	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA4	Calibration:	1900195
Lab File ID:	D19164004.D	Calibration Date:	06/03/19 06:37
Sequence:	S037092	Injection Date:	06/13/19
Lab Sample ID:	S037092-CCV1	Injection Time:	05:22

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	100	97.6	0.1323334	0.129199		-2.4	20
Acrylonitrile	A	10.0	9.70	0.1827163	0.1772766		-3.0	20
tert-Amyl Methyl Ether (TAME)	A	10.0	10.4	0.6020929	0.6230335		3.5	20
Benzene	A	10.0	9.78	1.016513	0.9936971		-2.2	20
Bromobenzene	A	10.0	9.53	0.6797344	0.6480071		-4.7	20
Bromochloromethane	A	10.0	10.4	0.1491653	0.1548255		3.8	20
Bromodichloromethane	A	10.0	10.5	0.1607757	0.1683358		4.7	20
Bromoform	A	10.0	9.83	0.2842803	0.2793696		-1.7	20
Bromomethane	A	10.0	10.9	0.2646063	0.1831888		9.4	20
2-Butanone (MEK)	A	100	100	0.2505012	0.2506694		0.07	20
tert-Butyl Alcohol (TBA)	A	100	110	5.389341E-02	5.920608E-02		9.9	20
n-Butylbenzene	A	10.0	9.55	1.498723	1.43107		-4.5	20
sec-Butylbenzene	A	10.0	10.4	0.3753634	0.3894439		3.8	20
tert-Butylbenzene	A	10.0	9.58	1.279774	1.225859		-4.2	20
tert-Butyl Ethyl Ether (TBEE)	A	10.0	10.3	0.9715114	0.9981217		2.7	20
Carbon Disulfide	A	100	97.3	0.5850267	0.5694912		-2.7	20
Carbon Tetrachloride	A	10.0	9.80	0.3674599	0.3599612		-2.0	20
Chlorobenzene	A	10.0	9.67	1.129254	1.092487		-3.3	20
Chlorodibromomethane	A	10.0	10.4	0.1469712	0.1532404		4.3	20
Chloroethane	A	10.0	9.16	0.1633779	0.1497328		-8.4	20
Chloroform	A	10.0	9.42	0.479242	0.4512782		-5.8	20
Chloromethane	A	10.0	9.68	0.6473569	0.6268152		-3.2	20
2-Chlorotoluene	A	10.0	9.62	1.266486	1.218868		-3.8	20
4-Chlorotoluene	A	10.0	9.83	1.490309	1.465399		-1.7	20
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	10.0	8.602283E-02	8.607739E-02		0.06	20
1,2-Dibromoethane (EDB)	A	10.0	10.9	0.1271825	0.1387079		9.1	20
Dibromomethane	A	10.0	10.4	8.579724E-02	8.955043E-02		4.4	20
1,2-Dichlorobenzene	A	10.0	9.56	0.8696371	0.8315482		-4.4	20
1,3-Dichlorobenzene	A	10.0	9.91	0.8855599	0.8774712		-0.9	20

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA4	Calibration:	1900195
Lab File ID:	D19164004.D	Calibration Date:	06/03/19 06:37
Sequence:	S037092	Injection Date:	06/13/19
Lab Sample ID:	S037092-CCV1	Injection Time:	05:22

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,4-Dichlorobenzene	A	10.0	9.40	0.9441266	0.887814		-6.0	20
trans-1,4-Dichloro-2-butene	A	10.0	9.58	0.228071	0.2185941		-4.2	20
Dichlorodifluoromethane (Freon 12)	A	10.0	9.05	0.2966425	0.2683542		-9.5	20
1,1-Dichloroethane	A	10.0	10.1	0.5196352	0.5230184		0.7	20
1,2-Dichloroethane	A	10.0	9.69	0.2849078	0.2761254		-3.1	20
1,1-Dichloroethylene	A	10.0	9.15	0.4249356	0.3889421		-8.5	20
cis-1,2-Dichloroethylene	A	10.0	9.94	0.5271954	0.5239764		-0.6	20
trans-1,2-Dichloroethylene	A	10.0	9.61	0.4656926	0.4477234		-3.9	20
1,2-Dichloropropane	A	10.0	10.0	0.1591117	0.1591036		-0.005	20
1,3-Dichloropropane	A	10.0	10.2	0.1972388	0.2013412		2.1	20
2,2-Dichloropropane	A	10.0	9.21	0.4089595	0.376664		-7.9	20
1,1-Dichloropropene	A	10.0	9.46	0.1097013	0.1038095		-5.4	20
cis-1,3-Dichloropropene	A	10.0	11.4	0.1953963	0.223036		14.1	20
trans-1,3-Dichloropropene	A	10.0	10.8	0.182882	0.1968031		7.6	20
Diethyl Ether	A	10.0	8.98	0.1162305	0.1044146		-10.2	20
Diisopropyl Ether (DIPE)	A	10.0	9.81	1.564535	1.534981		-1.9	20
1,4-Dioxane	A	100	104	1.687871E-03	1.77975E-03		4.2	20
Ethylbenzene	A	10.0	9.67	1.830223	1.769784		-3.3	20
Hexachlorobutadiene	A	10.0	10.0	0.2996889	0.3005723		0.3	20
2-Hexanone (MBK)	A	100	105	0.1875641	0.1966948		4.9	20
Isopropylbenzene (Cumene)	A	10.0	9.72	0.4793733	0.4658495		-2.8	20
p-Isopropyltoluene (p-Cymene)	A	10.0	9.93	1.635366	1.623821		-0.7	20
Methyl Acetate	A	10.0	10.2	0.459939	0.4711199		2.4	20
Methyl tert-Butyl Ether (MTBE)	A	10.0	10.2	0.6663357	0.6788271		1.9	20
Methyl Cyclohexane	A	10.0	9.68	0.2274408	0.2201174		-3.2	20
Methylene Chloride	A	10.0	9.93	0.6275776	0.6233991		-0.7	20
4-Methyl-2-pentanone (MIBK)	A	100	104	0.2626805	0.2722298		3.6	20
Naphthalene	L	10.0	9.27	1.12205	1.243773		-7.3	20
n-Propylbenzene	A	10.0	9.68	2.160499	2.091988		-3.2	20

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA4	Calibration:	1900195
Lab File ID:	D19164004.D	Calibration Date:	06/03/19 06:37
Sequence:	S037092	Injection Date:	06/13/19
Lab Sample ID:	S037092-CCV1	Injection Time:	05:22

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Styrene	A	10.0	10.2	1.187896	1.205491		1.5	20
1,1,1,2-Tetrachloroethane	A	10.0	10.4	0.3827312	0.3982164		4.0	20
1,1,2,2-Tetrachloroethane	A	10.0	10.4	0.4839699	0.5017063		3.7	20
Tetrachloroethylene	A	10.0	10.4	0.1491042	0.1556567		4.4	20
Tetrahydrofuran	A	10.0	10.4	3.974057E-02	4.123386E-02		3.8	20
Toluene	A	10.0	9.54	0.5932424	0.5658219		-4.6	20
1,2,3-Trichlorobenzene	A	10.0	10.3	0.4740036	0.487847		2.9	20
1,2,4-Trichlorobenzene	A	10.0	9.97	0.5480734	0.5463211		-0.3	20
1,3,5-Trichlorobenzene	A	10.0	10.2	0.5963089	0.6100003		2.3	20
1,1,1-Trichloroethane	A	10.0	9.43	0.420453	0.396367		-5.7	20
1,1,2-Trichloroethane	A	10.0	9.93	0.1017094	0.1010344		-0.7	20
Trichloroethylene	A	10.0	10.1	0.1815761	0.184176		1.4	20
Trichlorofluoromethane (Freon 11)	A	10.0	9.77	0.3755337	0.3670709		-2.3	20
1,2,3-Trichloropropane	A	10.0	9.98	0.152503	0.1522166		-0.2	20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	9.41	0.2071194	0.1948997		-5.9	20
1,2,4-Trimethylbenzene	A	10.0	9.95	1.509402	1.501194		-0.5	20
1,3,5-Trimethylbenzene	A	10.0	9.83	1.542252	1.516009		-1.7	20
Vinyl Chloride	A	10.0	9.22	0.3506729	0.3231646		-7.8	20
m+p Xylene	A	20.0	19.8	1.430983	1.420415		-0.7	20
o-Xylene	A	10.0	9.58	1.479893	1.418145		-4.2	20
1,2-Dichloroethane-d4	A	25.0	23.9	0.5093199	0.4875908		-4.3	
Toluene-d8	A	25.0	25.1	0.8222333	0.8249032		0.3	
4-Bromofluorobenzene	A	25.0	25.4	0.9207177	0.9369434		1.8	

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

* Values outside of QC limits

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA4	Calibration:	1900195
Lab File ID:	D19164034.D	Calibration Date:	06/03/19 06:37
Sequence:	S037093	Injection Date:	06/13/19
Lab Sample ID:	S037093-CCV1	Injection Time:	19:00

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	100	95.1	0.1323334	0.1258151		-4.9	20
Acrylonitrile	A	10.0	9.52	0.1827163	0.1739593		-4.8	20
tert-Amyl Methyl Ether (TAME)	A	10.0	10.1	0.6020929	0.6066941		0.8	20
Benzene	A	10.0	9.15	1.016513	0.9296117		-8.5	20
Bromobenzene	A	10.0	9.41	0.6797344	0.6398628		-5.9	20
Bromochloromethane	A	10.0	9.93	0.1491653	0.1481323		-0.7	20
Bromodichloromethane	A	10.0	10.5	0.1607757	0.1688132		5.0	20
Bromoform	A	10.0	9.22	0.2842803	0.2621377		-7.8	20
Bromomethane	A	10.0	10.1	0.2646063	0.1718389		1.3	20
2-Butanone (MEK)	A	100	97.1	0.2505012	0.2433224		-2.9	20
tert-Butyl Alcohol (TBA)	A	100	121	5.389341E-02	6.496445E-02		20.5	20 *
n-Butylbenzene	A	10.0	8.85	1.498723	1.326568		-11.5	20
sec-Butylbenzene	A	10.0	8.95	0.3753634	0.3359157		-10.5	20
tert-Butylbenzene	A	10.0	8.97	1.279774	1.147674		-10.3	20
tert-Butyl Ethyl Ether (TBEE)	A	10.0	9.61	0.9715114	0.9339264		-3.9	20
Carbon Disulfide	A	100	92.2	0.5850267	0.5394107		-7.8	20
Carbon Tetrachloride	A	10.0	9.62	0.3674599	0.3533183		-3.8	20
Chlorobenzene	A	10.0	9.18	1.129254	1.03612		-8.2	20
Chlorodibromomethane	A	10.0	9.85	0.1469712	0.1448239		-1.5	20
Chloroethane	A	10.0	8.80	0.1633779	0.1437313		-12.0	20
Chloroform	A	10.0	9.11	0.479242	0.436618		-8.9	20
Chloromethane	A	10.0	9.00	0.6473569	0.5826916		-10.0	20
2-Chlorotoluene	A	10.0	8.96	1.266486	1.134649		-10.4	20
4-Chlorotoluene	A	10.0	8.95	1.490309	1.333272		-10.5	20
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	9.19	8.602283E-02	7.904283E-02		-8.1	20
1,2-Dibromoethane (EDB)	A	10.0	10.9	0.1271825	0.1383969		8.8	20
Dibromomethane	A	10.0	9.65	8.579724E-02	8.281228E-02		-3.5	20
1,2-Dichlorobenzene	A	10.0	9.12	0.8696371	0.7934475		-8.8	20
1,3-Dichlorobenzene	A	10.0	8.75	0.8855599	0.774724		-12.5	20

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA4	Calibration:	1900195
Lab File ID:	D19164034.D	Calibration Date:	06/03/19 06:37
Sequence:	S037093	Injection Date:	06/13/19
Lab Sample ID:	S037093-CCV1	Injection Time:	19:00

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,4-Dichlorobenzene	A	10.0	8.84	0.9441266	0.8348043		-11.6	20
trans-1,4-Dichloro-2-butene	A	10.0	8.88	0.228071	0.2024678		-11.2	20
Dichlorodifluoromethane (Freon 12)	A	10.0	8.46	0.2966425	0.2508486		-15.4	20
1,1-Dichloroethane	A	10.0	9.98	0.5196352	0.5186357		-0.2	20
1,2-Dichloroethane	A	10.0	9.66	0.2849078	0.2752244		-3.4	20
1,1-Dichloroethylene	A	10.0	8.98	0.4249356	0.3815985		-10.2	20
cis-1,2-Dichloroethylene	A	10.0	9.61	0.5271954	0.506616		-3.9	20
trans-1,2-Dichloroethylene	A	10.0	9.12	0.4656926	0.4246846		-8.8	20
1,2-Dichloropropane	A	10.0	9.91	0.1591117	0.1576198		-0.9	20
1,3-Dichloropropane	A	10.0	9.98	0.1972388	0.1967549		-0.2	20
2,2-Dichloropropane	A	10.0	8.54	0.4089595	0.349324		-14.6	20
1,1-Dichloropropene	A	10.0	9.46	0.1097013	0.1038258		-5.4	20
cis-1,3-Dichloropropene	A	10.0	10.2	0.1953963	0.1988475		1.8	20
trans-1,3-Dichloropropene	A	10.0	9.24	0.182882	0.168946		-7.6	20
Diethyl Ether	A	10.0	10.1	0.1162305	0.1172632		0.9	20
Diisopropyl Ether (DIPE)	A	10.0	9.59	1.564535	1.500234		-4.1	20
1,4-Dioxane	A	100	106	1.687871E-03	1.824311E-03		6.3	20
Ethylbenzene	A	10.0	9.10	1.830223	1.664794		-9.0	20
Hexachlorobutadiene	A	10.0	9.36	0.2996889	0.280614		-6.4	20
2-Hexanone (MBK)	A	100	98.1	0.1875641	0.1839781		-1.9	20
Isopropylbenzene (Cumene)	A	10.0	9.35	0.4793733	0.4480076		-6.5	20
p-Isopropyltoluene (p-Cymene)	A	10.0	9.00	1.635366	1.472295		-10.0	20
Methyl Acetate	A	10.0	10.2	0.459939	0.4690651		2.0	20
Methyl tert-Butyl Ether (MTBE)	A	10.0	9.69	0.6663357	0.6460078		-3.1	20
Methyl Cyclohexane	A	10.0	9.41	0.2274408	0.2139684		-5.9	20
Methylene Chloride	A	10.0	10.0	0.6275776	0.6289213		0.2	20
4-Methyl-2-pentanone (MIBK)	A	100	100	0.2626805	0.2626701		-0.004	20
Naphthalene	L	10.0	8.57	1.12205	1.132144		-14.3	20
n-Propylbenzene	A	10.0	9.15	2.160499	1.977417		-8.5	20

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA4	Calibration:	1900195
Lab File ID:	D19164034.D	Calibration Date:	06/03/19 06:37
Sequence:	S037093	Injection Date:	06/13/19
Lab Sample ID:	S037093-CCV1	Injection Time:	19:00

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Styrene	A	10.0	9.31	1.187896	1.106425		-6.9	20
1,1,1,2-Tetrachloroethane	A	10.0	10.0	0.3827312	0.3837335		0.3	20
1,1,2,2-Tetrachloroethane	A	10.0	9.79	0.4839699	0.4737908		-2.1	20
Tetrachloroethylene	A	10.0	9.64	0.1491042	0.1437361		-3.6	20
Tetrahydrofuran	A	10.0	9.93	3.974057E-02	3.946168E-02		-0.7	20
Toluene	A	10.0	9.08	0.5932424	0.5384417		-9.2	20
1,2,3-Trichlorobenzene	A	10.0	9.03	0.4740036	0.4279477		-9.7	20
1,2,4-Trichlorobenzene	A	10.0	8.54	0.5480734	0.4681534		-14.6	20
1,3,5-Trichlorobenzene	A	10.0	9.68	0.5963089	0.5772798		-3.2	20
1,1,1-Trichloroethane	A	10.0	9.09	0.420453	0.3821779		-9.1	20
1,1,2-Trichloroethane	A	10.0	10.4	0.1017094	0.1052986		3.5	20
Trichloroethylene	A	10.0	9.39	0.1815761	0.1705735		-6.1	20
Trichlorofluoromethane (Freon 11)	A	10.0	9.26	0.3755337	0.3476474		-7.4	20
1,2,3-Trichloropropane	A	10.0	10.0	0.152503	0.1530652		0.4	20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	8.99	0.2071194	0.1861763		-10.1	20
1,2,4-Trimethylbenzene	A	10.0	8.77	1.509402	1.323571		-12.3	20
1,3,5-Trimethylbenzene	A	10.0	8.93	1.542252	1.377771		-10.7	20
Vinyl Chloride	A	10.0	8.71	0.3506729	0.3055476		-12.9	20
m+p Xylene	A	20.0	18.4	1.430983	1.319701		-7.8	20
o-Xylene	A	10.0	8.81	1.479893	1.303161		-11.9	20
1,2-Dichloroethane-d4	A	25.0	23.9	0.5093199	0.4869184		-4.4	
Toluene-d8	A	25.0	24.9	0.8222333	0.8177366		-0.5	
4-Bromofluorobenzene	A	25.0	24.7	0.9207177	0.9108129		-1.1	

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

* Values outside of QC limits

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QA/QC Review of Method 8270D Semi-Volatiles Data for Con-Test Analytical Laboratory, Work Order No: 19F0630

16 Soil Samples and 1 Field Duplicate Collected June 10-12, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: Samples were extracted and analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The average RRF for applicable compounds were above the method minimums, as required.

The average RRFs for target compounds were above the allowable minimum (0.010), as required.

The %RSD for benzidine was above the allowable maximum (30%) for GCMSSV3 on 05-21-19. Positive results for benzidine should be considered estimated (J) in associated samples.

Continuing Calibration: The RRFs for applicable compounds were above the method minimums, as required. The %Ds for di-n-octylphthalate, hexachlorocyclopentadiene, and 2,4-dinitrophenol were above the method maximum on 06-17-19 (S037217-CCV1). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.010), as required.

The %Ds for benzidine, di-n-octyl phthalate, and hexachlorocyclopentadiene were above the allowable maximum (25%) on 06-17-19 (S037217-CCV1). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analyses of the method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

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Surrogate Recovery: The surrogate recoveries were within control limits for the soil samples.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum, but 2 of 2 percent recoveries for benzoic acid were below QC limits, but not below 10% for soil samples B233189-BS1 and B233189-BSD1. Positive results for benzoic acid should be considered estimated, biased low (J-) and "not detected" results estimated (UJ) in associated soil samples.

Field Duplicate: The analyses of soil field duplicate pair SB-5 (0-2)/SB-Dup reported target compounds as not detected in one or both samples; therefore; valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compounds and surrogates were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 3546
Batch:	B233189	Laboratory ID:	B233189-BS1
Column:		Initial/Final:	30 g / 1 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.		QC LIMITS REC.
Acenaphthene	1.67	1.32	79.5		40 - 140
Acenaphthylene	1.67	1.37	82.4		40 - 140
Acetophenone	1.67	1.01	60.8		40 - 140
Aniline	1.67	0.920	55.2		10 - 140
Anthracene	1.67	1.48	88.5		40 - 140
Benzidine	1.67	1.72	104		40 - 140
Benzo(a)anthracene	1.67	1.43	86.1		40 - 140
Benzo(a)pyrene	1.67	1.52	91.2		40 - 140
Benzo(b)fluoranthene	1.67	1.47	88.0		40 - 140
Benzo(g,h,i)perylene	1.67	1.33	79.6		40 - 140
Benzo(k)fluoranthene	1.67	1.50	90.1		40 - 140
Benzoic Acid	1.67	0.354	21.2	*	30 - 130
Bis(2-chloroethoxy)methane	1.67	1.45	86.8		40 - 140
Bis(2-chloroethyl)ether	1.67	1.08	64.8		40 - 140
Bis(2-chloroisopropyl)ether	1.67	1.32	79.2		40 - 140
Bis(2-Ethylhexyl)phthalate	1.67	1.24	74.6		40 - 140
4-Bromophenylphenylether	1.67	1.56	93.7		40 - 140
Butylbenzylphthalate	1.67	1.35	80.8		40 - 140
Carbazole	1.67	1.46	87.4		40 - 140
4-Chloroaniline	1.67	1.05	63.2		10 - 140
4-Chloro-3-methylphenol	1.67	1.32	78.9		30 - 130
2-Chloronaphthalene	1.67	1.30	77.7		40 - 140
2-Chlorophenol	1.67	1.26	75.8		30 - 130
4-Chlorophenylphenylether	1.67	1.49	89.2		40 - 140
Chrysene	1.67	1.40	84.3		40 - 140
Dibenz(a,h)anthracene	1.67	1.26	75.4		40 - 140
Dibenzofuran	1.67	1.40	84.0		40 - 140
Di-n-butylphthalate	1.67	1.39	83.7		40 - 140
1,2-Dichlorobenzene	1.67	1.16	69.4		40 - 140
1,3-Dichlorobenzene	1.67	1.12	67.1		40 - 140
1,4-Dichlorobenzene	1.67	1.14	68.1		40 - 140
3,3-Dichlorobenzidine	1.67	1.24	74.3		20 - 140
2,4-Dichlorophenol	1.67	1.51	90.6		30 - 130
Diethylphthalate	1.67	1.35	81.1		40 - 140
2,4-Dimethylphenol	1.67	1.36	81.4		30 - 130
Dimethylphthalate	1.67	1.36	81.8		40 - 140
4,6-Dinitro-2-methylphenol	1.67	1.20	72.3		30 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 3546
Batch:	B233189	Laboratory ID:	B233189-BS1
Column:		Initial/Final:	30 g / 1 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
2,4-Dinitrophenol	1.67	0.695	41.7	30 - 130
2,4-Dinitrotoluene	1.67	1.43	85.8	40 - 140
2,6-Dinitrotoluene	1.67	1.52	91.1	40 - 140
Di-n-octylphthalate	1.67	1.34	80.4	40 - 140
1,2-Diphenylhydrazine/Azobenzene	1.67	1.35	81.2	40 - 140
Fluoranthene	1.67	1.47	88.5	40 - 140
Fluorene	1.67	1.41	84.8	40 - 140
Hexachlorobenzene	1.67	1.53	91.7	40 - 140
Hexachlorobutadiene	1.67	1.14	68.2	40 - 140
Hexachlorocyclopentadiene	1.67	1.01	60.9	40 - 140
Hexachloroethane	1.67	1.01	60.4	40 - 140
Indeno(1,2,3-cd)pyrene	1.67	1.30	78.0	40 - 140
Isophorone	1.67	1.32	79.3	40 - 140
1-Methylnaphthalene	1.67	1.34	80.4	40 - 140
2-Methylnaphthalene	1.67	1.36	81.9	40 - 140
2-Methylphenol	1.67	1.33	79.8	30 - 130
3/4-Methylphenol	1.67	1.24	74.5	30 - 130
Naphthalene	1.67	1.22	73.2	40 - 140
2-Nitroaniline	1.67	1.15	68.8	40 - 140
3-Nitroaniline	1.67	1.32	79.2	30 - 140
4-Nitroaniline	1.67	1.47	88.1	40 - 140
Nitrobenzene	1.67	1.12	66.9	40 - 140
2-Nitrophenol	1.67	1.29	77.2	30 - 130
4-Nitrophenol	1.67	1.11	66.4	30 - 130
N-Nitrosodimethylamine	1.67	0.983	59.0	40 - 140
N-Nitrosodiphenylamine/Diphenylamine	1.67	1.63	98.0	40 - 140
N-Nitrosodi-n-propylamine	1.67	1.08	64.6	40 - 140
Pentachloronitrobenzene	1.67	1.45	86.8	40 - 140
Pentachlorophenol	1.67	1.19	71.1	30 - 130
Phenanthrene	1.67	1.50	90.2	40 - 140
Phenol	1.67	1.22	73.3	30 - 130
Pyrene	1.67	1.50	90.2	40 - 140
Pyridine	1.67	0.734	44.1	30 - 140
1,2,4,5-Tetrachlorobenzene	1.67	1.16	69.8	40 - 140
1,2,4-Trichlorobenzene	1.67	1.26	75.7	40 - 140
2,4,5-Trichlorophenol	1.67	1.47	88.2	30 - 130
2,4,6-Trichlorophenol	1.67	1.45	86.8	30 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 3546
Batch:	B233189	Laboratory ID:	B233189-BS1
Column:		Initial/Final:	30 g / 1 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1.67	1.44	86.3	8.25	30	40 - 140
Acenaphthylene	1.67	1.53	92.0	11.0	30	40 - 140
Acetophenone	1.67	1.10	65.9	8.18	30	40 - 140
Aniline	1.67	1.01	60.5	9.10	50	10 - 140
Anthracene	1.67	1.66	99.9	12.0	30	40 - 140
Benzidine	1.67	2.22	133	25.2	30	40 - 140
Benzo(a)anthracene	1.67	1.64	98.3	13.3	30	40 - 140
Benzo(a)pyrene	1.67	1.77	106	15.3	30	40 - 140
Benzo(b)fluoranthene	1.67	1.67	100	13.1	30	40 - 140
Benzo(g,h,i)perylene	1.67	1.57	94.2	16.8	30	40 - 140
Benzo(k)fluoranthene	1.67	1.70	102	12.3	30	40 - 140
Benzoic Acid	1.67	0.333	20.0 *	6.12	50	30 - 130
Bis(2-chloroethoxy)methane	1.67	1.58	94.9	8.90	30	40 - 140
Bis(2-chloroethyl)ether	1.67	1.23	73.7	12.9	30	40 - 140
Bis(2-chloroisopropyl)ether	1.67	1.46	87.5	9.98	30	40 - 140
Bis(2-Ethylhexyl)phthalate	1.67	1.48	88.6	17.1	30	40 - 140
4-Bromophenylphenylether	1.67	1.77	106	12.7	30	40 - 140
Butylbenzylphthalate	1.67	1.56	93.5	14.6	30	40 - 140
Carbazole	1.67	1.64	98.5	12.0	30	40 - 140
4-Chloroaniline	1.67	1.15	69.1	8.92	30	10 - 140
4-Chloro-3-methylphenol	1.67	1.46	87.7	10.5	30	30 - 130
2-Chloronaphthalene	1.67	1.45	86.8	11.0	30	40 - 140
2-Chlorophenol	1.67	1.37	82.0	7.89	30	30 - 130
4-Chlorophenylphenylether	1.67	1.66	99.7	11.1	30	40 - 140
Chrysene	1.67	1.63	97.9	15.0	30	40 - 140
Dibenz(a,h)anthracene	1.67	1.45	87.0	14.2	30	40 - 140
Dibenzofuran	1.67	1.55	93.2	10.4	30	40 - 140
Di-n-butylphthalate	1.67	1.56	93.7	11.3	30	40 - 140
1,2-Dichlorobenzene	1.67	1.29	77.4	11.0	30	40 - 140
1,3-Dichlorobenzene	1.67	1.23	74.0	9.81	30	40 - 140
1,4-Dichlorobenzene	1.67	1.27	76.0	10.9	30	40 - 140
3,3-Dichlorobenzidine	1.67	1.40	84.1	12.4	50	20 - 140
2,4-Dichlorophenol	1.67	1.66	99.6	9.40	30	30 - 130
Diethylphthalate	1.67	1.51	90.7	11.2	30	40 - 140
2,4-Dimethylphenol	1.67	1.54	92.3	12.5	30	30 - 130
Dimethylphthalate	1.67	1.55	92.8	12.6	30	40 - 140

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 3546
Batch:	B233189	Laboratory ID:	B233189-BSD1
Column:		Initial/Final:	30 g / 1 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
4,6-Dinitro-2-methylphenol	1.67	1.29	77.2	6.66	30	30 - 130
2,4-Dinitrophenol	1.67	0.688	41.3	0.916	30	30 - 130
2,4-Dinitrotoluene	1.67	1.64	98.1	13.4	30	40 - 140
2,6-Dinitrotoluene	1.67	1.72	103	12.3	30	40 - 140
Di-n-octylphthalate	1.67	1.52	91.3	12.7	30	40 - 140
1,2-Diphenylhydrazine/Azobenzene	1.67	1.54	92.2	12.7	30	40 - 140
Fluoranthene	1.67	1.69	101	13.7	30	40 - 140
Fluorene	1.67	1.59	95.5	12.0	30	40 - 140
Hexachlorobenzene	1.67	1.70	102	10.4	30	40 - 140
Hexachlorobutadiene	1.67	1.24	74.7	9.04	30	40 - 140
Hexachlorocyclopentadiene	1.67	1.16	69.5	13.3	30	40 - 140
Hexachloroethane	1.67	1.13	67.7	11.4	30	40 - 140
Indeno(1,2,3-cd)pyrene	1.67	1.51	90.7	15.2	30	40 - 140
Isophorone	1.67	1.44	86.4	8.57	30	40 - 140
1-Methylnaphthalene	1.67	1.46	87.8	8.80	30	40 - 140
2-Methylnaphthalene	1.67	1.49	89.5	8.89	30	40 - 140
2-Methylphenol	1.67	1.44	86.2	7.71	30	30 - 130
3/4-Methylphenol	1.67	1.39	83.5	11.4	30	30 - 130
Naphthalene	1.67	1.31	78.5	6.96	30	40 - 140
2-Nitroaniline	1.67	1.29	77.7	12.2	30	40 - 140
3-Nitroaniline	1.67	1.48	88.9	11.6	30	30 - 140
4-Nitroaniline	1.67	1.63	97.9	10.6	30	40 - 140
Nitrobenzene	1.67	1.21	72.6	8.17	30	40 - 140
2-Nitrophenol	1.67	1.39	83.5	7.79	30	30 - 130
4-Nitrophenol	1.67	1.22	73.2	9.83	50	30 - 130
N-Nitrosodimethylamine	1.67	1.08	64.9	9.56	30	40 - 140
N-Nitrosodiphenylamine/Diphenylamine	1.67	1.85	111	12.5	30	40 - 140
N-Nitrosodi-n-propylamine	1.67	1.21	72.5	11.6	30	40 - 140
Pentachloronitrobenzene	1.67	1.61	96.6	10.6	30	40 - 140
Pentachlorophenol	1.67	1.27	76.5	7.26	30	30 - 130
Phenanthrene	1.67	1.68	101	10.9	30	40 - 140
Phenol	1.67	1.34	80.5	9.34	30	30 - 130
Pyrene	1.67	1.73	104	14.3	30	40 - 140
Pyridine	1.67	0.812	48.7	10.0	30	30 - 140
1,2,4,5-Tetrachlorobenzene	1.67	1.31	78.6	11.9	30	40 - 140

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Preparation:	SW-846 3546
Batch:	B233189	Laboratory ID:	B233189-BSD1
Column:		Initial/Final:	30 g / 1 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCSD CONCENTRATION (mg/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,2,4-Trichlorobenzene	1.67	1.39	83.4	9.65	30	40 - 140
2,4,5-Trichlorophenol	1.67	1.66	99.4	12.0	30	30 - 130
2,4,6-Trichlorophenol	1.67	1.59	95.5	9.54	30	30 - 130

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Calibration:	1900177	Instrument:	GCMSSV3
		Calibration Date:	5/21/2019 2:49:23PM

COMPOUND	Mean RF	RF RSD	Linear r^2	Quad COD	LIMIT	Q
Acenaphthene	1.326617	6.5			20	
Acenaphthylene	1.957101	5.0			20	
Acetophenone	2.156972	3.5			20	
Aniline	0.735609	2.4			20	
Anthracene	1.224277	5.5			20	
Benzidine	0.2766424	37.1			20	*
Benzo(a)anthracene	1.436351	4.7			20	
Benzo(a)pyrene	1.204468	8.0			20	
Benzo(b)fluoranthene	1.3817	9.2			20	
Benzo(g,h,i)perylene	1.011072	6.0			20	
Benzo(k)fluoranthene	1.285616	7.3			20	
Benzoic Acid	0.2107174	15.8			20	
Bis(2-chloroethoxy)methane	0.3819429	4.9			20	
Bis(2-chloroethyl)ether	0.9697521	3.1			20	
Bis(2-chloroisopropyl)ether	1.530294	1.8			20	
Bis(2-Ethylhexyl)phthalate	1.047889	7.6			20	
4-Bromophenylphenylether	0.2290617	6.4			20	
Butylbenzylphthalate	0.7082782	5.8			20	
Carbazole	1.11974	8.1			20	
4-Chloroaniline	0.4255763	4.2			20	
4-Chloro-3-methylphenol	0.3374644	4.4			20	
2-Chloronaphthalene	1.423648	7.2			20	
2-Chlorophenol	1.482924	5.1			20	
4-Chlorophenylphenylether	0.7051844	5.6			20	
Chrysene	1.389242	4.2			20	
Dibenz(a,h)anthracene	1.061311	6.9			20	
Dibenzofuran	1.797292	4.2			20	
Di-n-butylphthalate	1.376829	6.6			20	
1,2-Dichlorobenzene	1.53746	5.1			20	
1,3-Dichlorobenzene	1.614057	4.4			20	
1,4-Dichlorobenzene	1.65559	4.7			20	

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Calibration:	1900177	Instrument:	GCMSSV3
		Calibration Date:	5/21/2019 2:49:23PM

COMPOUND	Mean RF	RF RSD	Linear r^2	Quad COD	LIMIT	Q
3,3-Dichlorobenzidine	0.4870686	3.9			20	
2,4-Dichlorophenol	0.3093109	6.9			20	
Diethylphthalate	1.361526	3.7			20	
2,4-Dimethylphenol	0.3472814	6.6			20	
Dimethylphthalate	1.412595	7.8			20	
4,6-Dinitro-2-methylphenol	0.1503892	17.3	0.996		0.99	
2,4-Dinitrophenol	0.1655479	27.0	0.993		0.99	
2,4-Dinitrotoluene	0.4036897	8.5			20	
2,6-Dinitrotoluene	0.2990955	7.3			20	
Di-n-octylphthalate	1.61347	7.2			20	
1,2-Diphenylhydrazine/Azobenzene	0.8356596	2.9			20	
Fluoranthene	1.296694	9.8			20	
Fluorene	1.431087	4.6			20	
Hexachlorobenzene	0.2293528	8.2			20	
Hexachlorobutadiene	0.2076504	9.6			20	
Hexachlorocyclopentadiene	0.4373971	14.2			20	
Hexachloroethane	0.6830883	9.1			20	
Indeno(1,2,3-cd)pyrene	1.021085	5.5			20	
Isophorone	0.7069297	2.3			20	
1-Methylnaphthalene	0.7183659	3.9			20	
2-Methylnaphthalene	0.7571111	4.3			20	
2-Methylphenol	1.392749	5.8			20	
3/4-Methylphenol	1.637645	6.4			20	
Naphthalene	1.131842	7.2			20	
2-Nitroaniline	0.4193269	4.3			20	
3-Nitroaniline	0.3348415	3.3			20	
4-Nitroaniline	0.3668095	8.2			20	
Nitrobenzene	0.4187957	3.4			20	
2-Nitrophenol	0.202393	8.1			20	
4-Nitrophenol	0.215869	9.2			20	
N-Nitrosodimethylamine	0.6361175	6.6			20	

6 - FORM VI
INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Calibration:	1900177	Instrument:	GCMSSV3
		Calibration Date:	5/21/2019 2:49:23PM

COMPOUND	Mean RF	RF RSD	Linear r^2	Quad COD	LIMIT	Q
N-Nitrosodiphenylamine/Diphenylamine	0.6713072	4.3			20	
N-Nitrosodi-n-propylamine	1.183383	2.2			20	
Pentachloronitrobenzene	4.032671E-02	11.4			20	
Pentachlorophenol	0.1624133	17.6			20	
Phenanthrene	1.193216	4.4			20	
Phenol	1.91664	7.4			20	
Pyrene	1.532277	3.0			20	
Pyridine	1.279631	5.6			20	
1,2,4,5-Tetrachlorobenzene	0.6240599	7.9			20	
1,2,4-Trichlorobenzene	0.3397564	6.8			20	
2,4,5-Trichlorophenol	0.4099094	7.6			20	
2,4,6-Trichlorophenol	0.4038475	8.0			20	
2-Fluorophenol	1.268022	12.3			20	
Phenol-d6	1.679197	12.0			20	
Nitrobenzene-d5	0.3903826	12.2			20	
2-Fluorobiphenyl	1.043347	12.8			20	
2,4,6-Tribromophenol	0.1663675	13.3			20	
p-Terphenyl-d14	0.7193028	12.5			20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSSV2	Calibration:	1900123
Lab File ID:	B1916810.D	Calibration Date:	04/16/19 11:28
Sequence:	S037217	Injection Date:	06/17/19
Lab Sample ID:	S037217-CCV1	Injection Time:	14:39

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	50.0	44.8	1.385131	1.239717		-10.5	20	
Acenaphthylene	A	50.0	47.9	2.076328	1.989986		-4.2	20	
Acetophenone	A	50.0	47.5	2.02028	1.920709		-4.9	20	
Aniline	A	50.0	47.2	0.6919596	0.6531058		-5.6	20	
Anthracene	A	50.0	47.2	1.285873	1.21287		-5.7	20	
Benzidine	A	50.0	37.2	0.352346	0.2619986		-25.6	20	*
Benzo(a)anthracene	A	50.0	48.7	1.378729	1.342498		-2.6	20	
Benzo(a)pyrene	A	50.0	45.1	1.296159	1.168945		-9.8	20	
Benzo(b)fluoranthene	A	50.0	46.6	1.417292	1.321167		-6.8	20	
Benzo(g,h,i)perylene	A	50.0	48.7	1.265354	1.232724		-2.6	20	
Benzo(k)fluoranthene	A	50.0	46.3	1.359019	1.257992		-7.4	20	
Benzoic Acid	L	50.0	43.5	0.2737345	0.2382358		-13.0	20	
Bis(2-chloroethoxy)methane	A	50.0	49.2	0.3829404	0.3768225		-1.6	20	
Bis(2-chloroethyl)ether	A	50.0	46.7	0.920287	0.8599865		-6.6	20	
Bis(2-chloroisopropyl)ether	A	50.0	44.1	1.717996	1.515927		-11.8	20	
Bis(2-Ethylhexyl)phthalate	A	50.0	42.4	1.048522	0.8897905		-15.1	20	
4-Bromophenylphenylether	A	50.0	47.3	0.2304928	0.2181526		-5.4	20	
Butylbenzylphthalate	A	50.0	44.4	0.7261379	0.6455085		-11.1	20	
Carbazole	A	50.0	46.1	1.244071	1.14779		-7.7	20	
4-Chloroaniline	A	50.0	46.6	0.4692082	0.4368008		-6.9	20	
4-Chloro-3-methylphenol	A	50.0	48.8	0.320888	0.3128703		-2.5	20	
2-Chloronaphthalene	A	50.0	47.1	1.50474	1.418439		-5.7	20	
2-Chlorophenol	A	50.0	46.6	1.627012	1.515119		-6.9	20	
4-Chlorophenylphenylether	A	50.0	48.6	0.6701513	0.6518211		-2.7	20	
Chrysene	A	50.0	52.6	1.336921	1.406077		5.2	20	
Dibenz(a,h)anthracene	A	50.0	51.9	1.171858	1.216692		3.8	20	
Dibenzofuran	A	50.0	46.6	1.919157	1.790229		-6.7	20	
Di-n-butylphthalate	A	50.0	44.8	1.480857	1.326585		-10.4	20	
1,2-Dichlorobenzene	A	50.0	48.4	1.63882	1.585621		-3.2	20	
1,3-Dichlorobenzene	A	50.0	48.6	1.700465	1.65324		-2.8	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSSV2	Calibration:	1900123
Lab File ID:	B1916810.D	Calibration Date:	04/16/19 11:28
Sequence:	S037217	Injection Date:	06/17/19
Lab Sample ID:	S037217-CCV1	Injection Time:	14:39

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,4-Dichlorobenzene	A	50.0	48.0	1.753896	1.682157		-4.1	20	
3,3-Dichlorobenzidine	A	50.0	50.5	0.4621159	0.4663363		0.9	20	
2,4-Dichlorophenol	A	50.0	45.7	0.3359306	0.3068142		-8.7	20	
Diethylphthalate	A	50.0	47.9	1.372657	1.314134		-4.3	20	
2,4-Dimethylphenol	A	50.0	46.3	0.357435	0.3308403		-7.4	20	
Dimethylphthalate	A	50.0	47.7	1.435065	1.368921		-4.6	20	
4,6-Dinitro-2-methylphenol	L	50.0	42.8	0.1744732	0.1555487		-14.3	20	
2,4-Dinitrophenol	L	50.0	37.5	0.2164078	0.1643441		-25.0	20	*
2,4-Dinitrotoluene	A	50.0	49.9	0.441122	0.4402987		-0.2	20	
2,6-Dinitrotoluene	A	50.0	49.7	0.3357086	0.3338091		-0.6	20	
Di-n-octylphthalate	A	50.0	37.4	1.771405	1.325192		-25.2	20	*
1,2-Diphenylhydrazine/Azobenzene	A	50.0	48.6	0.7725604	0.7505916		-2.8	20	
Fluoranthene	A	50.0	45.6	1.355919	1.237876		-8.7	20	
Fluorene	A	50.0	45.9	1.516701	1.393297		-8.1	20	
Hexachlorobenzene	A	50.0	50.5	0.2338756	0.2363976		1.1	20	
Hexachlorobutadiene	A	50.0	50.3	0.1840422	0.1850915		0.6	20	
Hexachlorocyclopentadiene	A	50.0	29.4	0.402534	0.2370907		-41.1	20	*
Hexachloroethane	A	50.0	46.4	0.6866167	0.6368106		-7.3	20	
Indeno(1,2,3-cd)pyrene	A	50.0	43.7	1.183535	1.03428		-12.6	20	
Isophorone	A	50.0	48.6	0.6486237	0.6310393		-2.7	20	
1-Methylnaphthalene	A	50.0	47.9	0.750515	0.7185518		-4.3	20	
2-Methylnaphthalene	A	50.0	44.1	0.7861866	0.694072		-11.7	20	
2-Methylphenol	A	50.0	44.7	1.433403	1.281713		-10.6	20	
3/4-Methylphenol	A	100	95.5	1.577391	1.506948		-4.5	20	
Naphthalene	A	50.0	45.8	1.182004	1.082051		-8.5	20	
2-Nitroaniline	A	50.0	47.4	0.3666637	0.3475609		-5.2	20	
3-Nitroaniline	A	50.0	47.2	0.3866479	0.3649695		-5.6	20	
4-Nitroaniline	A	50.0	46.0	0.4284421	0.3944669		-7.9	20	
Nitrobenzene	A	50.0	50.4	0.3683338	0.3715401		0.9	20	
2-Nitrophenol	A	50.0	47.4	0.2262623	0.2143312		-5.3	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSSV2	Calibration:	1900123
Lab File ID:	B1916810.D	Calibration Date:	04/16/19 11:28
Sequence:	S037217	Injection Date:	06/17/19
Lab Sample ID:	S037217-CCV1	Injection Time:	14:39

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
4-Nitrophenol	A	50.0	54.8	0.1720463	0.1886395		9.6	20
N-Nitrosodimethylamine	A	50.0	49.1	0.5953265	0.5842195		-1.9	20
N-Nitrosodiphenylamine/Diphenylamine	A	42.8	39.8	0.7417309	0.6921633		-6.7	20
N-Nitrosodi-n-propylamine	A	50.0	46.4	1.069332	0.9924542		-7.2	20
Pentachloronitrobenzene	A	50.0	50.0	4.324385E-02	0.0432373		-0.02	20
Pentachlorophenol	A	50.0	40.5	0.1672428	0.1355355		-19.0	20
Phenanthrene	A	50.0	46.9	1.249182	1.172417		-6.1	20
Phenol	A	50.0	46.3	1.831649	1.696647		-7.4	20
Pyrene	A	50.0	47.1	1.553635	1.463063		-5.8	20
Pyridine	A	50.0	47.8	1.414221	1.352294		-4.4	20
1,2,4,5-Tetrachlorobenzene	A	50.0	47.5	0.635092	0.603701		-4.9	20
1,2,4-Trichlorobenzene	A	50.0	48.4	0.3528977	0.341389		-3.3	20
2,4,5-Trichlorophenol	A	50.0	46.0	0.4591889	0.4220808		-8.1	20
2,4,6-Trichlorophenol	A	50.0	47.1	0.4303061	0.4055257		-5.8	20
2-Fluorophenol	A	100	94.9	1.365203	1.296029		-5.1	
Phenol-d6	A	100	96.5	1.710249	1.649669		-3.5	
Nitrobenzene-d5	A	50.0	48.4	0.3728127	0.3610522		-3.2	
2-Fluorobiphenyl	A	50.0	47.7	1.145041	1.092098		-4.6	
2,4,6-Tribromophenol	A	100	93.2	0.1873557	0.1747112		-6.7	
p-Terphenyl-d14	A	50.0	48.4	0.7155633	0.6930348		-3.1	

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

* Values outside of QC limits

ALPHA
GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of 8082A PCB Data for
Con-Test Analytical Laboratory, Work Order No: 19F0630

6 Soil Samples and 1 Field Duplicate
Collected June 11, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: The samples were extracted and analyzed within USEPA SW-846 holding times.

Blanks: The analysis of the method blank reported target aroclors as not detected.

Surrogate Recovery: The surrogates for sample SB-05 (0-2) were diluted beyond detection limits. No action is taken on surrogates diluted beyond detection limits.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for aroclor 1016 and aroclor 1260 were below the allowable maximum and the percent recoveries were within QC limits on both columns for soil MS/MSD sample SB-2 (0-2).

Laboratory Control Sample: The relative percent differences for aroclor 1016 and aroclor 1260 were below the allowable maximums and percent recoveries were within QC limits on both columns for soil samples B233449-BS1 and B233449-BSD1.

Field Duplicates: The analyses of soil field duplicate pair SB-5 (0-2)/SB-Dup reported target aroclors as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) on both columns, as required.

Continuing Calibration: The %D for aroclor-1268 was above the allowable maximum (15%) for column SC2 on 06-18-19 (S037485-CCV5). Positive results for aroclor-1268 should be considered estimated (J) in associated samples.

PCB Identification Summary: Checked surrogate results were within quantitation limits. The analyses of the soil samples reported target aroclors as not detected.

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2 - FORM II
SYSTEM MONITORING COMPOUND SUMMARY
SW-846 8082A

Laboratory:	Con-Test Analytical Laboratory	SDG:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Soil	Instrument:	ECD3

	DCB 1 (30% - 150%)	DCB 2 (30% - 150%)	TCX 1 (30% - 150%)	TCX 2 (30% - 150%)
19F0630-01	89.0	90.8	89.1	86.4
19F0630-02	84.0	85.4	84.6	81.5
19F0630-03	88.2	90.4	87.3	83.8
19F0630-04	90.2	90.9	78.7	76.6
19F0630-07	D	D	D	D
19F0630-08	93.9	94.5	85.3	83.2
19F0630-17	100	102	93.7	90.9
B233449-BLK1	98.4	100	90.1	84.9
B233449-BS1	92.4	94.1	84.2	78.8
B233449-BSD1	93.3	94.9	80.8	75.1
B233449-MS1	81.8	82.5	77.2	75.1
B233449-MSD1	85.4	87.6	86.0	83.8

7 - FORM VII

1103

CONTINUING CALIBRATION VERIFICATION

SW-846 8082A

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F0630
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	ECD3	Calibration:	1900139
Lab File ID:	C0618037.d	Calibration Date:	04/27/19 00:00
Sequence:	S037485	Injection Date:	06/18/19
Lab Sample ID:	S037485-CCV5	Injection Time:	18:00

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Aroclor-1232	A	100	105				5.3	15
Aroclor-1232 [2C]	A	100	96.9				-3.1	15
Aroclor-1268	A	100	113				13.0	15
Aroclor-1268 [2C]	A	100	124				24.5	15

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

* Values outside of QC limits

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QA/QC Review of Metals Data for
Con-Test Analytical Laboratory
Work Order No: 19F0630

14 Soil Samples and 1 Field Duplicate
Collected June 10-12, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: The samples were analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110% for all metals except Hg, 80-120% for Hg).

Low Level Calibration Verification: The percent drift for metals were below the laboratory allowable maximum (30%) for sample S038741-LCV1, as required.

CRDL Standard: The percent recovery for lead was within laboratory QC limits (80-120%) for sample B233505-MRL1.

Blanks: The analyses of initial and continuing calibration and method blanks reported target metals as not detected.

ICP Interference Check Sample: The percent recoveries for applicable metals were within control limits (80-120%).

Spike Sample Recovery: The percent recoveries for target metals were within control limits for soil spike sample SB-3 (16-18).

Laboratory Duplicates: The relative percent differences for applicable metals were below the allowable maximum (35%) for soil duplicate sample SB-3 (16-18), as required.

Field Duplicate: The relative percent differences for arsenic, barium, cadmium, chromium, and lead were above the allowable maximum (35%) for soil field duplicate pair SB-5 (0-2)/SB-Dup (attached table). Positive results for these metals should be considered estimated (J) in samples SB-5 (0-2) and SB-Dup.

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Laboratory Control Sample: The relative percent differences for target metals were below the allowable maximums and the percent recoveries were within control limits for soil samples B233505-BS1 and B233492-BS1.

Percent Solids: The percent solids for the soil samples were above 50%.

RCRA Metals

Calculations for Field Duplicate Relative Percent Difference (RPD)
SDG No. 19F0630

S1= SB-5 (0-2) **S2=** SB-DUP

Analyte	S1	S2	RPD (%)	
arsenic	4.7	2.8	51%	*
barium	120	23	136%	*
cadmium	0.53	0.20	90%	*
chromium	11	7.2	42%	*
lead	220	6	189%	*
mercury	0.32	**0.013**	NC	
selenium	ND	ND	NC	
silver	ND	ND	NC	

* RPD is above the allowable maximum (35%)

All results are in mg/kg.

Bold numbers were values that below the CRDL.
ND - Not detected.
NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2)
Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.042	0.11	0.0096	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Acrylonitrile	ND	0.0069	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Benzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromochloromethane	ND	0.0046	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromodichloromethane	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromoform	ND	0.0046	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Bromomethane	ND	0.011	0.0013	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2-Butanone (MEK)	ND	0.046	0.0063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Butyl Alcohol (TBA)	ND	0.046	0.0051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
n-Butylbenzene	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
sec-Butylbenzene	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Butylbenzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Carbon Disulfide	ND	0.0069	0.0062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Carbon Tetrachloride	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chlorobenzene	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chlorodibromomethane	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chloroethane	ND	0.023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chloroform	ND	0.0046	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Chloromethane	ND	0.011	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2-Chlorotoluene	ND	0.0023	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
4-Chlorotoluene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Dibromomethane	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dichlorobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3-Dichlorobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,4-Dichlorobenzene	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
trans-1,4-Dichloro-2-butene	ND	0.0046	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.023	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1-Dichloroethane	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dichloroethane	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1-Dichloroethylene	ND	0.0046	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
cis-1,2-Dichloroethylene	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
trans-1,2-Dichloroethylene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2-Dichloropropane	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3-Dichloropropane	ND	0.0011	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2,2-Dichloropropane	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1-Dichloropropene	ND	0.0046	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Diethyl Ether	0.0018	0.023	0.00080	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) | Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

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	0.0011	0.00023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,4-Dioxane	ND	0.11	0.0061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Ethylbenzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Hexachlorobutadiene	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
2-Hexanone (MBK)	ND	0.023	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Isopropylbenzene (Cumene)	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methyl Acetate	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0046	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methyl Cyclohexane	ND	0.0023	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Methylene Chloride	0.0021	0.023	0.0011	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	0.0029	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Naphthalene	ND	0.0046	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
n-Propylbenzene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Styrene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Tetrachloroethylene	ND	0.0023	0.0014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Tetrahydrofuran	ND	0.011	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Toluene	0.0012	0.0023	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,3-Trichlorobenzene	ND	0.0023	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,4-Trichlorobenzene	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3,5-Trichlorobenzene	ND	0.0023	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,1-Trichloroethane	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,2-Trichloroethane	ND	0.0023	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Trichloroethylene	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,3-Trichloropropane	ND	0.0046	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,2,4-Trimethylbenzene	ND	0.0023	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
1,3,5-Trimethylbenzene	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
Vinyl Chloride	ND	0.011	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
m+p Xylene	ND	0.0046	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF
o-Xylene	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	97.4	70-130			6/13/19 13:06
Toluene-d8	100	70-130			6/13/19 13:06
4-Bromofluorobenzene	102	70-130			6/13/19 13:06

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Aniline	ND	0.37	0.088	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Anthracene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzidine	ND	0.73	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(a)anthracene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(a)pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(b)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(g,h,i)perylene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzo(k)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Benzoic Acid	ND	1.1	0.65	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Carbazole	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Chloroaniline	ND	0.73	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Chloro-3-methylphenol	ND	0.73	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Chrysene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,4-Dichlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dinitrophenol	ND	0.73	0.51	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,6-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Di-n-octylphthalate	ND	0.37	0.17	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Fluoranthene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Hexachlorocyclopentadiene	ND	0.37	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Indeno(1,2,3-cd)pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1-Methylnaphthalene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
4-Nitrophenol	ND	0.73	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Phenanthrene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:10	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	56.0	30-130		6/17/19 19:10
Phenol-d6	64.2	30-130		6/17/19 19:10
Nitrobenzene-d5	66.8	30-130		6/17/19 19:10
2-Fluorobiphenyl	70.7	30-130		6/17/19 19:10
2,4,6-Tribromophenol	50.0	30-130		6/17/19 19:10
p-Terphenyl-d14	87.4	30-130		6/17/19 19:10

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.089	0.040	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1221 [1]	ND	0.089	0.067	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1232 [1]	ND	0.089	0.080	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1242 [1]	ND	0.089	0.067	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1248 [1]	ND	0.089	0.031	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1254 [1]	ND	0.089	0.036	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1260 [1]	ND	0.089	0.049	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1262 [1]	ND	0.089	0.044	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH
Aroclor-1268 [1]	ND	0.089	0.071	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:22	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.0	30-150		6/18/19 20:22
Decachlorobiphenyl [2]	90.8	30-150		6/18/19 20:22
Tetrachloro-m-xylene [1]	89.1	30-150		6/18/19 20:22
Tetrachloro-m-xylene [2]	86.4	30-150		6/18/19 20:22

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Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.9	1.9	0.94	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Barium	30	1.9	0.92	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Cadmium	0.21	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Chromium	8.2	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Lead	11	0.56	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Mercury	0.056	0.029	0.0086	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:42	AJL
Selenium	ND	3.7	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB
Silver	ND	0.37	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:58	EJB

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (0-2) Sampled: 6/11/2019 08:05

Sample ID: 19F0630-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.6		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) | Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0073	0.067	0.0056	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Acrylonitrile	ND	0.0040	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00067	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Benzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromochloromethane	ND	0.0027	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromodichloromethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromoform	ND	0.0027	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Bromomethane	ND	0.0067	0.00073	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2-Butanone (MEK)	ND	0.027	0.0037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Butyl Alcohol (TBA)	ND	0.027	0.0030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
n-Butylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
sec-Butylbenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Butylbenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00067	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Carbon Disulfide	ND	0.0040	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Carbon Tetrachloride	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chlorobenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chlorodibromomethane	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chloroethane	ND	0.013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chloroform	ND	0.0027	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Chloromethane	ND	0.0067	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2-Chlorotoluene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
4-Chlorotoluene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dibromoethane (EDB)	ND	0.00067	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Dibromomethane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dichlorobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3-Dichlorobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,4-Dichlorobenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
trans-1,4-Dichloro-2-butene	ND	0.0027	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1-Dichloroethane	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1-Dichloroethylene	ND	0.0027	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
cis-1,2-Dichloroethylene	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
trans-1,2-Dichloroethylene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3-Dichloropropane	ND	0.00067	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1-Dichloropropene	ND	0.0027	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
cis-1,3-Dichloropropene	ND	0.00067	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
trans-1,3-Dichloropropene	ND	0.00067	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Diethyl Ether	0.0015	0.013	0.00047	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:33	MFF

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

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	0.00067	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,4-Dioxane	ND	0.067	0.0035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Ethylbenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Hexachlorobutadiene	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
2-Hexanone (MBK)	ND	0.013	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Isopropylbenzene (Cumene)	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methyl Acetate	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0027	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methyl Cyclohexane	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Methylene Chloride	0.0016	0.013	0.00067	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 13:33	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Naphthalene	ND	0.0027	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
n-Propylbenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Styrene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,2,2-Tetrachloroethane	ND	0.00067	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Tetrachloroethylene	ND	0.0013	0.00080	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Tetrahydrofuran	ND	0.0067	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Toluene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,3-Trichlorobenzene	ND	0.0013	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,4-Trichlorobenzene	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3,5-Trichlorobenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,1-Trichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,2-Trichloroethane	ND	0.0013	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Trichloroethylene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0067	0.00047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,3-Trichloropropane	ND	0.0027	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0067	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,2,4-Trimethylbenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
1,3,5-Trimethylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
Vinyl Chloride	ND	0.0067	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
m+p Xylene	ND	0.0027	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF
o-Xylene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 13:33	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	99.8	70-130			6/13/19 13:33
Toluene-d8	100	70-130			6/13/19 13:33
4-Bromofluorobenzene	103	70-130			6/13/19 13:33

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-2 (16-18)
Sampled: 6/11/2019 08:15
Sample ID: 19F0630-02
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Aniline	ND	0.36	0.084	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Anthracene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzidine	ND	0.69	0.19	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(a)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(a)pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(b)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(g,h,i)perylene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzo(k)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Benzoic Acid	ND	1.0	0.62	mg/Kg dry	1	VJ L-04	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-chloroisopropyl)ether	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Bromophenylphenylether	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Carbazole	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Chloroaniline	ND	0.69	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Chloro-3-methylphenol	ND	0.69	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Chloronaphthalene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Chrysene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Dibenz(a,h)anthracene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Di-n-butylphthalate	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2-Dichlorobenzene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,3-Dichlorobenzene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,4-Dichlorobenzene	ND	0.36	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dichlorophenol	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4,6-Dinitro-2-methylphenol	ND	0.36	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dinitrophenol	ND	0.69	0.48	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Fluoranthene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Hexachlorocyclopentadiene	ND	0.36	0.29	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Hexachloroethane	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1-Methylnaphthalene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
4-Nitrophenol	ND	0.69	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pentachlorophenol	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Phenanthrene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
Pyridine	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
1,2,4-Trichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 19:36	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.3	30-130		6/17/19 19:36
Phenol-d6	69.8	30-130		6/17/19 19:36
Nitrobenzene-d5	72.2	30-130		6/17/19 19:36
2-Fluorobiphenyl	77.0	30-130		6/17/19 19:36
2,4,6-Tribromophenol	65.9	30-130		6/17/19 19:36
p-Terphenyl-d14	84.4	30-130		6/17/19 19:36

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.085	0.038	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1221 [1]	ND	0.085	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1232 [1]	ND	0.085	0.076	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1242 [1]	ND	0.085	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1248 [1]	ND	0.085	0.030	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1254 [1]	ND	0.085	0.034	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1260 [1]	ND	0.085	0.047	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1262 [1]	ND	0.085	0.042	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH
Aroclor-1268 [1]	ND	0.085	0.068	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 20:35	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.0	30-150		6/18/19 20:35
Decachlorobiphenyl [2]	85.4	30-150		6/18/19 20:35
Tetrachloro-m-xylene [1]	84.6	30-150		6/18/19 20:35
Tetrachloro-m-xylene [2]	81.5	30-150		6/18/19 20:35

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18) Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.6	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Barium	34	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Cadmium	0.22	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Chromium	11	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Lead	6.8	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Mercury	0.016	0.027	0.0082	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:44	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:03	EJB

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-2 (16-18)
Sampled: 6/11/2019 08:15

Sample ID: 19F0630-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.2		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.020	0.064	0.0053	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Acrylonitrile	ND	0.0038	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00064	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Benzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromochloromethane	ND	0.0025	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromodichloromethane	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromoform	ND	0.0025	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Bromomethane	ND	0.0064	0.00070	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2-Butanone (MEK)	ND	0.025	0.0035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Butyl Alcohol (TBA)	ND	0.025	0.0029	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
n-Butylbenzene	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
sec-Butylbenzene	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Butylbenzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00064	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Carbon Disulfide	ND	0.0038	0.0034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Carbon Tetrachloride	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chlorobenzene	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chlorodibromomethane	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chloroethane	ND	0.013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chloroform	ND	0.0025	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Chloromethane	ND	0.0064	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2-Chlorotoluene	ND	0.0013	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
4-Chlorotoluene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dibromoethane (EDB)	ND	0.00064	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Dibromomethane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dichlorobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3-Dichlorobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,4-Dichlorobenzene	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
trans-1,4-Dichloro-2-butene	ND	0.0025	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00070	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1-Dichloroethane	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dichloroethane	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1-Dichloroethylene	ND	0.0025	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
cis-1,2-Dichloroethylene	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
trans-1,2-Dichloroethylene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2-Dichloropropane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3-Dichloropropane	ND	0.00064	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2,2-Dichloropropane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1-Dichloropropene	ND	0.0025	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
cis-1,3-Dichloropropene	ND	0.00064	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
trans-1,3-Dichloropropene	ND	0.00064	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Diethyl Ether	0.00099	0.013	0.00044	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:00	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

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	0.00064	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,4-Dioxane	ND	0.064	0.0034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Ethylbenzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Hexachlorobutadiene	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
2-Hexanone (MBK)	ND	0.013	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Isopropylbenzene (Cumene)	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methyl Acetate	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0025	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methyl Cyclohexane	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Methylene Chloride	0.0010	0.013	0.00064	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:00	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0016	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Naphthalene	ND	0.0025	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
n-Propylbenzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Styrene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,2,2-Tetrachloroethane	ND	0.00064	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Tetrachloroethylene	ND	0.0013	0.00076	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Tetrahydrofuran	ND	0.0064	0.00070	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Toluene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,3-Trichlorobenzene	ND	0.0013	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,4-Trichlorobenzene	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3,5-Trichlorobenzene	ND	0.0013	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,1-Trichloroethane	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,2-Trichloroethane	ND	0.0013	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Trichloroethylene	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0064	0.00044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,3-Trichloropropane	ND	0.0025	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0064	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,2,4-Trimethylbenzene	ND	0.0013	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
1,3,5-Trimethylbenzene	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
Vinyl Chloride	ND	0.0064	0.00057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
m+p Xylene	ND	0.0025	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF
o-Xylene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:00	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.2	70-130		6/13/19 14:00
Toluene-d8	100	70-130		6/13/19 14:00
4-Bromofluorobenzene	104	70-130		6/13/19 14:00

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Acenaphthylene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Acetophenone	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Aniline	ND	0.40	0.093	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Anthracene	0.18	0.20	0.10	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzidine	ND	0.77	0.21	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(a)anthracene	1.0	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(a)pyrene	0.92	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(b)fluoranthene	1.3	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(g,h,i)perylene	0.55	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzo(k)fluoranthene	0.46	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Benzoic Acid	ND	1.2	0.69	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-chloroethoxy)methane	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-chloroethyl)ether	ND	0.40	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-chloroisopropyl)ether	ND	0.40	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Bromophenylphenylether	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Butylbenzylphthalate	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Carbazole	0.11	0.20	0.10	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Chloroaniline	ND	0.77	0.16	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Chloro-3-methylphenol	ND	0.77	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Chloronaphthalene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Chlorophenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Chlorophenylphenylether	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Chrysene	1.1	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Dibenz(a,h)anthracene	0.13	0.20	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Dibenzofuran	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Di-n-butylphthalate	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2-Dichlorobenzene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,3-Dichlorobenzene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,4-Dichlorobenzene	ND	0.40	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
3,3-Dichlorobenzidine	ND	0.20	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dichlorophenol	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Diethylphthalate	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dimethylphenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Dimethylphthalate	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4,6-Dinitro-2-methylphenol	ND	0.40	0.35	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dinitrophenol	ND	0.77	0.53	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4-Dinitrotoluene	ND	0.40	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,6-Dinitrotoluene	ND	0.40	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Di-n-octylphthalate	ND	0.40	0.17	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Fluoranthene	2.2	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Fluorene	ND	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-3 (0-2)
Sampled: 6/11/2019 08:50
Sample ID: 19F0630-03
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.40	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Hexachlorobutadiene	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Hexachlorocyclopentadiene	ND	0.40	0.33	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Hexachloroethane	ND	0.40	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Indeno(1,2,3-cd)pyrene	0.56	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Isophorone	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1-Methylnaphthalene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Methylnaphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Methylphenol	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
3/4-Methylphenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Naphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Nitroaniline	ND	0.40	0.23	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
3-Nitroaniline	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Nitroaniline	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Nitrobenzene	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2-Nitrophenol	ND	0.40	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
4-Nitrophenol	ND	0.77	0.28	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
N-Nitrosodimethylamine	ND	0.40	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
N-Nitrosodi-n-propylamine	ND	0.40	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pentachloronitrobenzene	ND	0.40	0.14	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pentachlorophenol	ND	0.40	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Phenanthrene	0.96	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Phenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pyrene	1.8	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
Pyridine	ND	0.40	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.40	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
1,2,4-Trichlorobenzene	ND	0.40	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4,5-Trichlorophenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB
2,4,6-Trichlorophenol	ND	0.40	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:02	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	52.1	30-130		6/17/19 20:02
Phenol-d6	58.3	30-130		6/17/19 20:02
Nitrobenzene-d5	59.7	30-130		6/17/19 20:02
2-Fluorobiphenyl	64.5	30-130		6/17/19 20:02
2,4,6-Tribromophenol	51.0	30-130		6/17/19 20:02
p-Terphenyl-d14	71.5	30-130		6/17/19 20:02

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.091	0.041	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1221 [1]	ND	0.091	0.068	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1232 [1]	ND	0.091	0.082	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1242 [1]	ND	0.091	0.068	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1248 [1]	ND	0.091	0.032	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1254 [1]	ND	0.091	0.036	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1260 [1]	ND	0.091	0.050	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1262 [1]	ND	0.091	0.045	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH
Aroclor-1268 [1]	ND	0.091	0.073	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:05	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.2	30-150		6/18/19 22:05
Decachlorobiphenyl [2]	90.4	30-150		6/18/19 22:05
Tetrachloro-m-xylene [1]	87.3	30-150		6/18/19 22:05
Tetrachloro-m-xylene [2]	83.8	30-150		6/18/19 22:05

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	6.8	1.9	0.95	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Barium	170	1.9	0.93	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Cadmium	0.93	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Chromium	13	0.38	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Lead	3000	0.57	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Mercury	0.46	0.028	0.0084	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:45	AJL
Selenium	ND	3.8	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB
Silver	ND	0.38	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:08	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (0-2) | Sampled: 6/11/2019 08:50

Sample ID: 19F0630-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.8		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0061	0.066	0.0055	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Acrylonitrile	ND	0.0039	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00066	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Benzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromochloromethane	ND	0.0026	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromodichloromethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromoform	ND	0.0026	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Bromomethane	ND	0.0066	0.00072	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2-Butanone (MEK)	ND	0.026	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Butyl Alcohol (TBA)	ND	0.026	0.0030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
n-Butylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
sec-Butylbenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Butylbenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00066	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Carbon Disulfide	ND	0.0039	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Carbon Tetrachloride	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chlorobenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chlorodibromomethane	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chloroethane	ND	0.013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chloroform	ND	0.0026	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Chloromethane	ND	0.0066	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2-Chlorotoluene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
4-Chlorotoluene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dibromoethane (EDB)	ND	0.00066	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Dibromomethane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dichlorobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3-Dichlorobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,4-Dichlorobenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
trans-1,4-Dichloro-2-butene	ND	0.0026	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1-Dichloroethane	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1-Dichloroethylene	ND	0.0026	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
cis-1,2-Dichloroethylene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
trans-1,2-Dichloroethylene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3-Dichloropropane	ND	0.00066	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2,2-Dichloropropane	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1-Dichloropropene	ND	0.0026	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
cis-1,3-Dichloropropene	ND	0.00066	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
trans-1,3-Dichloropropene	ND	0.00066	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Diethyl Ether	0.0015	0.013	0.00046	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

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	0.00066	0.00013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,4-Dioxane	ND	0.066	0.0035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Ethylbenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Hexachlorobutadiene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
2-Hexanone (MBK)	ND	0.013	0.0013	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Isopropylbenzene (Cumene)	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methyl Acetate	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0026	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methyl Cyclohexane	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Methylene Chloride	0.0023	0.013	0.00066	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0016	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Naphthalene	ND	0.0026	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
n-Propylbenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Styrene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,2,2-Tetrachloroethane	ND	0.00066	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Tetrachloroethylene	ND	0.0013	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Tetrahydrofuran	ND	0.0066	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Toluene	0.0012	0.0013	0.00039	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,3-Trichlorobenzene	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,4-Trichlorobenzene	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3,5-Trichlorobenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,1-Trichloroethane	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,2-Trichloroethane	ND	0.0013	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Trichloroethylene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0066	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,3-Trichloropropane	ND	0.0026	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0066	0.00053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,2,4-Trimethylbenzene	ND	0.0013	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
1,3,5-Trimethylbenzene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
Vinyl Chloride	ND	0.0066	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
m+p Xylene	ND	0.0026	0.00066	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF
o-Xylene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:27	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	100	70-130			6/13/19 14:27
Toluene-d8	99.4	70-130			6/13/19 14:27
4-Bromofluorobenzene	102	70-130			6/13/19 14:27

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18)
Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Aniline	ND	0.36	0.084	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Anthracene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzidine	ND	0.70	0.19	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Benzoic Acid	ND	1.1	0.62	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-chloroisopropyl)ether	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Carbazole	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Chloroaniline	ND	0.70	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Chloro-3-methylphenol	ND	0.70	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,4-Dichlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dinitrophenol	ND	0.70	0.49	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) | Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1-Methylnaphthalene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
4-Nitrophenol	ND	0.70	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pentachlorophenol	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Phenanthrene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:28	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.8	30-130		6/17/19 20:28
Phenol-d6	69.7	30-130		6/17/19 20:28
Nitrobenzene-d5	70.8	30-130		6/17/19 20:28
2-Fluorobiphenyl	74.2	30-130		6/17/19 20:28
2,4,6-Tribromophenol	71.7	30-130		6/17/19 20:28
p-Terphenyl-d14	79.7	30-130		6/17/19 20:28

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) | Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.082	0.037	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1221 [1]	ND	0.082	0.062	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1232 [1]	ND	0.082	0.074	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1242 [1]	ND	0.082	0.062	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1248 [1]	ND	0.082	0.029	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1254 [1]	ND	0.082	0.033	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1260 [1]	ND	0.082	0.045	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1262 [1]	ND	0.082	0.041	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH
Aroclor-1268 [1]	ND	0.082	0.066	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:17	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.2	30-150		6/18/19 22:17
Decachlorobiphenyl [2]	90.9	30-150		6/18/19 22:17
Tetrachloro-m-xylene [1]	78.7	30-150		6/18/19 22:17
Tetrachloro-m-xylene [2]	76.6	30-150		6/18/19 22:17

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18) Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.4	1.7	0.88	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Barium	29	1.7	0.86	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Cadmium	0.18	0.17	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Chromium	6.8	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Lead	6.0	0.52	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Mercury	0.0089	0.027	0.0081	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:30	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB
Silver	ND	0.35	0.20	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 14:53	EJB

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-3 (16-18)
Sampled: 6/11/2019 09:05

Sample ID: 19F0630-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:42	JDN

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Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-4 (0-2)
Sampled: 6/11/2019 10:30
Sample ID: 19F0630-05
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.024	0.087	0.0073	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Acrylonitrile	ND	0.0052	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00087	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Benzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromochloromethane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromoform	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Bromomethane	ND	0.0087	0.00095	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2-Butanone (MEK)	ND	0.035	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Butyl Alcohol (TBA)	ND	0.035	0.0039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
sec-Butylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Butylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Carbon Disulfide	ND	0.0052	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Carbon Tetrachloride	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chlorodibromomethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chloroethane	ND	0.017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chloroform	ND	0.0035	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Chloromethane	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
4-Chlorotoluene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dibromoethane (EDB)	ND	0.00087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Dibromomethane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
trans-1,4-Dichloro-2-butene	ND	0.0035	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1-Dichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1-Dichloroethylene	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3-Dichloropropane	ND	0.00087	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1-Dichloropropene	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
cis-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
trans-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Diethyl Ether	0.0020	0.017	0.00061	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:55	MFF

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

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	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,4-Dioxane	ND	0.087	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Ethylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Hexachlorobutadiene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methyl Acetate	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methyl Cyclohexane	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Methylene Chloride	0.0028	0.017	0.00087	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 14:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0022	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Naphthalene	ND	0.0035	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
n-Propylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Styrene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Tetrahydrofuran	ND	0.0087	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Toluene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Trichloroethylene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,3-Trichloropropane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0087	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
Vinyl Chloride	ND	0.0087	0.00078	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
m+p Xylene	ND	0.0035	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF
o-Xylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 14:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.3	70-130		6/13/19 14:55
Toluene-d8	98.2	70-130		6/13/19 14:55
4-Bromofluorobenzene	98.6	70-130		6/13/19 14:55

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Aniline	ND	0.37	0.087	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Anthracene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Benzoic Acid	ND	1.1	0.64	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Carbazole	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,4-Dichlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dinitrophenol	ND	0.72	0.50	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Hexachlorocyclopentadiene	ND	0.37	0.30	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1-Methylnaphthalene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Phenanthrene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 20:54	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	50.0	30-130		6/17/19 20:54
Phenol-d6	58.8	30-130		6/17/19 20:54
Nitrobenzene-d5	54.8	30-130		6/17/19 20:54
2-Fluorobiphenyl	65.5	30-130		6/17/19 20:54
2,4,6-Tribromophenol	63.0	30-130		6/17/19 20:54
p-Terphenyl-d14	72.9	30-130		6/17/19 20:54

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2)
Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.3	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Barium	45	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Cadmium	0.29	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Chromium	9.3	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Lead	37	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Mercury	0.12	0.026	0.0077	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:47	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 16:49	EJB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (0-2) | Sampled: 6/11/2019 10:30

Sample ID: 19F0630-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.9		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-4 (18-20)
Sampled: 6/11/2019 11:05
Sample ID: 19F0630-06
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0098	0.083	0.0070	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Acrylonitrile	ND	0.0050	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00083	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Benzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromochloromethane	ND	0.0033	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromodichloromethane	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromoform	ND	0.0033	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Bromomethane	ND	0.0083	0.00091	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2-Butanone (MEK)	ND	0.033	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Butyl Alcohol (TBA)	ND	0.033	0.0037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
n-Butylbenzene	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
sec-Butylbenzene	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Butylbenzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00083	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Carbon Disulfide	ND	0.0050	0.0045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Carbon Tetrachloride	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chlorobenzene	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chlorodibromomethane	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chloroethane	ND	0.017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chloroform	ND	0.0033	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Chloromethane	ND	0.0083	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2-Chlorotoluene	ND	0.0017	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
4-Chlorotoluene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dibromoethane (EDB)	ND	0.00083	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Dibromomethane	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
trans-1,4-Dichloro-2-butene	ND	0.0033	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1-Dichloroethane	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dichloroethane	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1-Dichloroethylene	ND	0.0033	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2-Dichloropropane	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3-Dichloropropane	ND	0.00083	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2,2-Dichloropropane	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1-Dichloropropene	ND	0.0033	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
cis-1,3-Dichloropropene	ND	0.00083	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
trans-1,3-Dichloropropene	ND	0.00083	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Diethyl Ether	0.0019	0.017	0.00058	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:22	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) | Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

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	0.00083	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,4-Dioxane	ND	0.083	0.0044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Ethylbenzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Hexachlorobutadiene	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methyl Acetate	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methyl Cyclohexane	ND	0.0017	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Methylene Chloride	0.0022	0.017	0.00083	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:22	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Naphthalene	ND	0.0033	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
n-Propylbenzene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Styrene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,2,2-Tetrachloroethane	ND	0.00083	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Tetrahydrofuran	ND	0.0083	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Toluene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00033	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Trichloroethylene	ND	0.0017	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0083	0.00058	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,3-Trichloropropane	ND	0.0033	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0083	0.00067	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
Vinyl Chloride	ND	0.0083	0.00075	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
m+p Xylene	ND	0.0033	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF
o-Xylene	ND	0.0017	0.00050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:22	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.1	70-130		6/13/19 15:22
Toluene-d8	99.4	70-130		6/13/19 15:22
4-Bromofluorobenzene	99.8	70-130		6/13/19 15:22

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Acetophenone	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Aniline	ND	0.35	0.083	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Anthracene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzidine	ND	0.68	0.19	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(a)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(a)pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(b)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(g,h,i)perylene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzo(k)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Benzoic Acid	ND	1.0	0.61	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-chloroethoxy)methane	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-chloroethyl)ether	ND	0.35	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-chloroisopropyl)ether	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Bromophenylphenylether	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Butylbenzylphthalate	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Carbazole	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Chloroaniline	ND	0.68	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Chloro-3-methylphenol	ND	0.68	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Chloronaphthalene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Chlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Chlorophenylphenylether	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Chrysene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Dibenz(a,h)anthracene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Dibenzofuran	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Di-n-butylphthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,3-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,4-Dichlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
3,3-Dichlorobenzidine	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dichlorophenol	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Diethylphthalate	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dimethylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Dimethylphthalate	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4,6-Dinitro-2-methylphenol	ND	0.35	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dinitrophenol	ND	0.68	0.48	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,6-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Di-n-octylphthalate	ND	0.35	0.15	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Fluoranthene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Fluorene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Hexachlorobutadiene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Hexachlorocyclopentadiene	ND	0.35	0.29	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Hexachloroethane	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Indeno(1,2,3-cd)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Isophorone	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1-Methylnaphthalene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Methylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
3/4-Methylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Nitroaniline	ND	0.35	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
3-Nitroaniline	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Nitroaniline	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Nitrobenzene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2-Nitrophenol	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
4-Nitrophenol	ND	0.68	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
N-Nitrosodimethylamine	ND	0.35	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
N-Nitrosodi-n-propylamine	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pentachloronitrobenzene	ND	0.35	0.12	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pentachlorophenol	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Phenanthrene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Phenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
Pyridine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
1,2,4-Trichlorobenzene	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4,5-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB
2,4,6-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:19	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	62.5	30-130		6/17/19 21:19
Phenol-d6	68.1	30-130		6/17/19 21:19
Nitrobenzene-d5	69.0	30-130		6/17/19 21:19
2-Fluorobiphenyl	73.0	30-130		6/17/19 21:19
2,4,6-Tribromophenol	62.1	30-130		6/17/19 21:19
p-Terphenyl-d14	78.2	30-130		6/17/19 21:19

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.1	1.7	0.84	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Barium	29	1.7	0.82	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Cadmium	0.20	0.17	0.10	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Chromium	7.8	0.33	0.20	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Lead	5.9	0.50	0.29	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Mercury	0.013	0.024	0.0073	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:48	AJL
Selenium	ND	3.3	2.7	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB
Silver	ND	0.33	0.19	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:29	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-4 (18-20) | Sampled: 6/11/2019 11:05

Sample ID: 19F0630-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	96.5		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.029	0.090	0.0076	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Acrylonitrile	ND	0.0054	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00090	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Benzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromochloromethane	ND	0.0036	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromodichloromethane	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromoform	ND	0.0036	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Bromomethane	ND	0.0090	0.00099	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2-Butanone (MEK)	ND	0.036	0.0050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Butyl Alcohol (TBA)	ND	0.036	0.0041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
n-Butylbenzene	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
sec-Butylbenzene	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Butylbenzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00090	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Carbon Disulfide	ND	0.0054	0.0049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Carbon Tetrachloride	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chlorobenzene	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chlorodibromomethane	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chloroethane	ND	0.018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chloroform	ND	0.0036	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Chloromethane	ND	0.0090	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2-Chlorotoluene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
4-Chlorotoluene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dibromoethane (EDB)	ND	0.00090	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Dibromomethane	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dichlorobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3-Dichlorobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,4-Dichlorobenzene	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
trans-1,4-Dichloro-2-butene	ND	0.0036	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1-Dichloroethane	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dichloroethane	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1-Dichloroethylene	ND	0.0036	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
cis-1,2-Dichloroethylene	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
trans-1,2-Dichloroethylene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2-Dichloropropane	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3-Dichloropropane	ND	0.00090	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2,2-Dichloropropane	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1-Dichloropropene	ND	0.0036	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
cis-1,3-Dichloropropene	ND	0.00090	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
trans-1,3-Dichloropropene	ND	0.00090	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Diethyl Ether	0.0012	0.018	0.00063	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:49	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

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	0.00090	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,4-Dioxane	ND	0.090	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Ethylbenzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Hexachlorobutadiene	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
2-Hexanone (MBK)	ND	0.018	0.0018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Isopropylbenzene (Cumene)	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methyl Acetate	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0036	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methyl Cyclohexane	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Methylene Chloride	0.0018	0.018	0.00090	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 15:49	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Naphthalene	ND	0.0036	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
n-Propylbenzene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Styrene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,2,2-Tetrachloroethane	ND	0.00090	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Tetrachloroethylene	ND	0.0018	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Tetrahydrofuran	ND	0.0090	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Toluene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,3-Trichlorobenzene	ND	0.0018	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,4-Trichlorobenzene	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3,5-Trichlorobenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,1-Trichloroethane	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,2-Trichloroethane	ND	0.0018	0.00036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Trichloroethylene	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0090	0.00063	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,3-Trichloropropane	ND	0.0036	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0090	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,2,4-Trimethylbenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
1,3,5-Trimethylbenzene	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
Vinyl Chloride	ND	0.0090	0.00081	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
m+p Xylene	ND	0.0036	0.00090	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF
o-Xylene	ND	0.0018	0.00054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 15:49	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	104	70-130		6/13/19 15:49
Toluene-d8	99.2	70-130		6/13/19 15:49
4-Bromofluorobenzene	100	70-130		6/13/19 15:49

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Acetophenone	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Aniline	ND	0.38	0.088	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Anthracene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzidine	ND	0.73	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(a)anthracene	0.55	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(a)pyrene	0.45	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(b)fluoranthene	0.66	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(g,h,i)perylene	0.25	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzo(k)fluoranthene	0.22	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Benzoic Acid	ND	1.1	0.65	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-chloroethoxy)methane	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-chloroethyl)ether	ND	0.38	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-chloroisopropyl)ether	ND	0.38	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Bromophenylphenylether	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Butylbenzylphthalate	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Carbazole	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Chloroaniline	ND	0.73	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Chloro-3-methylphenol	ND	0.73	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Chloronaphthalene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Chlorophenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Chlorophenylphenylether	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Chrysene	0.56	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Dibenzofuran	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Di-n-butylphthalate	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2-Dichlorobenzene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,3-Dichlorobenzene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,4-Dichlorobenzene	ND	0.38	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dichlorophenol	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Diethylphthalate	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dimethylphenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Dimethylphthalate	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4,6-Dinitro-2-methylphenol	ND	0.38	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dinitrophenol	ND	0.73	0.51	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4-Dinitrotoluene	ND	0.38	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,6-Dinitrotoluene	ND	0.38	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Di-n-octylphthalate	ND	0.38	0.17	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Fluoranthene	1.0	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.38	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Hexachlorobutadiene	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Hexachlorocyclopentadiene	ND	0.38	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Hexachloroethane	ND	0.38	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Indeno(1,2,3-cd)pyrene	0.27	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Isophorone	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1-Methylnaphthalene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Methylphenol	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
3/4-Methylphenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Nitroaniline	ND	0.38	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
3-Nitroaniline	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Nitroaniline	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Nitrobenzene	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2-Nitrophenol	ND	0.38	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
4-Nitrophenol	ND	0.73	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
N-Nitrosodimethylamine	ND	0.38	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
N-Nitrosodi-n-propylamine	ND	0.38	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pentachloronitrobenzene	ND	0.38	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pentachlorophenol	ND	0.38	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Phenanthrene	0.40	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Phenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pyrene	0.84	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
Pyridine	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.38	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
1,2,4-Trichlorobenzene	ND	0.38	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4,5-Trichlorophenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB
2,4,6-Trichlorophenol	ND	0.38	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 21:45	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	61.8	30-130		6/17/19 21:45
Phenol-d6	68.4	30-130		6/17/19 21:45
Nitrobenzene-d5	67.3	30-130		6/17/19 21:45
2-Fluorobiphenyl	75.0	30-130		6/17/19 21:45
2,4,6-Tribromophenol	69.9	30-130		6/17/19 21:45
p-Terphenyl-d14	79.6	30-130		6/17/19 21:45

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Sample Flags: DL-04

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.90	0.40	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1221 [1]	ND	0.90	0.67	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1232 [1]	ND	0.90	0.81	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1242 [1]	ND	0.90	0.67	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1248 [1]	ND	0.90	0.31	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1254 [1]	ND	0.90	0.36	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1260 [1]	ND	0.90	0.49	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1262 [1]	ND	0.90	0.45	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH
Aroclor-1268 [1]	ND	0.90	0.72	mg/Kg dry	40		SW-846 8082A	6/16/19	6/19/19 10:12	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	*	30-150	S-01	6/19/19 10:12
Decachlorobiphenyl [2]	*	30-150	S-01	6/19/19 10:12
Tetrachloro-m-xylene [1]	*	30-150	S-01	6/19/19 10:12
Tetrachloro-m-xylene [2]	*	30-150	S-01	6/19/19 10:12

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.7	1.9	0.94	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Barium	120	1.9	0.92	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Cadmium	0.53	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Chromium	11	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Lead	220	0.56	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Mercury	0.32	0.028	0.0085	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:50	AJL
Selenium	ND	3.7	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB
Silver	ND	0.37	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 15:48	EJB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (0-2) | Sampled: 6/11/2019 12:40

Sample ID: 19F0630-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.1		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-5 (17-19)
Sampled: 6/11/2019 13:00
Sample ID: 19F0630-08
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.010	0.098	0.0083	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Acrylonitrile	ND	0.0059	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00098	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Benzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromochloromethane	ND	0.0039	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromodichloromethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromoform	ND	0.0039	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Bromomethane	ND	0.0098	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2-Butanone (MEK)	ND	0.039	0.0054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Butyl Alcohol (TBA)	ND	0.039	0.0044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
n-Butylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
sec-Butylbenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Butylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00098	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Carbon Disulfide	ND	0.0059	0.0053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Carbon Tetrachloride	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chlorobenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chlorodibromomethane	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chloroethane	ND	0.020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chloroform	ND	0.0039	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Chloromethane	ND	0.0098	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2-Chlorotoluene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
4-Chlorotoluene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00098	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Dibromomethane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
trans-1,4-Dichloro-2-butene	ND	0.0039	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1-Dichloroethane	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1-Dichloroethylene	ND	0.0039	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3-Dichloropropane	ND	0.00098	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1-Dichloropropene	ND	0.0039	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
cis-1,3-Dichloropropene	ND	0.00098	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
trans-1,3-Dichloropropene	ND	0.00098	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Diethyl Ether	0.0015	0.020	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:16	MFF

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

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	0.00098	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,4-Dioxane	ND	0.098	0.0052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Ethylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Hexachlorobutadiene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
2-Hexanone (MBK)	ND	0.020	0.0020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methyl Acetate	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0039	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methyl Cyclohexane	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Methylene Chloride	0.0025	0.020	0.00098	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	0.0025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Naphthalene	ND	0.0039	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
n-Propylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Styrene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.00098	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Tetrachloroethylene	ND	0.0020	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Tetrahydrofuran	ND	0.0098	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Toluene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,1-Trichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,2-Trichloroethane	ND	0.0020	0.00039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Trichloroethylene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0098	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,3-Trichloropropane	ND	0.0039	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0098	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
Vinyl Chloride	ND	0.0098	0.00089	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
m+p Xylene	ND	0.0039	0.00098	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF
o-Xylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	99.7	70-130			6/13/19 16:16
Toluene-d8	100	70-130			6/13/19 16:16
4-Bromofluorobenzene	99.5	70-130			6/13/19 16:16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Aniline	ND	0.37	0.088	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Anthracene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(a)anthracene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(a)pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(b)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(g,h,i)perylene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzo(k)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Benzoic Acid	ND	1.1	0.65	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Carbazole	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Chrysene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,4-Dichlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dinitrophenol	ND	0.72	0.51	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,6-Dinitrotoluene	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Fluoranthene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Hexachlorocyclopentadiene	ND	0.37	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Indeno(1,2,3-cd)pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1-Methylnaphthalene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Phenanthrene	ND	0.19	0.099	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:10	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	62.6	30-130		6/17/19 22:10
Phenol-d6	68.2	30-130		6/17/19 22:10
Nitrobenzene-d5	67.9	30-130		6/17/19 22:10
2-Fluorobiphenyl	70.5	30-130		6/17/19 22:10
2,4,6-Tribromophenol	70.1	30-130		6/17/19 22:10
p-Terphenyl-d14	79.5	30-130		6/17/19 22:10

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) | Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	0.039	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1221 [1]	ND	0.086	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1232 [1]	ND	0.086	0.077	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1242 [1]	ND	0.086	0.064	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1248 [1]	ND	0.086	0.030	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1254 [1]	ND	0.086	0.034	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1260 [1]	ND	0.086	0.047	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1262 [1]	ND	0.086	0.043	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH
Aroclor-1268 [1]	ND	0.086	0.069	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:43	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	93.9	30-150		6/18/19 22:43
Decachlorobiphenyl [2]	94.5	30-150		6/18/19 22:43
Tetrachloro-m-xylene [1]	85.3	30-150		6/18/19 22:43
Tetrachloro-m-xylene [2]	83.2	30-150		6/18/19 22:43

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.8	1.8	0.92	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Barium	24	1.8	0.90	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Cadmium	0.20	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Chromium	7.1	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Lead	6.3	0.55	0.32	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Mercury	0.012	0.027	0.0080	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:52	AJL
Selenium	ND	3.7	3.0	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB
Silver	ND	0.37	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:06	EJB

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-5 (17-19) | Sampled: 6/11/2019 13:00

Sample ID: 19F0630-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.8		% Wt	1		SM 2540G	6/13/19	6/14/19 7:43	JDN

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) | Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.099	0.0083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Acrylonitrile	ND	0.0059	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00099	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Benzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromochloromethane	ND	0.0040	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromodichloromethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromoform	ND	0.0040	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Bromomethane	ND	0.0099	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2-Butanone (MEK)	ND	0.040	0.0054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Butyl Alcohol (TBA)	ND	0.040	0.0044	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
n-Butylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
sec-Butylbenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Butylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00099	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Carbon Disulfide	ND	0.0059	0.0053	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Carbon Tetrachloride	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chlorobenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chlorodibromomethane	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chloroethane	ND	0.020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chloroform	ND	0.0040	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Chloromethane	ND	0.0099	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2-Chlorotoluene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
4-Chlorotoluene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00099	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Dibromomethane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
trans-1,4-Dichloro-2-butene	ND	0.0040	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1-Dichloroethane	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1-Dichloroethylene	ND	0.0040	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3-Dichloropropane	ND	0.00099	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2,2-Dichloropropane	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1-Dichloropropene	ND	0.0040	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
cis-1,3-Dichloropropene	ND	0.00099	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
trans-1,3-Dichloropropene	ND	0.00099	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Diethyl Ether	0.0013	0.020	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:44	MFF

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

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	0.00099	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,4-Dioxane	ND	0.099	0.0052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Ethylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Hexachlorobutadiene	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
2-Hexanone (MBK)	ND	0.020	0.0020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methyl Acetate	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methyl Cyclohexane	ND	0.0020	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Methylene Chloride	0.0021	0.020	0.00099	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 16:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	0.0025	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Naphthalene	ND	0.0040	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
n-Propylbenzene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Styrene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00099	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Tetrachloroethylene	ND	0.0020	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Tetrahydrofuran	ND	0.0099	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Toluene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,1-Trichloroethane	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,2-Trichloroethane	ND	0.0020	0.00040	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Trichloroethylene	ND	0.0020	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0099	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,3-Trichloropropane	ND	0.0040	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0099	0.00079	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00030	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
Vinyl Chloride	ND	0.0099	0.00089	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
m+p Xylene	ND	0.0040	0.00099	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF
o-Xylene	ND	0.0020	0.00059	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 16:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.3	70-130		6/13/19 16:44
Toluene-d8	101	70-130		6/13/19 16:44
4-Bromofluorobenzene	100	70-130		6/13/19 16:44

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Acenaphthylene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Aniline	ND	0.37	0.087	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Anthracene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(a)anthracene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(a)pyrene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(b)fluoranthene	0.18	0.19	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(g,h,i)perylene	0.19	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzo(k)fluoranthene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Benzoic Acid	ND	1.1	0.64	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-chloroethyl)ether	ND	0.37	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Carbazole	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Chrysene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,4-Dichlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
3,3-Dichlorobenzidine	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dinitrophenol	ND	0.72	0.50	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Fluoranthene	0.16	0.19	0.11	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Fluorene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) | Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Hexachlorocyclopentadiene	ND	0.37	0.31	mg/Kg dry	1	V-05	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Indeno(1,2,3-cd)pyrene	0.16	0.19	0.13	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1-Methylnaphthalene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Methylnaphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Naphthalene	ND	0.19	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1	V-16	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Phenanthrene	ND	0.19	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pyrene	0.18	0.19	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/17/19 22:35	KLB
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/17/19 22:35	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	60.2	30-130		6/17/19 22:35
Phenol-d6	65.7	30-130		6/17/19 22:35
Nitrobenzene-d5	68.0	30-130		6/17/19 22:35
2-Fluorobiphenyl	73.6	30-130		6/17/19 22:35
2,4,6-Tribromophenol	63.7	30-130		6/17/19 22:35
p-Terphenyl-d14	88.2	30-130		6/17/19 22:35

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (0-2) | Sampled: 6/10/2019 14:50

Sample ID: 19F0630-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0097	0.085	0.0072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Acrylonitrile	ND	0.0051	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00085	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Benzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromochloromethane	ND	0.0034	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromoform	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Bromomethane	ND	0.0085	0.00094	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2-Butanone (MEK)	ND	0.034	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Butyl Alcohol (TBA)	ND	0.034	0.0038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
sec-Butylbenzene	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Butylbenzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00085	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Carbon Disulfide	ND	0.0051	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Carbon Tetrachloride	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chlorodibromomethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chloroethane	ND	0.017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chloroform	ND	0.0034	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Chloromethane	ND	0.0085	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
4-Chlorotoluene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dibromoethane (EDB)	ND	0.00085	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Dibromomethane	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
trans-1,4-Dichloro-2-butene	ND	0.0034	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00094	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1-Dichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1-Dichloroethylene	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2-Dichloropropane	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3-Dichloropropane	ND	0.00085	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2,2-Dichloropropane	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1-Dichloropropene	ND	0.0034	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
cis-1,3-Dichloropropene	ND	0.00085	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
trans-1,3-Dichloropropene	ND	0.00085	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Diethyl Ether	0.0015	0.017	0.00060	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:17	MFF

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) | Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

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	0.00085	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,4-Dioxane	ND	0.085	0.0045	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Ethylbenzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Hexachlorobutadiene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methyl Acetate	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methyl Cyclohexane	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Methylene Chloride	0.0021	0.017	0.00085	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:17	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Naphthalene	ND	0.0034	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
n-Propylbenzene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Styrene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,2,2-Tetrachloroethane	ND	0.00085	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Tetrahydrofuran	ND	0.0085	0.00094	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Toluene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Trichloroethylene	ND	0.0017	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0085	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,3-Trichloropropane	ND	0.0034	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0085	0.00068	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
Vinyl Chloride	ND	0.0085	0.00077	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
m+p Xylene	ND	0.0034	0.00085	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF
o-Xylene	ND	0.0017	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.2	70-130		6/13/19 21:17
Toluene-d8	100	70-130		6/13/19 21:17
4-Bromofluorobenzene	102	70-130		6/13/19 21:17

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Acetophenone	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Aniline	ND	0.35	0.083	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Anthracene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzidine	ND	0.69	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(a)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(a)pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(b)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(g,h,i)perylene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzo(k)fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Benzoic Acid	ND	1.0	0.61	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-chloroethoxy)methane	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-chloroethyl)ether	ND	0.35	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Bromophenylphenylether	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Butylbenzylphthalate	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Carbazole	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Chloroaniline	ND	0.69	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Chloro-3-methylphenol	ND	0.69	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Chloronaphthalene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Chlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Chlorophenylphenylether	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Chrysene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Dibenz(a,h)anthracene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Dibenzofuran	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Di-n-butylphthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,3-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,4-Dichlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
3,3-Dichlorobenzidine	ND	0.18	0.13	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dichlorophenol	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Diethylphthalate	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dimethylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Dimethylphthalate	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4,6-Dinitro-2-methylphenol	ND	0.35	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dinitrophenol	ND	0.69	0.48	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,6-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Di-n-octylphthalate	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Fluoranthene	ND	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Fluorene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.35	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Hexachlorobutadiene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Hexachlorocyclopentadiene	ND	0.35	0.29	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Hexachloroethane	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Isophorone	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1-Methylnaphthalene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Methylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
3/4-Methylphenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Nitroaniline	ND	0.35	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
3-Nitroaniline	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Nitroaniline	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Nitrobenzene	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2-Nitrophenol	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
4-Nitrophenol	ND	0.69	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
N-Nitrosodimethylamine	ND	0.35	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
N-Nitrosodi-n-propylamine	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pentachloronitrobenzene	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pentachlorophenol	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Phenanthrene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Phenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pyrene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
Pyridine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
1,2,4-Trichlorobenzene	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4,5-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR
2,4,6-Trichlorophenol	ND	0.35	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:20	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	59.5	30-130		6/19/19 8:20
Phenol-d6	64.9	30-130		6/19/19 8:20
Nitrobenzene-d5	62.6	30-130		6/19/19 8:20
2-Fluorobiphenyl	79.0	30-130		6/19/19 8:20
2,4,6-Tribromophenol	52.9	30-130		6/19/19 8:20
p-Terphenyl-d14	87.3	30-130		6/19/19 8:20

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-1 (17.5-19.5) | Sampled: 6/10/2019 15:20

Sample ID: 19F0630-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	95.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.017	0.087	0.0073	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Acrylonitrile	ND	0.0052	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00087	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Benzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromochloromethane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromoform	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Bromomethane	ND	0.0087	0.00095	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2-Butanone (MEK)	ND	0.035	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Butyl Alcohol (TBA)	ND	0.035	0.0039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
sec-Butylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Butylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Carbon Disulfide	ND	0.0052	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Carbon Tetrachloride	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chlorodibromomethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chloroethane	ND	0.017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chloroform	ND	0.0035	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Chloromethane	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
4-Chlorotoluene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dibromoethane (EDB)	ND	0.00087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Dibromomethane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
trans-1,4-Dichloro-2-butene	ND	0.0035	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1-Dichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1-Dichloroethylene	ND	0.0035	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3-Dichloropropane	ND	0.00087	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1-Dichloropropene	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
cis-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
trans-1,3-Dichloropropene	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Diethyl Ether	ND	0.017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-6 (0-2)
Sampled: 6/11/2019 14:40
Sample ID: 19F0630-11
Sample Matrix: Soil

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	0.00087	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,4-Dioxane	ND	0.087	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Ethylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Hexachlorobutadiene	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methyl Acetate	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0035	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methyl Cyclohexane	ND	0.0017	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Methylene Chloride	0.0017	0.017	0.00087	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0022	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Naphthalene	ND	0.0035	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
n-Propylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Styrene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,2,2-Tetrachloroethane	ND	0.00087	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Tetrachloroethylene	0.0092	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Tetrahydrofuran	ND	0.0087	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Toluene	0.00059	0.0017	0.00052	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00035	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Trichloroethylene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0087	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,3-Trichloropropane	ND	0.0035	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0087	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
Vinyl Chloride	ND	0.0087	0.00078	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
m+p Xylene	ND	0.0035	0.00087	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF
o-Xylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 21:44	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/13/19 21:44
Toluene-d8	99.6	70-130		6/13/19 21:44
4-Bromofluorobenzene	99.2	70-130		6/13/19 21:44

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Aniline	ND	0.36	0.084	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Anthracene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzidine	ND	0.70	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Benzoic Acid	ND	1.1	0.62	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Carbazole	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Chloroaniline	ND	0.70	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Chloro-3-methylphenol	ND	0.70	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,4-Dichlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dinitrophenol	ND	0.70	0.48	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1-Methylnaphthalene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
4-Nitrophenol	ND	0.70	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pentachlorophenol	ND	0.36	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Phenanthrene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 8:47	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.2	30-130		6/19/19 8:47
Phenol-d6	67.8	30-130		6/19/19 8:47
Nitrobenzene-d5	62.8	30-130		6/19/19 8:47
2-Fluorobiphenyl	77.5	30-130		6/19/19 8:47
2,4,6-Tribromophenol	64.4	30-130		6/19/19 8:47
p-Terphenyl-d14	86.9	30-130		6/19/19 8:47

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.1	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Barium	51	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Cadmium	0.22	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Chromium	9.0	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Lead	56	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Mercury	0.12	0.026	0.0079	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 10:53	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:11	EJB

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (0-2) | Sampled: 6/11/2019 14:40

Sample ID: 19F0630-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.0		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18)
Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.091	0.0077	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Acrylonitrile	ND	0.0055	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00091	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Benzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromochloromethane	ND	0.0037	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromodichloromethane	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromoform	ND	0.0037	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Bromomethane	ND	0.0091	0.0010	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2-Butanone (MEK)	ND	0.037	0.0050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	0.0041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
n-Butylbenzene	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
sec-Butylbenzene	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Butylbenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00091	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Carbon Disulfide	ND	0.0055	0.0049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Carbon Tetrachloride	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chlorobenzene	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chlorodibromomethane	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chloroethane	ND	0.018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chloroform	ND	0.0037	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Chloromethane	ND	0.0091	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2-Chlorotoluene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
4-Chlorotoluene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dibromoethane (EDB)	ND	0.00091	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Dibromomethane	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dichlorobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3-Dichlorobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,4-Dichlorobenzene	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1-Dichloroethane	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dichloroethane	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1-Dichloroethylene	ND	0.0037	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
cis-1,2-Dichloroethylene	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
trans-1,2-Dichloroethylene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2-Dichloropropane	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3-Dichloropropane	ND	0.00091	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2,2-Dichloropropane	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1-Dichloropropene	ND	0.0037	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
cis-1,3-Dichloropropene	ND	0.00091	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
trans-1,3-Dichloropropene	ND	0.00091	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Diethyl Ether	ND	0.018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) | Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

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	0.00091	0.00018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,4-Dioxane	ND	0.091	0.0048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Ethylbenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Hexachlorobutadiene	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
2-Hexanone (MBK)	ND	0.018	0.0018	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Isopropylbenzene (Cumene)	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methyl Acetate	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methyl Cyclohexane	ND	0.0018	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Methylene Chloride	0.0014	0.018	0.00091	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:11	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Naphthalene	ND	0.0037	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
n-Propylbenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Styrene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,2,2-Tetrachloroethane	ND	0.00091	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Tetrachloroethylene	0.0036	0.0018	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Tetrahydrofuran	ND	0.0091	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Toluene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,3-Trichlorobenzene	ND	0.0018	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,4-Trichlorobenzene	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3,5-Trichlorobenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,1-Trichloroethane	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,2-Trichloroethane	ND	0.0018	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Trichloroethylene	ND	0.0018	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0091	0.00064	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,3-Trichloropropane	ND	0.0037	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0091	0.00073	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,2,4-Trimethylbenzene	ND	0.0018	0.00027	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
1,3,5-Trimethylbenzene	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
Vinyl Chloride	ND	0.0091	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
m+p Xylene	ND	0.0037	0.00091	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF
o-Xylene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:11	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.4	70-130		6/13/19 22:11
Toluene-d8	98.9	70-130		6/13/19 22:11
4-Bromofluorobenzene	104	70-130		6/13/19 22:11

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Acenaphthylene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Acetophenone	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Aniline	ND	0.39	0.092	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Anthracene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzidine	ND	0.76	0.21	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(a)anthracene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(a)pyrene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(b)fluoranthene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(g,h,i)perylene	ND	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzo(k)fluoranthene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Benzoic Acid	ND	1.2	0.68	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-chloroethoxy)methane	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-chloroethyl)ether	ND	0.39	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Bromophenylphenylether	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Butylbenzylphthalate	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Carbazole	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Chloroaniline	ND	0.76	0.16	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Chloro-3-methylphenol	ND	0.76	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Chloronaphthalene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Chlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Chlorophenylphenylether	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Chrysene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Dibenz(a,h)anthracene	ND	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Dibenzofuran	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Di-n-butylphthalate	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2-Dichlorobenzene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,3-Dichlorobenzene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,4-Dichlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
3,3-Dichlorobenzidine	ND	0.20	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dichlorophenol	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Diethylphthalate	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dimethylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Dimethylphthalate	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4,6-Dinitro-2-methylphenol	ND	0.39	0.35	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dinitrophenol	ND	0.76	0.53	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,6-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Di-n-octylphthalate	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Fluoranthene	ND	0.20	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Fluorene	ND	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR

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Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) | Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Hexachlorobutadiene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Hexachlorocyclopentadiene	ND	0.39	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Hexachloroethane	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Indeno(1,2,3-cd)pyrene	ND	0.20	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Isophorone	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1-Methylnaphthalene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Methylnaphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Methylphenol	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
3/4-Methylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Naphthalene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Nitroaniline	ND	0.39	0.23	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
3-Nitroaniline	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Nitroaniline	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Nitrobenzene	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2-Nitrophenol	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
4-Nitrophenol	ND	0.76	0.28	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
N-Nitrosodimethylamine	ND	0.39	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
N-Nitrosodi-n-propylamine	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pentachloronitrobenzene	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pentachlorophenol	ND	0.39	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Phenanthrene	ND	0.20	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Phenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pyrene	ND	0.20	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
Pyridine	ND	0.39	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
1,2,4-Trichlorobenzene	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4,5-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR
2,4,6-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:14	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.6	30-130		6/19/19 9:14
Phenol-d6	67.2	30-130		6/19/19 9:14
Nitrobenzene-d5	59.9	30-130		6/19/19 9:14
2-Fluorobiphenyl	77.3	30-130		6/19/19 9:14
2,4,6-Tribromophenol	75.7	30-130		6/19/19 9:14
p-Terphenyl-d14	87.7	30-130		6/19/19 9:14

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	5.0	1.9	0.97	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Barium	38	1.9	0.95	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Cadmium	0.28	0.19	0.12	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Chromium	8.2	0.39	0.24	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Lead	7.4	0.58	0.34	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Mercury	0.016	0.028	0.0085	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 10:59	AJL
Selenium	ND	3.9	3.2	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB
Silver	ND	0.39	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:16	EJB

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-6 (16-18) Sampled: 6/11/2019 15:00

Sample ID: 19F0630-12

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.1		% Wt	1		SM 2540G	6/13/19	6/14/19 7:44	JDN

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.029	0.10	0.0086	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Acrylonitrile	ND	0.0062	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Benzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromochloromethane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromodichloromethane	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromoform	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Bromomethane	ND	0.010	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2-Butanone (MEK)	ND	0.041	0.0057	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Butyl Alcohol (TBA)	ND	0.041	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
n-Butylbenzene	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
sec-Butylbenzene	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Butylbenzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Carbon Disulfide	ND	0.0062	0.0056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Carbon Tetrachloride	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chlorobenzene	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chlorodibromomethane	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chloroethane	ND	0.021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chloroform	ND	0.0041	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Chloromethane	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2-Chlorotoluene	ND	0.0021	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
4-Chlorotoluene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Dibromomethane	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
trans-1,4-Dichloro-2-butene	ND	0.0041	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1-Dichloroethane	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dichloroethane	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1-Dichloroethylene	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2-Dichloropropane	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3-Dichloropropane	ND	0.0010	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2,2-Dichloropropane	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1-Dichloropropene	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
cis-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
trans-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Diethyl Ether	0.0020	0.021	0.00072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:38	MFF

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

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	0.0010	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,4-Dioxane	ND	0.10	0.0055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Ethylbenzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Hexachlorobutadiene	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
2-Hexanone (MBK)	ND	0.021	0.0021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Isopropylbenzene (Cumene)	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methyl Acetate	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methyl Cyclohexane	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Methylene Chloride	0.0022	0.021	0.0010	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 22:38	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	0.0026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Naphthalene	ND	0.0041	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
n-Propylbenzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Styrene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Tetrachloroethylene	ND	0.0021	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Tetrahydrofuran	ND	0.010	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Toluene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,3-Trichlorobenzene	ND	0.0021	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,4-Trichlorobenzene	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3,5-Trichlorobenzene	ND	0.0021	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,1-Trichloroethane	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,2-Trichloroethane	ND	0.0021	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Trichloroethylene	ND	0.0021	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,3-Trichloropropane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,2,4-Trimethylbenzene	ND	0.0021	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
Vinyl Chloride	ND	0.010	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
m+p Xylene	ND	0.0041	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF
o-Xylene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 22:38	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.0	70-130		6/13/19 22:38
Toluene-d8	98.6	70-130		6/13/19 22:38
4-Bromofluorobenzene	102	70-130		6/13/19 22:38

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Date Received: 6/12/2019

Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Acenaphthylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Acetophenone	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Aniline	ND	0.35	0.083	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Anthracene	0.43	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzidine	ND	0.69	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(a)anthracene	1.7	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(a)pyrene	1.6	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(b)fluoranthene	1.8	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(g,h,i)perylene	1.3	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzo(k)fluoranthene	0.69	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Benzoic Acid	ND	1.0	0.62	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-chloroethoxy)methane	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-chloroethyl)ether	ND	0.35	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-chloroisopropyl)ether	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Bromophenylphenylether	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Butylbenzylphthalate	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Carbazole	0.29	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Chloroaniline	ND	0.69	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Chloro-3-methylphenol	ND	0.69	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Chloronaphthalene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Chlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Chlorophenylphenylether	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Chrysene	1.5	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Dibenz(a,h)anthracene	0.25	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Dibenzofuran	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Di-n-butylphthalate	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,3-Dichlorobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,4-Dichlorobenzene	ND	0.35	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dichlorophenol	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Diethylphthalate	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dimethylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Dimethylphthalate	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4,6-Dinitro-2-methylphenol	ND	0.35	0.31	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dinitrophenol	ND	0.69	0.48	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,6-Dinitrotoluene	ND	0.35	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Di-n-octylphthalate	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Fluoranthene	3.8	0.18	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR

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Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.35	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Hexachlorobutadiene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Hexachlorocyclopentadiene	ND	0.35	0.29	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Hexachloroethane	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Indeno(1,2,3-cd)pyrene	1.3	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Isophorone	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1-Methylnaphthalene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Methylnaphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Methylphenol	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
3/4-Methylphenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Naphthalene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Nitroaniline	ND	0.35	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
3-Nitroaniline	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Nitroaniline	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Nitrobenzene	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2-Nitrophenol	ND	0.35	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
4-Nitrophenol	ND	0.69	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
N-Nitrosodimethylamine	ND	0.35	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
N-Nitrosodi-n-propylamine	ND	0.35	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pentachloronitrobenzene	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pentachlorophenol	ND	0.35	0.24	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Phenanthrene	2.1	0.18	0.094	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Phenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pyrene	3.5	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
Pyridine	ND	0.35	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.35	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
1,2,4-Trichlorobenzene	ND	0.35	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4,5-Trichlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR
2,4,6-Trichlorophenol	ND	0.35	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 9:48	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	61.0	30-130		6/19/19 9:48
Phenol-d6	64.3	30-130		6/19/19 9:48
Nitrobenzene-d5	61.0	30-130		6/19/19 9:48
2-Fluorobiphenyl	79.7	30-130		6/19/19 9:48
2,4,6-Tribromophenol	65.6	30-130		6/19/19 9:48
p-Terphenyl-d14	80.0	30-130		6/19/19 9:48

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Field Sample #: SB-7 (0-2) Sampled: 6/12/2019 07:40

Sample ID: 19F0630-13

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.5	1.8	0.89	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Barium	47	1.8	0.87	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Cadmium	0.36	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Chromium	9.2	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Lead	49	0.53	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Mercury	0.13	0.027	0.0081	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 11:01	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB
Silver	ND	0.35	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:21	EJB

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Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	93.7		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0097	0.086	0.0072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Acrylonitrile	ND	0.0052	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00086	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Benzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromochloromethane	ND	0.0034	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromodichloromethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromoform	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Bromomethane	ND	0.0086	0.00095	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2-Butanone (MEK)	ND	0.034	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Butyl Alcohol (TBA)	ND	0.034	0.0039	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
n-Butylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
sec-Butylbenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Butylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00086	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Carbon Disulfide	ND	0.0052	0.0047	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Carbon Tetrachloride	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chlorobenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chlorodibromomethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chloroethane	ND	0.017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chloroform	ND	0.0034	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Chloromethane	ND	0.0086	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2-Chlorotoluene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
4-Chlorotoluene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dibromoethane (EDB)	ND	0.00086	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Dibromomethane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3-Dichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,4-Dichlorobenzene	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
trans-1,4-Dichloro-2-butene	ND	0.0034	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.017	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1-Dichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1-Dichloroethylene	ND	0.0034	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
cis-1,2-Dichloroethylene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
trans-1,2-Dichloroethylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3-Dichloropropane	ND	0.00086	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2,2-Dichloropropane	ND	0.0017	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1-Dichloropropene	ND	0.0034	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
cis-1,3-Dichloropropene	ND	0.00086	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
trans-1,3-Dichloropropene	ND	0.00086	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Diethyl Ether	0.0027	0.017	0.00060	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

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	0.00086	0.00017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,4-Dioxane	ND	0.086	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Ethylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Hexachlorobutadiene	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
2-Hexanone (MBK)	ND	0.017	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Isopropylbenzene (Cumene)	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methyl Acetate	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0034	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methyl Cyclohexane	ND	0.0017	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Methylene Chloride	0.0027	0.017	0.00086	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.017	0.0022	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Naphthalene	ND	0.0034	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
n-Propylbenzene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Styrene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,1,2-Tetrachloroethane	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,2,2-Tetrachloroethane	ND	0.00086	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Tetrachloroethylene	ND	0.0017	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Tetrahydrofuran	ND	0.0086	0.00095	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Toluene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,3-Trichlorobenzene	ND	0.0017	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,4-Trichlorobenzene	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3,5-Trichlorobenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,1-Trichloroethane	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,2-Trichloroethane	ND	0.0017	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Trichloroethylene	0.00069	0.0017	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0086	0.00060	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,3-Trichloropropane	ND	0.0034	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0086	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,2,4-Trimethylbenzene	ND	0.0017	0.00026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
1,3,5-Trimethylbenzene	ND	0.0017	0.00043	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
Vinyl Chloride	ND	0.0086	0.00078	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
m+p Xylene	ND	0.0034	0.00086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF
o-Xylene	ND	0.0017	0.00052	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.5	70-130		6/13/19 23:06
Toluene-d8	101	70-130		6/13/19 23:06
4-Bromofluorobenzene	99.9	70-130		6/13/19 23:06

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-7 (18-20)
Sampled: 6/12/2019 08:15
Sample ID: 19F0630-14
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Aniline	ND	0.36	0.086	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Anthracene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzidine	ND	0.71	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Benzoic Acid	ND	1.1	0.63	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Carbazole	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Chloroaniline	ND	0.71	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Chloro-3-methylphenol	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,4-Dichlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dinitrophenol	ND	0.71	0.49	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20)
Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1-Methylnaphthalene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
4-Nitrophenol	ND	0.71	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pentachlorophenol	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Phenanthrene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:09	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	68.0	30-130		6/19/19 10:09
Phenol-d6	69.4	30-130		6/19/19 10:09
Nitrobenzene-d5	63.4	30-130		6/19/19 10:09
2-Fluorobiphenyl	82.5	30-130		6/19/19 10:09
2,4,6-Tribromophenol	75.9	30-130		6/19/19 10:09
p-Terphenyl-d14	82.4	30-130		6/19/19 10:09

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20) Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.7	1.7	0.88	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Barium	47	1.7	0.86	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Cadmium	0.31	0.17	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Chromium	8.8	0.35	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Lead	6.4	0.52	0.31	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Mercury	0.011	0.026	0.0077	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 11:02	AJL
Selenium	ND	3.5	2.9	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB
Silver	ND	0.35	0.20	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:26	EJB

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-7 (18-20)
Sampled: 6/12/2019 08:15

Sample ID: 19F0630-14

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	92.6		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-8 (0-2)
Sampled: 6/12/2019 08:55
Sample ID: 19F0630-15
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.031	0.093	0.0078	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Acrylonitrile	ND	0.0056	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00093	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Benzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromochloromethane	ND	0.0037	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromodichloromethane	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromoform	ND	0.0037	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Bromomethane	ND	0.0093	0.0010	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2-Butanone (MEK)	ND	0.037	0.0051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Butyl Alcohol (TBA)	ND	0.037	0.0042	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
n-Butylbenzene	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
sec-Butylbenzene	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Butylbenzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00093	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Carbon Disulfide	0.0064	0.0056	0.0050	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Carbon Tetrachloride	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chlorobenzene	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chlorodibromomethane	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chloroethane	ND	0.019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chloroform	ND	0.0037	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Chloromethane	ND	0.0093	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2-Chlorotoluene	ND	0.0019	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
4-Chlorotoluene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0019	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dibromoethane (EDB)	ND	0.00093	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Dibromomethane	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dichlorobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3-Dichlorobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,4-Dichlorobenzene	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.019	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1-Dichloroethane	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dichloroethane	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1-Dichloroethylene	ND	0.0037	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
cis-1,2-Dichloroethylene	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
trans-1,2-Dichloroethylene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2-Dichloropropane	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3-Dichloropropane	ND	0.00093	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2,2-Dichloropropane	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1-Dichloropropene	ND	0.0037	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
cis-1,3-Dichloropropene	ND	0.00093	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
trans-1,3-Dichloropropene	ND	0.00093	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Diethyl Ether	0.0025	0.019	0.00065	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:33	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) | Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

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	0.00093	0.00019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,4-Dioxane	ND	0.093	0.0049	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Ethylbenzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Hexachlorobutadiene	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
2-Hexanone (MBK)	ND	0.019	0.0019	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Isopropylbenzene (Cumene)	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methyl Acetate	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methyl Cyclohexane	ND	0.0019	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Methylene Chloride	0.0029	0.019	0.00093	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/13/19 23:33	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.019	0.0023	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Naphthalene	ND	0.0037	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
n-Propylbenzene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Styrene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,1,2-Tetrachloroethane	ND	0.0019	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,2,2-Tetrachloroethane	ND	0.00093	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Tetrachloroethylene	ND	0.0019	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Tetrahydrofuran	ND	0.0093	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Toluene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,3-Trichlorobenzene	ND	0.0019	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,4-Trichlorobenzene	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3,5-Trichlorobenzene	ND	0.0019	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,1-Trichloroethane	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,2-Trichloroethane	ND	0.0019	0.00037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Trichloroethylene	ND	0.0019	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0093	0.00065	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,3-Trichloropropane	ND	0.0037	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0093	0.00074	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,2,4-Trimethylbenzene	ND	0.0019	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
1,3,5-Trimethylbenzene	ND	0.0019	0.00046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
Vinyl Chloride	ND	0.0093	0.00083	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
m+p Xylene	ND	0.0037	0.00093	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF
o-Xylene	ND	0.0019	0.00056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/13/19 23:33	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.2	70-130		6/13/19 23:33
Toluene-d8	98.3	70-130		6/13/19 23:33
4-Bromofluorobenzene	102	70-130		6/13/19 23:33

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-8 (0-2)
Sampled: 6/12/2019 08:55
Sample ID: 19F0630-15
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Acetophenone	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Aniline	ND	0.37	0.087	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Anthracene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzidine	ND	0.72	0.20	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(a)anthracene	0.15	0.18	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(a)pyrene	0.16	0.18	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(b)fluoranthene	0.20	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(g,h,i)perylene	0.15	0.18	0.11	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Benzoic Acid	ND	1.1	0.64	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-chloroethoxy)methane	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-chloroethyl)ether	ND	0.37	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-chloroisopropyl)ether	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Bromophenylphenylether	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Butylbenzylphthalate	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Carbazole	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Chloroaniline	ND	0.72	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Chloro-3-methylphenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Chloronaphthalene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Chlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Chlorophenylphenylether	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Chrysene	0.17	0.18	0.12	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Dibenzofuran	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Di-n-butylphthalate	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,3-Dichlorobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,4-Dichlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dichlorophenol	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Diethylphthalate	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dimethylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Dimethylphthalate	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4,6-Dinitro-2-methylphenol	ND	0.37	0.33	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dinitrophenol	ND	0.72	0.50	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,6-Dinitrotoluene	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Di-n-octylphthalate	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Fluoranthene	0.32	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-8 (0-2)
Sampled: 6/12/2019 08:55
Sample ID: 19F0630-15
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Hexachlorobutadiene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Hexachlorocyclopentadiene	ND	0.37	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Hexachloroethane	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Isophorone	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1-Methylnaphthalene	ND	0.18	0.098	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Methylphenol	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
3/4-Methylphenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Nitroaniline	ND	0.37	0.22	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
3-Nitroaniline	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Nitroaniline	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Nitrobenzene	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2-Nitrophenol	ND	0.37	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
4-Nitrophenol	ND	0.72	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
N-Nitrosodimethylamine	ND	0.37	0.20	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
N-Nitrosodi-n-propylamine	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pentachloronitrobenzene	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pentachlorophenol	ND	0.37	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Phenanthrene	0.15	0.18	0.098	mg/Kg dry	1	J	SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Phenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pyrene	0.30	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
Pyridine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
1,2,4-Trichlorobenzene	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4,5-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR
2,4,6-Trichlorophenol	ND	0.37	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 10:37	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	66.6	30-130		6/19/19 10:37
Phenol-d6	67.2	30-130		6/19/19 10:37
Nitrobenzene-d5	63.4	30-130		6/19/19 10:37
2-Fluorobiphenyl	78.9	30-130		6/19/19 10:37
2,4,6-Tribromophenol	71.3	30-130		6/19/19 10:37
p-Terphenyl-d14	93.8	30-130		6/19/19 10:37

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2)
Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.7	1.8	0.93	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Barium	39	1.8	0.91	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Cadmium	0.32	0.18	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Chromium	11	0.37	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Lead	350	0.55	0.33	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Mercury	0.034	0.028	0.0084	mg/Kg dry	1		SW-846 7471B	6/17/19	6/18/19 11:04	AJL
Selenium	ND	3.7	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB
Silver	ND	0.37	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:31	EJB

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (0-2) Sampled: 6/12/2019 08:55

Sample ID: 19F0630-15

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.2		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0076	0.069	0.0058	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Acrylonitrile	ND	0.0041	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00069	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Benzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromochloromethane	ND	0.0028	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromodichloromethane	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromoform	ND	0.0028	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Bromomethane	ND	0.0069	0.00076	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2-Butanone (MEK)	ND	0.028	0.0038	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Butyl Alcohol (TBA)	ND	0.028	0.0031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
n-Butylbenzene	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
sec-Butylbenzene	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Butylbenzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00069	0.00014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Carbon Disulfide	ND	0.0041	0.0037	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Carbon Tetrachloride	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chlorobenzene	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chlorodibromomethane	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chloroethane	ND	0.014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chloroform	ND	0.0028	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Chloromethane	ND	0.0069	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2-Chlorotoluene	ND	0.0014	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
4-Chlorotoluene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0014	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dibromoethane (EDB)	ND	0.00069	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Dibromomethane	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dichlorobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3-Dichlorobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,4-Dichlorobenzene	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
trans-1,4-Dichloro-2-butene	ND	0.0028	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.014	0.00076	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1-Dichloroethane	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dichloroethane	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1-Dichloroethylene	ND	0.0028	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
cis-1,2-Dichloroethylene	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
trans-1,2-Dichloroethylene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2-Dichloropropane	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3-Dichloropropane	ND	0.00069	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2,2-Dichloropropane	ND	0.0014	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1-Dichloropropene	ND	0.0028	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
cis-1,3-Dichloropropene	ND	0.00069	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
trans-1,3-Dichloropropene	ND	0.00069	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Diethyl Ether	0.0013	0.014	0.00048	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

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	0.00069	0.00014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,4-Dioxane	ND	0.069	0.0036	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Ethylbenzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Hexachlorobutadiene	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
2-Hexanone (MBK)	ND	0.014	0.0014	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Isopropylbenzene (Cumene)	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methyl Acetate	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0028	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methyl Cyclohexane	ND	0.0014	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Methylene Chloride	0.0021	0.014	0.00069	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.014	0.0017	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Naphthalene	ND	0.0028	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
n-Propylbenzene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Styrene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,1,2-Tetrachloroethane	ND	0.0014	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,2,2-Tetrachloroethane	ND	0.00069	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Tetrachloroethylene	0.0011	0.0014	0.00083	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Tetrahydrofuran	ND	0.0069	0.00076	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Toluene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,3-Trichlorobenzene	ND	0.0014	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,4-Trichlorobenzene	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3,5-Trichlorobenzene	ND	0.0014	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,1-Trichloroethane	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,2-Trichloroethane	ND	0.0014	0.00028	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Trichloroethylene	0.00078	0.0014	0.00055	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0069	0.00048	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,3-Trichloropropane	ND	0.0028	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0069	0.00055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,2,4-Trimethylbenzene	ND	0.0014	0.00021	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
1,3,5-Trimethylbenzene	ND	0.0014	0.00034	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
Vinyl Chloride	ND	0.0069	0.00062	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
m+p Xylene	ND	0.0028	0.00069	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF
o-Xylene	ND	0.0014	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:00	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	96.3	70-130			6/14/19 0:00
Toluene-d8	98.9	70-130			6/14/19 0:00
4-Bromofluorobenzene	102	70-130			6/14/19 0:00

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Acenaphthylene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Acetophenone	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Aniline	ND	0.39	0.091	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Anthracene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzidine	ND	0.75	0.21	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(a)anthracene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(a)pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(b)fluoranthene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(g,h,i)perylene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzo(k)fluoranthene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Benzoic Acid	ND	1.1	0.67	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-chloroethoxy)methane	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-chloroethyl)ether	ND	0.39	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-chloroisopropyl)ether	ND	0.39	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Bromophenylphenylether	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Butylbenzylphthalate	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Carbazole	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Chloroaniline	ND	0.75	0.16	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Chloro-3-methylphenol	ND	0.75	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Chloronaphthalene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Chlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Chlorophenylphenylether	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Chrysene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Dibenzofuran	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Di-n-butylphthalate	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2-Dichlorobenzene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,3-Dichlorobenzene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,4-Dichlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
3,3-Dichlorobenzidine	ND	0.19	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dichlorophenol	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Diethylphthalate	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dimethylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Dimethylphthalate	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4,6-Dinitro-2-methylphenol	ND	0.39	0.34	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dinitrophenol	ND	0.75	0.53	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,6-Dinitrotoluene	ND	0.39	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Di-n-octylphthalate	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Fluoranthene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Fluorene	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20) | Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.39	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Hexachlorobutadiene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Hexachlorocyclopentadiene	ND	0.39	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Hexachloroethane	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Indeno(1,2,3-cd)pyrene	ND	0.19	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Isophorone	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1-Methylnaphthalene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Methylnaphthalene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Methylphenol	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
3/4-Methylphenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Naphthalene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Nitroaniline	ND	0.39	0.23	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
3-Nitroaniline	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Nitroaniline	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Nitrobenzene	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2-Nitrophenol	ND	0.39	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
4-Nitrophenol	ND	0.75	0.27	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
N-Nitrosodimethylamine	ND	0.39	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
N-Nitrosodi-n-propylamine	ND	0.39	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pentachloronitrobenzene	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pentachlorophenol	ND	0.39	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Phenanthrene	ND	0.19	0.10	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Phenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
Pyridine	ND	0.39	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.39	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
1,2,4-Trichlorobenzene	ND	0.39	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4,5-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR
2,4,6-Trichlorophenol	ND	0.39	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:05	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	63.5	30-130		6/19/19 11:05
Phenol-d6	68.4	30-130		6/19/19 11:05
Nitrobenzene-d5	62.5	30-130		6/19/19 11:05
2-Fluorobiphenyl	82.0	30-130		6/19/19 11:05
2,4,6-Tribromophenol	75.1	30-130		6/19/19 11:05
p-Terphenyl-d14	97.7	30-130		6/19/19 11:05

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20)
Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.1	1.9	0.96	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Barium	25	1.9	0.94	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Cadmium	0.26	0.19	0.11	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Chromium	7.2	0.38	0.23	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Lead	7.4	0.57	0.34	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Mercury	0.016	0.029	0.0086	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 11:06	AJL
Selenium	ND	3.8	3.1	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB
Silver	ND	0.38	0.22	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:35	EJB

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-8 (18-20)
Sampled: 6/12/2019 09:05

Sample ID: 19F0630-16

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	86.9		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630
Date Received: 6/12/2019
Field Sample #: SB-Dup
Sampled: 6/11/2019 00:00
Sample ID: 19F0630-17
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.10	0.0086	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Acrylonitrile	ND	0.0061	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0010	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Benzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromochloromethane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromodichloromethane	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromoform	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Bromomethane	ND	0.010	0.0011	mg/Kg dry	1	V-34	SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2-Butanone (MEK)	ND	0.041	0.0056	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Butyl Alcohol (TBA)	ND	0.041	0.0046	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
n-Butylbenzene	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
sec-Butylbenzene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Butylbenzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Carbon Disulfide	ND	0.0061	0.0055	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Carbon Tetrachloride	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chlorobenzene	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chlorodibromomethane	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chloroethane	ND	0.020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chloroform	ND	0.0041	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Chloromethane	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2-Chlorotoluene	ND	0.0020	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
4-Chlorotoluene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dibromoethane (EDB)	ND	0.0010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Dibromomethane	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dichlorobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3-Dichlorobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,4-Dichlorobenzene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
trans-1,4-Dichloro-2-butene	ND	0.0041	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.020	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1-Dichloroethane	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dichloroethane	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1-Dichloroethylene	ND	0.0041	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
cis-1,2-Dichloroethylene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
trans-1,2-Dichloroethylene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2-Dichloropropane	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3-Dichloropropane	ND	0.0010	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2,2-Dichloropropane	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1-Dichloropropene	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
cis-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
trans-1,3-Dichloropropene	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Diethyl Ether	0.0015	0.020	0.00072	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:29	MFF

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

Project Location: 615 Broadway, Kingston, NY | Sample Description: | Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup | Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

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	0.0010	0.00020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,4-Dioxane	ND	0.10	0.0054	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Ethylbenzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Hexachlorobutadiene	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
2-Hexanone (MBK)	ND	0.020	0.0020	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Isopropylbenzene (Cumene)	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methyl Acetate	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0041	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methyl Cyclohexane	ND	0.0020	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Methylene Chloride	0.0023	0.020	0.0010	mg/Kg dry	1	J	SW-846 8260C	6/13/19	6/14/19 0:29	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.020	0.0026	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Naphthalene	ND	0.0041	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
n-Propylbenzene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Styrene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,1,2-Tetrachloroethane	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,2,2-Tetrachloroethane	ND	0.0010	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Tetrachloroethylene	ND	0.0020	0.0012	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Tetrahydrofuran	ND	0.010	0.0011	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Toluene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,3-Trichlorobenzene	ND	0.0020	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,4-Trichlorobenzene	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3,5-Trichlorobenzene	ND	0.0020	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,1-Trichloroethane	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,2-Trichloroethane	ND	0.0020	0.00041	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Trichloroethylene	ND	0.0020	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Trichlorofluoromethane (Freon 11)	ND	0.010	0.00072	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,3-Trichloropropane	ND	0.0041	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	0.00082	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,2,4-Trimethylbenzene	ND	0.0020	0.00031	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
1,3,5-Trimethylbenzene	ND	0.0020	0.00051	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
Vinyl Chloride	ND	0.010	0.00092	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
m+p Xylene	ND	0.0041	0.0010	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF
o-Xylene	ND	0.0020	0.00061	mg/Kg dry	1		SW-846 8260C	6/13/19	6/14/19 0:29	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/14/19 0:29
Toluene-d8	98.7	70-130		6/14/19 0:29
4-Bromofluorobenzene	99.6	70-130		6/14/19 0:29

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup
Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Acenaphthylene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Acetophenone	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Aniline	ND	0.36	0.086	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Anthracene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzidine	ND	0.71	0.19	mg/Kg dry	1	V-04, V-35	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(a)anthracene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(a)pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(b)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(g,h,i)perylene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzo(k)fluoranthene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Benzoic Acid	ND	1.1	0.63	mg/Kg dry	1	UJ L-04	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-chloroethoxy)methane	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-chloroethyl)ether	ND	0.36	0.18	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-chloroisopropyl)ether	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Bromophenylphenylether	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Butylbenzylphthalate	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Carbazole	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Chloroaniline	ND	0.71	0.15	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Chloro-3-methylphenol	ND	0.71	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Chloronaphthalene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Chlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Chlorophenylphenylether	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Chrysene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Dibenzofuran	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Di-n-butylphthalate	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,3-Dichlorobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,4-Dichlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
3,3-Dichlorobenzidine	ND	0.18	0.14	mg/Kg dry	1	V-34	SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dichlorophenol	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Diethylphthalate	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dimethylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Dimethylphthalate	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4,6-Dinitro-2-methylphenol	ND	0.36	0.32	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dinitrophenol	ND	0.71	0.49	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,6-Dinitrotoluene	ND	0.36	0.17	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Di-n-octylphthalate	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Fluoranthene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Fluorene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup
Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Hexachlorobutadiene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Hexachlorocyclopentadiene	ND	0.36	0.30	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Hexachloroethane	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Isophorone	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1-Methylnaphthalene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Methylnaphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Methylphenol	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
3/4-Methylphenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Naphthalene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Nitroaniline	ND	0.36	0.21	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
3-Nitroaniline	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Nitroaniline	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Nitrobenzene	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2-Nitrophenol	ND	0.36	0.15	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
4-Nitrophenol	ND	0.71	0.26	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
N-Nitrosodimethylamine	ND	0.36	0.19	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
N-Nitrosodi-n-propylamine	ND	0.36	0.16	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pentachloronitrobenzene	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pentachlorophenol	ND	0.36	0.25	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Phenanthrene	ND	0.18	0.097	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Phenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pyrene	ND	0.18	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
Pyridine	ND	0.36	0.11	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.14	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
1,2,4-Trichlorobenzene	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4,5-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR
2,4,6-Trichlorophenol	ND	0.36	0.13	mg/Kg dry	1		SW-846 8270D	6/13/19	6/19/19 11:33	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	63.4	30-130		6/19/19 11:33
Phenol-d6	66.2	30-130		6/19/19 11:33
Nitrobenzene-d5	59.7	30-130		6/19/19 11:33
2-Fluorobiphenyl	76.9	30-130		6/19/19 11:33
2,4,6-Tribromophenol	76.7	30-130		6/19/19 11:33
p-Terphenyl-d14	90.2	30-130		6/19/19 11:33

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup
Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Polychlorinated Biphenyls with 3540 Soxhlet Extraction

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.086	0.039	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1221 [1]	ND	0.086	0.065	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1232 [1]	ND	0.086	0.078	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1242 [1]	ND	0.086	0.065	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1248 [1]	ND	0.086	0.030	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1254 [1]	ND	0.086	0.035	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1260 [1]	ND	0.086	0.048	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1262 [1]	ND	0.086	0.043	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH
Aroclor-1268 [1]	ND	0.086	0.069	mg/Kg dry	4		SW-846 8082A	6/16/19	6/18/19 22:56	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	100	30-150		6/18/19 22:56
Decachlorobiphenyl [2]	102	30-150		6/18/19 22:56
Tetrachloro-m-xylene [1]	93.7	30-150		6/18/19 22:56
Tetrachloro-m-xylene [2]	90.9	30-150		6/18/19 22:56

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

Project Location: 615 Broadway, Kingston, NY
Sample Description:
Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup
Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.8	1.8	0.92	mg/Kg dry	1	J	SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Barium	23	1.8	0.90	mg/Kg dry	1	J	SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Cadmium	0.20	0.18	0.11	mg/Kg dry	1	J	SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Chromium	7.2	0.36	0.22	mg/Kg dry	1	J	SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Lead	6.2	0.55	0.32	mg/Kg dry	1	J	SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Mercury	0.013	0.027	0.0080	mg/Kg dry	1	J	SW-846 7471B	6/17/19	6/18/19 11:07	AJL
Selenium	ND	3.6	3.0	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB
Silver	ND	0.36	0.21	mg/Kg dry	1		SW-846 6010D	6/17/19	6/18/19 17:40	EJB

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

Project Location: 615 Broadway, Kingston, NY Sample Description: Work Order: 19F0630

Date Received: 6/12/2019

Field Sample #: SB-Dup Sampled: 6/11/2019 00:00

Sample ID: 19F0630-17

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.1		% Wt	1		SM 2540G	6/13/19	6/14/19 7:45	JDN

ALPHA
GEOSCIENCE
Geology
Hydrology
Remediation
Water Supply

Data Usability Summary Report
for Con-Test Analytical Laboratory
Work Order No: 19F1123

6 Ground Water Samples, 1 Field Duplicate,
and 1 Trip Blank
Collected June 18-20, 2019

Prepared by: Donald Anné
October 9, 2019

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results of volatile analyses for 6 ground water samples, 1 field duplicate, and 1 trip blank; semi-volatile and metal analyses for 6 ground water samples and 1 field duplicate; and PCB analyses for 2 ground water samples and 1 field duplicate.

The overall performances of the analyses are acceptable. Con-Test Analytical Laboratory did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The "not detected" semi-volatile result for hexachlorocyclopentadiene were qualified as "estimated" (UJ) in all 6 ground water samples and field duplicate because 2 of 2 percent recoveries for hexachlorocyclopentadiene were below control limits, but not below 10% in the associated aqueous LCS/LCSD.

- The positive metal results for chromium were qualified as "estimated" (J) in samples MW-4 and DUP because the relative percent difference for chromium was above the allowable maximum in aqueous field duplicate pair MW-4/DUP.

All data are considered usable with estimated (J or UJ) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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QA/QC Review of Method 8260C Volatiles Data for Con-Test Analytical Laboratory, Work Order No: 19F1123

6 Ground Water Samples, 1 Field Duplicate, and 1 Trip Blank Collected June 18-20, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for applicable compounds were above the method minimums, as required.

The average RRFs for target compounds were below the allowable minimum (0.001 for 1,4-dioxane, 0.010 for all other compounds) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for applicable compounds were above the method minimums, as required. The %Ds for bromomethane and chloromethane were above the method maximum on 06-21-19 (S037370-CCV1). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.0005 for 1,4-dioxane, 0.010 for all other compounds), as required.

The %Ds for bromomethane and chloromethane were above the allowable maximum (25%) on 06-21-19 (S037370-CCV1). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analyses of the method and trip blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

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Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous samples B233900-BS1 and B233900-BSD1.

Field Duplicate: The relative percent difference for trichloroethylene was below the allowable maximum (20%) for aqueous field duplicate pair MW-4/DUP (attached table), as required.

Compound ID: Checked compounds were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Volatiles

Calculations for Field Duplicate Relative Percent Difference (RPD)

SDG No. 19F1123

S1= MW-4 **S2=** DUP

Analyte	S1	S2	RPD (%)
tetrachloroethylene	**0.80**	**0.69**	NC
trichloroethylene	1.7	1.5	13%

* RPD is above the allowable maximum (20%)

All results are in ug/L.

Bold numbers were values that below the CRQL or above the high standard.
ND - Not detected.
NC - Not calculated, both results must be within the linear range for valid RPDs to be calculated.

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1917203.D	Calibration Date:	05/16/19 09:46
Sequence:	S037370	Injection Date:	06/21/19
Lab Sample ID:	S037370-CCV1	Injection Time:	10:01

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100	98.4	0.1881665	0.1850612		-1.7	20	
Acrylonitrile	A	10.0	9.02	0.2484221	0.2240686		-9.8	20	
tert-Amyl Methyl Ether (TAME)	A	10.0	9.76	1.289385	1.257831		-2.4	20	
Benzene	A	10.0	9.91	1.72594	1.7108		-0.9	20	
Bromobenzene	A	10.0	9.94	1.057032	1.050194		-0.6	20	
Bromochloromethane	A	10.0	10.6	0.4131035	0.4362023		5.6	20	
Bromodichloromethane	A	10.0	10.2	0.3780762	0.3860302		2.1	20	
Bromoform	A	10.0	10.8	0.4654726	0.501573		7.8	20	
Bromomethane	A	10.0	13.2	0.2847145	0.3749439		31.7	20	*
2-Butanone (MEK)	A	100	94.8	0.3378563	0.3204186		-5.2	20	
tert-Butyl Alcohol (TBA)	A	100	112	7.238849E-02	8.106445E-02		12.0	20	
n-Butylbenzene	A	10.0	10.0	1.769604	1.775551		0.3	20	
sec-Butylbenzene	A	10.0	9.81	2.284017	2.240211		-1.9	20	
tert-Butylbenzene	A	10.0	9.77	1.618806	1.581425		-2.3	20	
tert-Butyl Ethyl Ether (TBEE)	A	10.0	9.65	1.451316	1.400732		-3.5	20	
Carbon Disulfide	A	100	102	1.119853	1.140268		1.8	20	
Carbon Tetrachloride	A	10.0	9.63	0.4997097	0.4810372		-3.7	20	
Chlorobenzene	A	10.0	10.4	1.478802	1.533279		3.7	20	
Chlorodibromomethane	A	10.0	10.3	0.3139765	0.3240255		3.2	20	
Chloroethane	A	10.0	10.5	0.2881543	0.3013281		4.6	20	
Chloroform	A	10.0	10.3	0.7462329	0.7668131		2.8	20	
Chloromethane	A	10.0	13.5	0.6525361	0.8838114		35.4	20	*
2-Chlorotoluene	A	10.0	10.0	1.720424	1.726858		0.4	20	
4-Chlorotoluene	A	10.0	10.3	1.958256	2.024815		3.4	20	
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	10.1	0.1644986	0.1667727		1.4	20	
1,2-Dibromoethane (EDB)	A	10.0	10.2	0.3046615	0.3112537		2.2	20	
Dibromomethane	A	10.0	10.4	0.1962563	0.2031528		3.5	20	
1,2-Dichlorobenzene	A	10.0	10.4	1.195438	1.245476		4.2	20	
1,3-Dichlorobenzene	A	10.0	10.3	1.185068	1.219077		2.9	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1917203.D	Calibration Date:	05/16/19 09:46
Sequence:	S037370	Injection Date:	06/21/19
Lab Sample ID:	S037370-CCV1	Injection Time:	10:01

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,4-Dichlorobenzene	A	10.0	10.3	1.256354	1.291243		2.8	20
trans-1,4-Dichloro-2-butene	A	10.0	10.8	0.2217889	0.240169		8.3	20
Dichlorodifluoromethane (Freon 12)	A	10.0	9.56	0.489052	0.4675445		-4.4	20
1,1-Dichloroethane	A	10.0	9.77	0.8050564	0.7866957		-2.3	20
1,2-Dichloroethane	A	10.0	9.93	0.4085792	0.4058204		-0.7	20
1,1-Dichloroethylene	A	10.0	10.4	0.580623	0.604267		4.1	20
cis-1,2-Dichloroethylene	A	10.0	9.97	0.7003627	0.698135		-0.3	20
trans-1,2-Dichloroethylene	A	10.0	9.68	0.6012956	0.5822192		-3.2	20
1,2-Dichloropropane	A	10.0	9.90	0.3162404	0.3131253		-1.0	20
1,3-Dichloropropane	A	10.0	9.81	0.5087606	0.4988967		-1.9	20
2,2-Dichloropropane	A	10.0	9.94	0.6030733	0.5996462		-0.6	20
1,1-Dichloropropene	A	10.0	9.97	0.5527761	0.5509299		-0.3	20
cis-1,3-Dichloropropene	A	10.0	10.2	0.4823059	0.4944777		2.5	20
trans-1,3-Dichloropropene	A	10.0	10.2	0.4359988	0.4450022		2.1	20
Diethyl Ether	A	10.0	10.1	0.3702305	0.3752079		1.3	20
Diisopropyl Ether (DIPE)	A	10.0	9.61	1.74122	1.673544		-3.9	20
1,4-Dioxane	A	100	96.1	4.635165E-03	4.453661E-03		-3.9	20
Ethylbenzene	A	10.0	10.2	2.545889	2.598298		2.1	20
Hexachlorobutadiene	A	10.0	11.1	0.2928132	0.3244275		10.8	20
2-Hexanone (MBK)	A	100	95.2	0.3344099	0.3185338		-4.7	20
Isopropylbenzene (Cumene)	A	10.0	10.2	2.305934	2.341965		1.6	20
p-Isopropyltoluene (p-Cymene)	A	10.0	9.99	1.967049	1.965507		-0.08	20
Methyl Acetate	A	10.0	9.56	0.5828072	0.5571613		-4.4	20
Methyl tert-Butyl Ether (MTBE)	A	10.0	9.63	1.31052	1.261739		-3.7	20
Methyl Cyclohexane	A	10.0	9.77	0.3612119	0.3528097		-2.3	20
Methylene Chloride	A	10.0	10.6	0.6164331	0.6507917		5.6	20
4-Methyl-2-pentanone (MIBK)	A	100	95.5	0.4656019	0.4445568		-4.5	20
Naphthalene	A	10.0	9.93	2.298426	2.281489		-0.7	20
n-Propylbenzene	A	10.0	10.3	2.710896	2.784728		2.7	20

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1917203.D	Calibration Date:	05/16/19 09:46
Sequence:	S037370	Injection Date:	06/21/19
Lab Sample ID:	S037370-CCV1	Injection Time:	10:01

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Styrene	A	10.0	10.4	1.60354	1.663153		3.7	20
1,1,1,2-Tetrachloroethane	A	10.0	10.6	0.5280217	0.5568963		5.5	20
1,1,2,2-Tetrachloroethane	A	10.0	10.5	0.8779885	0.9210588		4.9	20
Tetrachloroethylene	A	10.0	10.8	0.2684052	0.2906664		8.3	20
Tetrahydrofuran	A	10.0	10.0	0.2017468	0.2020736		0.2	20
Toluene	A	10.0	10.1	1.159427	1.169095		0.8	20
1,2,3-Trichlorobenzene	A	10.0	9.90	0.763704	0.756432		-1.0	20
1,2,4-Trichlorobenzene	A	10.0	9.92	0.768892	0.7624046		-0.8	20
1,3,5-Trichlorobenzene	A	10.0	10.3	0.816296	0.8423099		3.2	20
1,1,1-Trichloroethane	A	10.0	10.3	0.5962929	0.6133501		2.9	20
1,1,2-Trichloroethane	A	10.0	10.6	0.2729421	0.2888814		5.8	20
Trichloroethylene	A	10.0	10.2	0.264012	0.2688833		1.8	20
Trichlorofluoromethane (Freon 11)	A	10.0	10.5	0.5804948	0.6108153		5.2	20
1,2,3-Trichloropropane	A	10.0	10.4	0.7335319	0.7601244		3.6	20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	10.3	0.3179614	0.3275214		3.0	20
1,2,4-Trimethylbenzene	A	10.0	9.77	2.04495	1.997208		-2.3	20
1,3,5-Trimethylbenzene	A	10.0	9.90	1.923032	1.90385		-1.0	20
Vinyl Chloride	A	10.0	9.93	0.5215649	0.5178714		-0.7	20
m+p Xylene	A	20.0	20.4	1.929171	1.972978		2.3	20
o-Xylene	A	10.0	10.2	1.987587	2.036542		2.5	20
1,2-Dichloroethane-d4	A	25.0	24.6	0.5643226	0.5542832		-1.8	
Toluene-d8	A	25.0	24.7	1.196284	1.18387		-1.0	
4-Bromofluorobenzene	A	25.0	24.2	0.8899582	0.86158		-3.2	

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

* Values outside of QC limits

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QA/QC Review of Method 8270D Semi-Volatiles Data for Con-Test Analytical Laboratory, Work Order No: 19F1123

6 Ground Water Samples and 1 Field Duplicate Collected June 18-20, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: Samples were extracted and analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The average RRF for applicable compounds were above the method minimums, as required.

The average RRFs for target compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for applicable compounds were above the method minimums, as required. The %Ds for hexachlorocyclopentadiene, 4-nitrophenol, and n-nitrosodimethylamine were above the method maximum on 06-25-19 (S037429-CCV1). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.010), as required.

The %Ds for hexachlorocyclopentadiene and 4-nitrophenol were above the allowable maximum (25%) on 06-25-19 (S037429-CCV1). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analyses of the method blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples.

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Laboratory Control Sample: The relative percent difference for benzidine was above the allowable maximum and 2 of 2 percent recoveries for hexachlorocylopentadiene were below QC limits, but not below 10% for aqueous samples B233869-BS1 and B233869-BSD1. Positive results for benzidine should be considered estimated (J) and the positive results for hexachlorocyclopentadiene should be considered estimated, biased low (J-) and "not detected" results for hexachlorocyclopentadiene estimated (UJ) in associated aqueous samples.

Field Duplicate: The analyses of soil field duplicate pair MW-4/DUP reported target compounds as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked surrogates were within GC/MS quantitation limits. The analyses of the ground water samples reported target compounds as not detected.

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 3510C
Batch:	B233869	Laboratory ID:	B233869-BS1
Column:		Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	50.0	32.3	64.7	40 - 140
Acenaphthylene	50.0	35.6	71.2	40 - 140
Acetophenone	50.0	33.7	67.4	40 - 140
Aniline	50.0	37.5	74.9	40 - 140
Anthracene	50.0	35.9	71.7	40 - 140
Benzidine	50.0	41.9	83.8	40 - 140
Benzo(a)anthracene	50.0	38.1	76.2	40 - 140
Benzo(a)pyrene	50.0	38.1	76.2	40 - 140
Benzo(b)fluoranthene	50.0	36.3	72.6	40 - 140
Benzo(g,h,i)perylene	50.0	30.9	61.9	40 - 140
Benzo(k)fluoranthene	50.0	37.1	74.1	40 - 140
Benzoic Acid	50.0	14.7	29.4	10 - 130
Bis(2-chloroethoxy)methane	50.0	38.9	77.7	40 - 140
Bis(2-chloroethyl)ether	50.0	32.6	65.2	40 - 140
Bis(2-chloroisopropyl)ether	50.0	34.0	68.1	40 - 140
Bis(2-Ethylhexyl)phthalate	50.0	33.3	66.6	40 - 140
4-Bromophenylphenylether	50.0	33.3	66.6	40 - 140
Butylbenzylphthalate	50.0	35.2	70.4	40 - 140
Carbazole	50.0	36.7	73.3	40 - 140
4-Chloroaniline	50.0	36.0	72.0	40 - 140
4-Chloro-3-methylphenol	50.0	36.1	72.3	30 - 130
2-Chloronaphthalene	50.0	31.9	63.7	40 - 140
2-Chlorophenol	50.0	32.5	65.0	30 - 130
4-Chlorophenylphenylether	50.0	35.5	71.0	40 - 140
Chrysene	50.0	39.9	79.7	40 - 140
Dibenz(a,h)anthracene	50.0	33.5	67.0	40 - 140
Dibenzofuran	50.0	34.3	68.7	40 - 140
Di-n-butylphthalate	50.0	32.5	65.0	40 - 140
1,2-Dichlorobenzene	50.0	32.1	64.3	40 - 140
1,3-Dichlorobenzene	50.0	31.5	63.0	40 - 140
1,4-Dichlorobenzene	50.0	31.9	63.7	40 - 140
3,3-Dichlorobenzidine	50.0	41.4	82.7	40 - 140
2,4-Dichlorophenol	50.0	35.4	70.7	30 - 130
Diethylphthalate	50.0	35.4	70.9	40 - 140
2,4-Dimethylphenol	50.0	31.3	62.5	30 - 130
Dimethylphthalate	50.0	34.9	69.7	40 - 140
4,6-Dinitro-2-methylphenol	50.0	33.4	66.9	30 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 3510C
Batch:	B233869	Laboratory ID:	B233869-BS1
Column:		Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.	QC LIMITS REC.
2,4-Dinitrophenol	50.0	31.4	62.8	30 - 130
2,4-Dinitrotoluene	50.0	39.4	78.7	40 - 140
2,6-Dinitrotoluene	50.0	39.2	78.3	40 - 140
Di-n-octylphthalate	50.0	32.6	65.1	40 - 140
1,2-Diphenylhydrazine/Azobenzene	50.0	32.8	65.6	40 - 140
Fluoranthene	50.0	38.2	76.3	40 - 140
Fluorene	50.0	35.8	71.5	40 - 140
Hexachlorobenzene	50.0	35.0	70.1	40 - 140
Hexachlorobutadiene	50.0	35.1	70.2	40 - 140
Hexachlorocyclopentadiene	50.0	12.7	25.4 *	30 - 140
Hexachloroethane	50.0	31.4	62.9	40 - 140
Indeno(1,2,3-cd)pyrene	50.0	34.0	68.1	40 - 140
Isophorone	50.0	37.3	74.7	40 - 140
1-Methylnaphthalene	50.0	35.1	70.3	40 - 140
2-Methylnaphthalene	50.0	34.5	69.1	40 - 140
2-Methylphenol	50.0	29.7	59.5	30 - 130
3/4-Methylphenol	50.0	31.6	63.2	30 - 130
Naphthalene	50.0	34.1	68.3	40 - 140
2-Nitroaniline	50.0	36.8	73.6	40 - 140
3-Nitroaniline	50.0	37.0	74.0	40 - 140
4-Nitroaniline	50.0	39.5	79.1	40 - 140
Nitrobenzene	50.0	36.6	73.2	40 - 140
2-Nitrophenol	50.0	34.9	69.7	30 - 130
4-Nitrophenol	50.0	27.3	54.6	10 - 130
N-Nitrosodimethylamine	50.0	26.3	52.5	40 - 140
N-Nitrosodiphenylamine/Diphenylamine	50.0	33.3	66.7	40 - 140
N-Nitrosodi-n-propylamine	50.0	32.7	65.3	40 - 140
Pentachloronitrobenzene	50.0	32.6	65.1	40 - 140
Pentachlorophenol	50.0	28.6	57.1	30 - 130
Phenanthrene	50.0	36.2	72.4	40 - 140
Phenol	50.0	16.5	33.0	20 - 130
Pyrene	50.0	35.7	71.4	40 - 140
Pyridine	50.0	15.5	31.0	10 - 140
1,2,4,5-Tetrachlorobenzene	50.0	33.9	67.9	40 - 140
1,2,4-Trichlorobenzene	50.0	35.2	70.4	40 - 140
2,4,5-Trichlorophenol	50.0	37.1	74.2	30 - 130
2,4,6-Trichlorophenol	50.0	34.8	69.5	30 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 3510C
Batch:	B233869	Laboratory ID:	B233869-BS1
Column:		Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (µg/L)	LCSD CONCENTRATION (µg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	50.0	33.3	66.7	3.05	20	40 - 140
Acenaphthylene	50.0	36.0	72.1	1.23	20	40 - 140
Acetophenone	50.0	33.7	67.3	0.0891	20	40 - 140
Aniline	50.0	36.2	72.5	3.31	50	40 - 140
Anthracene	50.0	37.1	74.3	3.51	20	40 - 140
Benzidine	50.0	65.4	131	43.7 *	20	40 - 140
Benzo(a)anthracene	50.0	37.4	74.9	1.69	20	40 - 140
Benzo(a)pyrene	50.0	36.9	73.9	3.07	20	40 - 140
Benzo(b)fluoranthene	50.0	35.8	71.6	1.47	20	40 - 140
Benzo(g,h,i)perylene	50.0	30.8	61.6	0.486	20	40 - 140
Benzo(k)fluoranthene	50.0	36.9	73.8	0.378	20	40 - 140
Benzoic Acid	50.0	12.4	24.8	17.1	50	10 - 130
Bis(2-chloroethoxy)methane	50.0	38.6	77.2	0.697	20	40 - 140
Bis(2-chloroethyl)ether	50.0	33.5	67.0	2.78	20	40 - 140
Bis(2-chloroisopropyl)ether	50.0	33.9	67.9	0.294	20	40 - 140
Bis(2-Ethylhexyl)phthalate	50.0	32.8	65.5	1.67	20	40 - 140
4-Bromophenylphenylether	50.0	33.6	67.3	1.05	20	40 - 140
Butylbenzylphthalate	50.0	34.8	69.7	0.971	20	40 - 140
Carbazole	50.0	37.0	73.9	0.815	20	40 - 140
4-Chloroaniline	50.0	36.4	72.8	1.13	20	40 - 140
4-Chloro-3-methylphenol	50.0	38.4	76.9	6.17	20	30 - 130
2-Chloronaphthalene	50.0	31.5	63.0	1.10	20	40 - 140
2-Chlorophenol	50.0	33.2	66.4	2.25	20	30 - 130
4-Chlorophenylphenylether	50.0	36.0	72.0	1.40	20	40 - 140
Chrysene	50.0	39.8	79.7	0.0753	20	40 - 140
Dibenz(a,h)anthracene	50.0	33.7	67.4	0.476	20	40 - 140
Dibenzofuran	50.0	35.7	71.3	3.80	20	40 - 140
Di-n-butylphthalate	50.0	33.6	67.3	3.48	20	40 - 140
1,2-Dichlorobenzene	50.0	32.2	64.5	0.311	20	40 - 140
1,3-Dichlorobenzene	50.0	31.2	62.3	1.15	20	40 - 140
1,4-Dichlorobenzene	50.0	32.2	64.3	0.906	20	40 - 140
3,3-Dichlorobenzidine	50.0	40.5	81.0	2.10	20	40 - 140
2,4-Dichlorophenol	50.0	35.2	70.4	0.482	20	30 - 130
Diethylphthalate	50.0	35.7	71.4	0.703	20	40 - 140
2,4-Dimethylphenol	50.0	33.1	66.1	5.63	20	30 - 130
Dimethylphthalate	50.0	36.2	72.3	3.63	50	40 - 140

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 3510C
Batch:	B233869	Laboratory ID:	B233869-BSD1
Column:		Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (µg/L)	LCSD CONCENTRATION (µg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
4,6-Dinitro-2-methylphenol	50.0	34.6	69.2	3.44	50	30 - 130
2,4-Dinitrophenol	50.0	32.3	64.5	2.70	50	30 - 130
2,4-Dinitrotoluene	50.0	40.8	81.7	3.74	20	40 - 140
2,6-Dinitrotoluene	50.0	40.2	80.4	2.65	20	40 - 140
Di-n-octylphthalate	50.0	31.2	62.4	4.36	20	40 - 140
1,2-Diphenylhydrazine/Azobenzene	50.0	33.9	67.8	3.36	20	40 - 140
Fluoranthene	50.0	38.2	76.4	0.105	20	40 - 140
Fluorene	50.0	36.6	73.1	2.24	20	40 - 140
Hexachlorobenzene	50.0	35.5	71.0	1.25	20	40 - 140
Hexachlorobutadiene	50.0	34.6	69.1	1.49	20	40 - 140
Hexachlorocyclopentadiene	50.0	13.6	27.1 *	6.40	50	30 - 140
Hexachloroethane	50.0	30.0	60.0	4.65	50	40 - 140
Indeno(1,2,3-cd)pyrene	50.0	33.1	66.2	2.86	50	40 - 140
Isophorone	50.0	37.8	75.5	1.12	20	40 - 140
1-Methylnaphthalene	50.0	34.9	69.8	0.628	20	40 - 140
2-Methylnaphthalene	50.0	35.7	71.4	3.25	20	40 - 140
2-Methylphenol	50.0	29.9	59.8	0.570	20	30 - 130
3/4-Methylphenol	50.0	30.9	61.8	2.30	20	30 - 130
Naphthalene	50.0	34.4	68.7	0.701	20	40 - 140
2-Nitroaniline	50.0	37.5	74.9	1.80	20	40 - 140
3-Nitroaniline	50.0	37.5	75.1	1.42	20	40 - 140
4-Nitroaniline	50.0	43.4	86.9	9.42	20	40 - 140
Nitrobenzene	50.0	36.1	72.3	1.29	20	40 - 140
2-Nitrophenol	50.0	35.2	70.5	1.11	20	30 - 130
4-Nitrophenol	50.0	25.7	51.4	6.04	50	10 - 130
N-Nitrosodimethylamine	50.0	28.2	56.5	7.19	20	40 - 140
N-Nitrosodiphenylamine/Diphenylamine	50.0	34.3	68.6	2.78	20	40 - 140
N-Nitrosodi-n-propylamine	50.0	32.9	65.8	0.762	20	40 - 140
Pentachloronitrobenzene	50.0	33.6	67.1	2.99	20	40 - 140
Pentachlorophenol	50.0	28.2	56.4	1.16	50	30 - 130
Phenanthrene	50.0	36.6	73.2	1.15	20	40 - 140
Phenol	50.0	16.9	33.8	2.33	20	20 - 130
Pyrene	50.0	35.8	71.6	0.308	20	40 - 140
Pyridine	50.0	18.2	36.4	16.2	50	10 - 140
1,2,4,5-Tetrachlorobenzene	50.0	33.8	67.6	0.413	20	40 - 140

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 3510C
Batch:	B233869	Laboratory ID:	B233869-BSD1
Column:		Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (µg/L)	LCSD CONCENTRATION (µg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,2,4-Trichlorobenzene	50.0	34.6	69.2	1.83	20	40 - 140
2,4,5-Trichlorophenol	50.0	36.0	71.9	3.12	20	30 - 130
2,4,6-Trichlorophenol	50.0	35.4	70.9	1.99	50	30 - 130

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSSV2	Calibration:	1900123
Lab File ID:	B1917602.D	Calibration Date:	04/16/19 11:28
Sequence:	S037429	Injection Date:	06/25/19
Lab Sample ID:	S037429-CCV1	Injection Time:	09:07

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	50.0	46.3	1.385131	1.281489		-7.5	20
Acenaphthylene	A	50.0	49.3	2.076328	2.046073		-1.5	20
Acetophenone	A	50.0	49.3	2.02028	1.993481		-1.3	20
Aniline	A	50.0	49.6	0.6919596	0.6862803		-0.8	20
Anthracene	A	50.0	49.1	1.285873	1.261717		-1.9	20
Benzidine	A	50.0	39.2	0.352346	0.2760606		-21.7	20
Benzo(a)anthracene	A	50.0	51.3	1.378729	1.413364		2.5	20
Benzo(a)pyrene	A	50.0	47.6	1.296159	1.23492		-4.7	20
Benzo(b)fluoranthene	A	50.0	49.5	1.417292	1.403431		-1.0	20
Benzo(g,h,i)perylene	A	50.0	49.2	1.265354	1.244901		-1.6	20
Benzo(k)fluoranthene	A	50.0	48.5	1.359019	1.317441		-3.1	20
Benzoic Acid	L	50.0	46.4	0.2737345	0.2539344		-7.2	20
Bis(2-chloroethoxy)methane	A	50.0	48.7	0.3829404	0.3728374		-2.6	20
Bis(2-chloroethyl)ether	A	50.0	48.1	0.920287	0.8855778		-3.8	20
Bis(2-chloroisopropyl)ether	A	50.0	43.9	1.717996	1.507538		-12.3	20
Bis(2-Ethylhexyl)phthalate	A	50.0	45.8	1.048522	0.959356		-8.5	20
4-Bromophenylphenylether	A	50.0	48.6	0.2304928	0.2242849		-2.7	20
Butylbenzylphthalate	A	50.0	47.3	0.7261379	0.6866739		-5.4	20
Carbazole	A	50.0	49.7	1.244071	1.237516		-0.5	20
4-Chloroaniline	A	50.0	50.0	0.4692082	0.468804		-0.09	20
4-Chloro-3-methylphenol	A	50.0	51.3	0.320888	0.3289952		2.5	20
2-Chloronaphthalene	A	50.0	50.9	1.50474	1.531221		1.8	20
2-Chlorophenol	A	50.0	48.1	1.627012	1.566084		-3.7	20
4-Chlorophenylphenylether	A	50.0	48.8	0.6701513	0.6544988		-2.3	20
Chrysene	A	50.0	54.4	1.336921	1.454641		8.8	20
Dibenz(a,h)anthracene	A	50.0	53.0	1.171858	1.241652		6.0	20
Dibenzofuran	A	50.0	47.8	1.919157	1.836622		-4.3	20
Di-n-butylphthalate	A	50.0	46.7	1.480857	1.384447		-6.5	20
1,2-Dichlorobenzene	A	50.0	49.1	1.63882	1.610355		-1.7	20
1,3-Dichlorobenzene	A	50.0	49.1	1.700465	1.669238		-1.8	20

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSSV2	Calibration:	1900123
Lab File ID:	B1917602.D	Calibration Date:	04/16/19 11:28
Sequence:	S037429	Injection Date:	06/25/19
Lab Sample ID:	S037429-CCV1	Injection Time:	09:07

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
1,4-Dichlorobenzene	A	50.0	49.6	1.753896	1.740836		-0.7	20
3,3-Dichlorobenzidine	A	50.0	54.0	0.4621159	0.4989521		8.0	20
2,4-Dichlorophenol	A	50.0	48.3	0.3359306	0.3242995		-3.5	20
Diethylphthalate	A	50.0	49.3	1.372657	1.353082		-1.4	20
2,4-Dimethylphenol	A	50.0	49.2	0.357435	0.3516517		-1.6	20
Dimethylphthalate	A	50.0	49.4	1.435065	1.416294		-1.3	20
4,6-Dinitro-2-methylphenol	L	50.0	46.7	0.1744732	0.1709445		-6.6	20
2,4-Dinitrophenol	L	50.0	42.6	0.2164078	0.1914058		-14.7	20
2,4-Dinitrotoluene	A	50.0	53.8	0.441122	0.4743143		7.5	20
2,6-Dinitrotoluene	A	50.0	51.5	0.3357086	0.3459203		3.0	20
Di-n-octylphthalate	A	50.0	42.4	1.771405	1.500585		-15.3	20
1,2-Diphenylhydrazine/Azobenzene	A	50.0	48.0	0.7725604	0.7412578		-4.1	20
Fluoranthene	A	50.0	51.7	1.355919	1.40267		3.4	20
Fluorene	A	50.0	49.4	1.516701	1.498095		-1.2	20
Hexachlorobenzene	A	50.0	48.5	0.2338756	0.2267191		-3.1	20
Hexachlorobutadiene	A	50.0	48.7	0.1840422	0.1791642		-2.7	20
Hexachlorocyclopentadiene	A	50.0	24.9	0.402534	0.2002252		-50.3	20
Hexachloroethane	A	50.0	48.5	0.6866167	0.6658799		-3.0	20
Indeno(1,2,3-cd)pyrene	A	50.0	46.1	1.183535	1.090982		-7.8	20
Isophorone	A	50.0	50.1	0.6486237	0.6502541		0.3	20
1-Methylnaphthalene	A	50.0	50.6	0.750515	0.7587449		1.1	20
2-Methylnaphthalene	A	50.0	46.0	0.7861866	0.7236031		-8.0	20
2-Methylphenol	A	50.0	46.5	1.433403	1.333895		-6.9	20
3/4-Methylphenol	A	100	103	1.577391	1.621131		2.8	20
Naphthalene	A	50.0	48.4	1.182004	1.143986		-3.2	20
2-Nitroaniline	A	50.0	51.5	0.3666637	0.3773636		2.9	20
3-Nitroaniline	A	50.0	51.2	0.3866479	0.3956716		2.3	20
4-Nitroaniline	A	50.0	51.7	0.4284421	0.4428835		3.4	20
Nitrobenzene	A	50.0	53.0	0.3683338	0.3900433		5.9	20
2-Nitrophenol	A	50.0	51.1	0.2262623	0.2313276		2.2	20

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19F1123
Client:	Weston & Sampson - Waterbury, VT	Project:	Kingston Brownfields
Instrument ID:	GCMSSV2	Calibration:	1900123
Lab File ID:	B1917602.D	Calibration Date:	04/16/19 11:28
Sequence:	S037429	Injection Date:	06/25/19
Lab Sample ID:	S037429-CCV1	Injection Time:	09:07

		CONC. (µg/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
4-Nitrophenol	A	50.0	63.0	0.1720463	0.2167694		26.0	20	*
N-Nitrosodimethylamine	A	50.0	60.3	0.5953265	0.7180892		20.6	20	*
N-Nitrosodiphenylamine/Diphenylamine	A	42.8	41.3	0.7417309	0.718027		-3.2	20	
N-Nitrosodi-n-propylamine	A	50.0	48.0	1.069332	1.026667		-4.0	20	
Pentachloronitrobenzene	A	50.0	47.4	4.324385E-02	4.095122E-02		-5.3	20	
Pentachlorophenol	A	50.0	40.7	0.1672428	0.1360409		-18.7	20	
Phenanthrene	A	50.0	49.4	1.249182	1.234098		-1.2	20	
Phenol	A	50.0	50.3	1.831649	1.842374		0.6	20	
Pyrene	A	50.0	47.4	1.553635	1.473611		-5.2	20	
Pyridine	A	50.0	50.0	1.414221	1.413319		-0.06	20	
1,2,4,5-Tetrachlorobenzene	A	50.0	48.6	0.635092	0.6168569		-2.9	20	
1,2,4-Trichlorobenzene	A	50.0	51.5	0.3528977	0.363407		3.0	20	
2,4,5-Trichlorophenol	A	50.0	50.3	0.4591889	0.4619359		0.6	20	
2,4,6-Trichlorophenol	A	50.0	49.2	0.4303061	0.4230555		-1.7	20	
2-Fluorophenol	A	100	98.3	1.365203	1.342072		-1.7		
Phenol-d6	A	100	102	1.710249	1.748184		2.2		
Nitrobenzene-d5	A	50.0	50.0	0.3728127	0.3728622		0.01		
2-Fluorobiphenyl	A	50.0	49.4	1.145041	1.131815		-1.2		
2,4,6-Tribromophenol	A	100	92.4	0.1873557	0.1730633		-7.6		
p-Terphenyl-d14	A	50.0	49.0	0.7155633	0.7012444		-2.0		

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

* Values outside of QC limits

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QA/QC Review of 8082A PCB Data for
Con-Test Analytical Laboratory, Work Order No: 19F1123

2 Ground Water Samples and 1 Field Duplicate
Collected June 19-20, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: The samples were extracted and analyzed within USEPA SW-846 holding times.

Blanks: The analysis of the method blank reported target aroclors as not detected.

Surrogate Recovery: The surrogate recoveries were within QC limits on both columns for the ground water samples.

Laboratory Control Sample: The relative percent differences for aroclor 1016 and aroclor 1260 were below the allowable maximums and percent recoveries were within QC limits on both columns for aqueous samples B233911-BS1 and B233911-BSD1.

Field Duplicates: The analyses of aqueous field duplicate pair MW-4/DUP reported target aroclors as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Initial Calibration: The %RSDs for target aroclors were below the allowable maximum (20%) on both columns, as required.

Continuing Calibration: The %Ds for target aroclors were below the allowable maximum (15%) for on both columns, as required.

PCB Identification Summary: Checked surrogate results were within quantitation limits. The analyses of the ground water samples reported target aroclors as not detected.

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QA/QC Review of Metals Data for
Con-Test Analytical Laboratory
Work Order No: 19F1123

6 Ground Water Samples and 1 Field Duplicate
Collected June 19, 2019

Prepared by: Donald Anné
October 9, 2019

Holding Times: The samples were analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for target metals were within control limits (90-110%for all metals except Hg, 80-120% for Hg).

Blanks: The analyses of initial and continuing calibration blanks reported target metals as either not detected or below the reporting limit, as required.

ICP Interference Check Sample: The percent recoveries for applicable metals were within control limits (80-120%).

Spike Sample Recovery: The percent recoveries for target metals within control limits for aqueous spike sample MW-1.

Laboratory Duplicates: The relative percent differences for applicable metals were below the allowable maximum (20%) for aqueous duplicate sample MW-1, as required.

Field Duplicate: The relative percent difference for chromium was above the allowable maximum (20%) for aqueous field duplicate pair MW-4/DUP (attached table). Positive results for chromium should be considered estimated (J) in samples MW-4 and DUP.

Laboratory Control Sample: The relative percent differences for target metals were below the allowable maximums and the percent recoveries were within control limits for soil samples B234110-BS1 and B234222-BS1.

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RCRA Metals

Calculations for Field Duplicate Relative Percent Difference (RPD)
SDG No. 19F1123

S1= MW-4 **S2=** DUP

Analyte	S1	S2	RPD (%)	
arsenic	ND	ND	NC	
barium	33	35	6%	
cadmium	0.22	0.25	13%	
chromium	0.69	0.91	28%	*
lead	0.31	0.35	12%	
mercury	ND	ND	NC	
selenium	14	15	7%	
silver	ND	ND	NC	

* RPD is above the allowable maximum (20%)

All results are in ug/L.

Bold numbers were values that below the CRDL.
ND - Not detected.
NC - Not calculated, both results must be above the CRDL for valid RPDs to be calculated.

con-test® ANALYTICAL LABORATORY

Qualified Data

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

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-1
Sampled: 6/19/2019 13:40

Sample ID: 19F1123-01

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-1
Sampled: 6/19/2019 13:40
Sample ID: 19F1123-01
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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Tetrachloroethylene	0.60	1.0	0.18	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:19	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/21/19 15:19
Toluene-d8	97.6	70-130		6/21/19 15:19
4-Bromofluorobenzene	96.2	70-130		6/21/19 15:19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-1
Sampled: 6/19/2019 13:40
Sample ID: 19F1123-01
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Acenaphthylene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Acetophenone	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Aniline	ND	4.7	3.5	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Anthracene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzidine	ND	19	11	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(a)anthracene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(a)pyrene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(b)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(g,h,i)perylene	ND	4.7	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzo(k)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Benzoic Acid	ND	9.5	8.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-chloroethoxy)methane	ND	9.5	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-chloroethyl)ether	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-chloroisopropyl)ether	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Bromophenylphenylether	ND	9.5	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Butylbenzylphthalate	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Carbazole	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Chloroaniline	ND	9.5	2.1	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Chloro-3-methylphenol	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Chloronaphthalene	ND	9.5	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Chlorophenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Chlorophenylphenylether	ND	9.5	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Chrysene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Dibenz(a,h)anthracene	ND	4.7	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Dibenzofuran	ND	4.7	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Di-n-butylphthalate	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2-Dichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,3-Dichlorobenzene	ND	4.7	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,4-Dichlorobenzene	ND	4.7	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
3,3-Dichlorobenzidine	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dichlorophenol	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Diethylphthalate	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dimethylphenol	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Dimethylphthalate	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4,6-Dinitro-2-methylphenol	ND	9.5	7.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dinitrophenol	ND	9.5	7.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4-Dinitrotoluene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,6-Dinitrotoluene	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Di-n-octylphthalate	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	9.5	5.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Fluoranthene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Fluorene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-1 | Sampled: 6/19/2019 13:40
Sample ID: 19F1123-01
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Hexachlorobutadiene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Hexachlorocyclopentadiene	ND	9.5	7.7	µg/L	1	UJ L-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Hexachloroethane	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Indeno(1,2,3-cd)pyrene	ND	4.7	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Isophorone	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1-Methylnaphthalene	ND	4.7	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Methylnaphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
3/4-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Naphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Nitroaniline	ND	9.5	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
3-Nitroaniline	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Nitroaniline	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Nitrobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2-Nitrophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
4-Nitrophenol	ND	9.5	3.6	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
N-Nitrosodimethylamine	ND	9.5	3.0	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:08	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.5	5.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
N-Nitrosodi-n-propylamine	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pentachloronitrobenzene	ND	9.5	4.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pentachlorophenol	ND	9.5	7.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Phenanthrene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Phenol	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pyrene	ND	4.7	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
Pyridine	ND	4.7	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
1,2,4-Trichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4,5-Trichlorophenol	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR
2,4,6-Trichlorophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:08	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	38.9	15-110		6/25/19 15:08
Phenol-d6	29.0	15-110		6/25/19 15:08
Nitrobenzene-d5	69.7	30-130		6/25/19 15:08
2-Fluorobiphenyl	73.6	30-130		6/25/19 15:08
2,4,6-Tribromophenol	66.4	15-110		6/25/19 15:08
p-Terphenyl-d14	72.7	30-130		6/25/19 15:08

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-1
Sampled: 6/19/2019 13:40
Sample ID: 19F1123-01
Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Barium	66	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Cadmium	0.049	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Chromium	1.1	1.0	0.24	µg/L	1	B	SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Lead	0.49	0.50	0.085	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:30	AJL
Selenium	20	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:33	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-2
Sampled: 6/20/2019 09:15
Sample ID: 19F1123-02
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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-2
Sampled: 6/20/2019 09:15
Sample ID: 19F1123-02
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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Tetrachloroethylene	7.3	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Trichloroethylene	21	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 15:45	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/21/19 15:45
Toluene-d8	97.7	70-130		6/21/19 15:45
4-Bromofluorobenzene	93.4	70-130		6/21/19 15:45

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-2 | Sampled: 6/20/2019 09:15
Sample ID: 19F1123-02
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Acenaphthylene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Acetophenone	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Aniline	ND	5.1	3.8	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Anthracene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzidine	ND	20	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(a)anthracene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(a)pyrene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(b)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(g,h,i)perylene	ND	5.1	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzo(k)fluoranthene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Benzoic Acid	ND	10	9.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Butylbenzylphthalate	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Chloronaphthalene	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Chlorophenylphenylether	ND	10	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Chrysene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Dibenz(a,h)anthracene	ND	5.1	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Dibenzofuran	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,3-Dichlorobenzene	ND	5.1	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,4-Dichlorobenzene	ND	5.1	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
3,3-Dichlorobenzidine	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Diethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dimethylphenol	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dinitrophenol	ND	10	7.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,6-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Di-n-octylphthalate	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Fluoranthene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Fluorene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-2
Sampled: 6/20/2019 09:15
Sample ID: 19F1123-02
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Hexachlorocyclopentadiene	ND	10	8.3	µg/L	1	UJ L-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Hexachloroethane	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Indeno(1,2,3-cd)pyrene	ND	5.1	3.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Isophorone	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1-Methylnaphthalene	ND	5.1	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Methylnaphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Naphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Nitroaniline	ND	10	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
3-Nitroaniline	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
4-Nitrophenol	ND	10	3.8	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
N-Nitrosodimethylamine	ND	10	3.2	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:33	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
N-Nitrosodi-n-propylamine	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pentachloronitrobenzene	ND	10	5.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pentachlorophenol	ND	10	8.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Phenanthrene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Phenol	ND	10	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pyrene	ND	5.1	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
Pyridine	ND	5.1	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
1,2,4-Trichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4,5-Trichlorophenol	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR
2,4,6-Trichlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:33	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	42.5	15-110		6/25/19 15:33
Phenol-d6	32.5	15-110		6/25/19 15:33
Nitrobenzene-d5	73.2	30-130		6/25/19 15:33
2-Fluorobiphenyl	74.2	30-130		6/25/19 15:33
2,4,6-Tribromophenol	65.8	15-110		6/25/19 15:33
p-Terphenyl-d14	75.3	30-130		6/25/19 15:33

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

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-2
Sampled: 6/20/2019 09:15
Sample ID: 19F1123-02
Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.31	0.28	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1221 [1]	ND	0.31	0.25	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1232 [1]	ND	0.31	0.31	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1242 [1]	ND	0.31	0.27	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1248 [1]	ND	0.31	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1254 [1]	ND	0.31	0.16	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1260 [1]	ND	0.31	0.30	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1262 [1]	ND	0.31	0.21	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG
Aroclor-1268 [1]	ND	0.31	0.19	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:19	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.0	30-150		6/25/19 10:19
Decachlorobiphenyl [2]	81.4	30-150		6/25/19 10:19
Tetrachloro-m-xylene [1]	65.5	30-150		6/25/19 10:19
Tetrachloro-m-xylene [2]	72.4	30-150		6/25/19 10:19

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

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-2
Sampled: 6/20/2019 09:15

Sample ID: 19F1123-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Barium	17	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Cadmium	ND	0.20	0.038	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Chromium	1.0	1.0	0.24	µg/L	1	B	SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Lead	ND	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:32	AJL
Selenium	4.4	5.0	1.6	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:36	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:36	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-3
Sampled: 6/20/2019 09:10
Sample ID: 19F1123-03
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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-3 | Sampled: 6/20/2019 09:10

Sample ID: 19F1123-03

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Trichloroethylene	1.0	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:11	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		6/21/19 16:11
Toluene-d8	97.6	70-130		6/21/19 16:11
4-Bromofluorobenzene	97.5	70-130		6/21/19 16:11

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

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-3
Sampled: 6/20/2019 09:10
Sample ID: 19F1123-03
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Acenaphthylene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Acetophenone	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Aniline	ND	4.7	3.5	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Anthracene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzidine	ND	19	11	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(a)anthracene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(a)pyrene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(b)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(g,h,i)perylene	ND	4.7	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzo(k)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Benzoic Acid	ND	9.5	8.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-chloroethoxy)methane	ND	9.5	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-chloroethyl)ether	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-chloroisopropyl)ether	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Bromophenylphenylether	ND	9.5	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Butylbenzylphthalate	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Carbazole	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Chloroaniline	ND	9.5	2.1	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Chloro-3-methylphenol	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Chloronaphthalene	ND	9.5	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Chlorophenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Chlorophenylphenylether	ND	9.5	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Chrysene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Dibenz(a,h)anthracene	ND	4.7	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Dibenzofuran	ND	4.7	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Di-n-butylphthalate	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2-Dichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,3-Dichlorobenzene	ND	4.7	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,4-Dichlorobenzene	ND	4.7	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
3,3-Dichlorobenzidine	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dichlorophenol	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Diethylphthalate	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dimethylphenol	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Dimethylphthalate	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4,6-Dinitro-2-methylphenol	ND	9.5	7.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dinitrophenol	ND	9.5	7.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4-Dinitrotoluene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,6-Dinitrotoluene	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Di-n-octylphthalate	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	9.5	5.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Fluoranthene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Fluorene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-3 | Sampled: 6/20/2019 09:10
Sample ID: 19F1123-03
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Hexachlorobutadiene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Hexachlorocyclopentadiene	ND	9.5	7.7	µg/L	1	UJ L-04, V-05	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Hexachloroethane	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Indeno(1,2,3-cd)pyrene	ND	4.7	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Isophorone	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1-Methylnaphthalene	ND	4.7	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Methylnaphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
3/4-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Naphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Nitroaniline	ND	9.5	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
3-Nitroaniline	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Nitroaniline	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Nitrobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2-Nitrophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
4-Nitrophenol	ND	9.5	3.6	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
N-Nitrosodimethylamine	ND	9.5	3.0	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 15:58	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.5	5.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
N-Nitrosodi-n-propylamine	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pentachloronitrobenzene	ND	9.5	4.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pentachlorophenol	ND	9.5	7.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Phenanthrene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Phenol	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pyrene	ND	4.7	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
Pyridine	ND	4.7	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
1,2,4-Trichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4,5-Trichlorophenol	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR
2,4,6-Trichlorophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 15:58	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	40.1	15-110		6/25/19 15:58
Phenol-d6	28.4	15-110		6/25/19 15:58
Nitrobenzene-d5	72.5	30-130		6/25/19 15:58
2-Fluorobiphenyl	74.8	30-130		6/25/19 15:58
2,4,6-Tribromophenol	67.7	15-110		6/25/19 15:58
p-Terphenyl-d14	74.6	30-130		6/25/19 15:58

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-3
Sampled: 6/20/2019 09:10

Sample ID: 19F1123-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.73	0.80	0.64	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Barium	32	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Cadmium	0.067	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Chromium	2.1	1.0	0.24	µg/L	1	B	SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Lead	0.99	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:34	AJL
Selenium	9.1	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:39	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-4
Sampled: 6/19/2019 13:50
Sample ID: 19F1123-04
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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-4
Sampled: 6/19/2019 13:50
Sample ID: 19F1123-04
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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Tetrachloroethylene	0.80	1.0	0.18	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Trichloroethylene	1.7	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 16:38	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 16:38
Toluene-d8	98.6	70-130		6/21/19 16:38
4-Bromofluorobenzene	98.1	70-130		6/21/19 16:38

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-4
Sampled: 6/19/2019 13:50
Sample ID: 19F1123-04
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Acenaphthylene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Acetophenone	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Aniline	ND	5.1	3.8	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Anthracene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzidine	ND	20	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(a)anthracene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(a)pyrene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(b)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(g,h,i)perylene	ND	5.1	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzo(k)fluoranthene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Benzoic Acid	ND	10	9.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Butylbenzylphthalate	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Chloronaphthalene	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Chlorophenylphenylether	ND	10	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Chrysene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Dibenz(a,h)anthracene	ND	5.1	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Dibenzofuran	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,3-Dichlorobenzene	ND	5.1	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,4-Dichlorobenzene	ND	5.1	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
3,3-Dichlorobenzidine	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Diethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dimethylphenol	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dinitrophenol	ND	10	7.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,6-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Di-n-octylphthalate	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Fluoranthene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Fluorene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-4 | Sampled: 6/19/2019 13:50
Sample ID: 19F1123-04
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Hexachlorocyclopentadiene	ND	10	8.3	µg/L	1	UL-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Hexachloroethane	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Indeno(1,2,3-cd)pyrene	ND	5.1	3.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Isophorone	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1-Methylnaphthalene	ND	5.1	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Methylnaphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Naphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Nitroaniline	ND	10	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
3-Nitroaniline	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
4-Nitrophenol	ND	10	3.8	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
N-Nitrosodimethylamine	ND	10	3.2	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:01	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
N-Nitrosodi-n-propylamine	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pentachloronitrobenzene	ND	10	5.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pentachlorophenol	ND	10	8.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Phenanthrene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Phenol	ND	10	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pyrene	ND	5.1	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
Pyridine	ND	5.1	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
1,2,4-Trichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4,5-Trichlorophenol	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR
2,4,6-Trichlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:01	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	39.0	15-110		6/25/19 17:01
Phenol-d6	28.5	15-110		6/25/19 17:01
Nitrobenzene-d5	69.8	30-130		6/25/19 17:01
2-Fluorobiphenyl	72.8	30-130		6/25/19 17:01
2,4,6-Tribromophenol	66.0	15-110		6/25/19 17:01
p-Terphenyl-d14	71.1	30-130		6/25/19 17:01

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4 | Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.30	0.27	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1221 [1]	ND	0.30	0.24	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1232 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1242 [1]	ND	0.30	0.26	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1248 [1]	ND	0.30	0.28	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1254 [1]	ND	0.30	0.16	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1260 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1262 [1]	ND	0.30	0.20	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG
Aroclor-1268 [1]	ND	0.30	0.19	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:32	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	85.4	30-150		6/25/19 10:32
Decachlorobiphenyl [2]	89.6	30-150		6/25/19 10:32
Tetrachloro-m-xylene [1]	73.9	30-150		6/25/19 10:32
Tetrachloro-m-xylene [2]	81.0	30-150		6/25/19 10:32

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-4 | Sampled: 6/19/2019 13:50

Sample ID: 19F1123-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Barium	33	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Cadmium	0.22	0.20	0.038	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Chromium	0.69	1.0	0.24	µg/L	1	J B, J	SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Lead	0.31	0.50	0.085	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:35	AJL
Selenium	14	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:41	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-5 | Sampled: 6/18/2019 14:50
Sample ID: 19F1123-05
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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chloroform	0.33	2.0	0.17	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-5
Sampled: 6/18/2019 14:50
Sample ID: 19F1123-05
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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Tetrachloroethylene	12	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Trichloroethylene	0.83	1.0	0.24	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:04	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 17:04
Toluene-d8	98.6	70-130		6/21/19 17:04
4-Bromofluorobenzene	97.4	70-130		6/21/19 17:04

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-5
Sampled: 6/18/2019 14:50
Sample ID: 19F1123-05
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Acenaphthylene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Acetophenone	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Aniline	ND	4.7	3.5	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Anthracene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzidine	ND	19	11	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(a)anthracene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(a)pyrene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(b)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(g,h,i)perylene	ND	4.7	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzo(k)fluoranthene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Benzoic Acid	ND	9.5	8.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-chloroethoxy)methane	ND	9.5	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-chloroethyl)ether	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-chloroisopropyl)ether	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Bromophenylphenylether	ND	9.5	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Butylbenzylphthalate	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Carbazole	ND	9.5	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Chloroaniline	ND	9.5	2.1	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Chloro-3-methylphenol	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Chloronaphthalene	ND	9.5	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Chlorophenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Chlorophenylphenylether	ND	9.5	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Chrysene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Dibenz(a,h)anthracene	ND	4.7	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Dibenzofuran	ND	4.7	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Di-n-butylphthalate	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2-Dichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,3-Dichlorobenzene	ND	4.7	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,4-Dichlorobenzene	ND	4.7	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
3,3-Dichlorobenzidine	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dichlorophenol	ND	9.5	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Diethylphthalate	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dimethylphenol	ND	9.5	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Dimethylphthalate	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4,6-Dinitro-2-methylphenol	ND	9.5	7.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dinitrophenol	ND	9.5	7.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4-Dinitrotoluene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,6-Dinitrotoluene	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Di-n-octylphthalate	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	9.5	5.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Fluoranthene	ND	4.7	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Fluorene	ND	4.7	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-5 | Sampled: 6/18/2019 14:50

Sample ID: 19F1123-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.5	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Hexachlorobutadiene	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Hexachlorocyclopentadiene	ND	9.5	7.7	µg/L	1	UJ L-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Hexachloroethane	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Indeno(1,2,3-cd)pyrene	ND	4.7	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Isophorone	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1-Methylnaphthalene	ND	4.7	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Methylnaphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
3/4-Methylphenol	ND	9.5	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Naphthalene	ND	4.7	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Nitroaniline	ND	9.5	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
3-Nitroaniline	ND	9.5	1.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Nitroaniline	ND	9.5	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Nitrobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2-Nitrophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
4-Nitrophenol	ND	9.5	3.6	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
N-Nitrosodimethylamine	ND	9.5	3.0	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:26	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.5	5.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
N-Nitrosodi-n-propylamine	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pentachloronitrobenzene	ND	9.5	4.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pentachlorophenol	ND	9.5	7.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Phenanthrene	ND	4.7	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Phenol	ND	9.5	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pyrene	ND	4.7	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
Pyridine	ND	4.7	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.5	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
1,2,4-Trichlorobenzene	ND	4.7	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4,5-Trichlorophenol	ND	9.5	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR
2,4,6-Trichlorophenol	ND	9.5	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:26	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	35.9	15-110		6/25/19 17:26
Phenol-d6	25.6	15-110		6/25/19 17:26
Nitrobenzene-d5	60.6	30-130		6/25/19 17:26
2-Fluorobiphenyl	64.9	30-130		6/25/19 17:26
2,4,6-Tribromophenol	59.8	15-110		6/25/19 17:26
p-Terphenyl-d14	69.7	30-130		6/25/19 17:26

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-5
Sampled: 6/18/2019 14:50

Sample ID: 19F1123-05

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.74	0.80	0.64	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Barium	81	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Cadmium	0.060	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Chromium	0.89	1.0	0.24	µg/L	1	B, J	SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Lead	0.87	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:37	AJL
Selenium	6.6	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:44	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Tetrachloroethylene	14	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Trichloroethylene	12	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:31	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	104	70-130		6/21/19 17:31
Toluene-d8	98.3	70-130		6/21/19 17:31
4-Bromofluorobenzene	97.7	70-130		6/21/19 17:31

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-6 | Sampled: 6/18/2019 14:55
Sample ID: 19F1123-06
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Acenaphthylene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Acetophenone	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Aniline	ND	5.1	3.8	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Anthracene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzidine	ND	21	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(a)anthracene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(a)pyrene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(b)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(g,h,i)perylene	ND	5.1	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzo(k)fluoranthene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Benzoic Acid	ND	10	9.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Butylbenzylphthalate	ND	10	2.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Chloronaphthalene	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Chlorophenylphenylether	ND	10	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Chrysene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Dibenz(a,h)anthracene	ND	5.1	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Dibenzofuran	ND	5.1	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,3-Dichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,4-Dichlorobenzene	ND	5.1	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
3,3-Dichlorobenzidine	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Diethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dimethylphenol	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dinitrophenol	ND	10	8.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,6-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Di-n-octylphthalate	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Fluoranthene	ND	5.1	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Fluorene	ND	5.1	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: MW-6 | Sampled: 6/18/2019 14:55
Sample ID: 19F1123-06
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Hexachlorocyclopentadiene	ND	10	8.4	µg/L	1	UJ L-04, V-05	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Hexachloroethane	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Indeno(1,2,3-cd)pyrene	ND	5.1	3.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Isophorone	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1-Methylnaphthalene	ND	5.1	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Methylnaphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Methylphenol	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Naphthalene	ND	5.1	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Nitroaniline	ND	10	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
3-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
4-Nitrophenol	ND	10	3.9	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
N-Nitrosodimethylamine	ND	10	3.3	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 17:52	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
N-Nitrosodi-n-propylamine	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pentachloronitrobenzene	ND	10	5.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pentachlorophenol	ND	10	8.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Phenanthrene	ND	5.1	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Phenol	ND	10	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pyrene	ND	5.1	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
Pyridine	ND	5.1	3.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
1,2,4-Trichlorobenzene	ND	5.1	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4,5-Trichlorophenol	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR
2,4,6-Trichlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 17:52	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	39.5	15-110		6/25/19 17:52
Phenol-d6	29.5	15-110		6/25/19 17:52
Nitrobenzene-d5	66.9	30-130		6/25/19 17:52
2-Fluorobiphenyl	69.1	30-130		6/25/19 17:52
2,4,6-Tribromophenol	62.3	15-110		6/25/19 17:52
p-Terphenyl-d14	71.9	30-130		6/25/19 17:52

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: MW-6 | Sampled: 6/18/2019 14:55

Sample ID: 19F1123-06

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Barium	59	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Cadmium	0.092	0.20	0.038	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Chromium	0.96	1.0	0.24	µg/L	1	B, J	SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Lead	0.98	0.50	0.085	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:38	AJL
Selenium	2.3	5.0	1.6	µg/L	1	J	SW-846 6020B	6/25/19	6/27/19 11:47	MJH
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/27/19 11:47	MJH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Tetrachloroethylene	0.69	1.0	0.18	µg/L	1	J	SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Trichloroethylene	1.5	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 17:57	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 17:57
Toluene-d8	97.2	70-130		6/21/19 17:57
4-Bromofluorobenzene	97.0	70-130		6/21/19 17:57

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: DUP
Sampled: 6/19/2019 00:00
Sample ID: 19F1123-07
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Acenaphthylene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Acetophenone	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Aniline	ND	5.0	3.7	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Anthracene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzidine	ND	20	12	µg/L	1	R-05, V-04, V-05	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(a)anthracene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(a)pyrene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(b)fluoranthene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(g,h,i)perylene	ND	5.0	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzo(k)fluoranthene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Benzoic Acid	ND	10	8.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-chloroethoxy)methane	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-chloroethyl)ether	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-chloroisopropyl)ether	ND	10	2.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Bromophenylphenylether	ND	10	3.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Butylbenzylphthalate	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Carbazole	ND	10	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Chloroaniline	ND	10	2.2	µg/L	1	V-34	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Chloro-3-methylphenol	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Chloronaphthalene	ND	10	2.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Chlorophenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Chlorophenylphenylether	ND	10	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Chrysene	ND	5.0	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Dibenz(a,h)anthracene	ND	5.0	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Dibenzofuran	ND	5.0	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Di-n-butylphthalate	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2-Dichlorobenzene	ND	5.0	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,3-Dichlorobenzene	ND	5.0	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,4-Dichlorobenzene	ND	5.0	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
3,3-Dichlorobenzidine	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Diethylphthalate	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dimethylphenol	ND	10	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Dimethylphthalate	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dinitrophenol	ND	10	7.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4-Dinitrotoluene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,6-Dinitrotoluene	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Di-n-octylphthalate	ND	10	2.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2-Diphenylhydrazine/Azobenzene	ND	10	5.3	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Fluoranthene	ND	5.0	2.4	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Fluorene	ND	5.0	2.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: DUP | Sampled: 6/19/2019 00:00
Sample ID: 19F1123-07
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Hexachlorocyclopentadiene	ND	10	8.2	µg/L	1	UJ L-04, V-05	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Hexachloroethane	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Indeno(1,2,3-cd)pyrene	ND	5.0	3.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Isophorone	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1-Methylnaphthalene	ND	5.0	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Methylnaphthalene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
3/4-Methylphenol	ND	10	2.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Naphthalene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Nitroaniline	ND	10	3.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
3-Nitroaniline	ND	10	1.6	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Nitroaniline	ND	10	1.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Nitrobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2-Nitrophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
4-Nitrophenol	ND	10	3.8	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
N-Nitrosodimethylamine	ND	10	3.2	µg/L	1	V-20	SW-846 8270D	6/21/19	6/25/19 18:18	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	6.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
N-Nitrosodi-n-propylamine	ND	10	3.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pentachloronitrobenzene	ND	10	5.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pentachlorophenol	ND	10	8.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Phenanthrene	ND	5.0	2.7	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Phenol	ND	10	3.1	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pyrene	ND	5.0	3.5	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
Pyridine	ND	5.0	3.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	2.2	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
1,2,4-Trichlorobenzene	ND	5.0	1.9	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4,5-Trichlorophenol	ND	10	1.8	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR
2,4,6-Trichlorophenol	ND	10	2.0	µg/L	1		SW-846 8270D	6/21/19	6/25/19 18:18	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	39.0	15-110		6/25/19 18:18
Phenol-d6	28.9	15-110		6/25/19 18:18
Nitrobenzene-d5	68.6	30-130		6/25/19 18:18
2-Fluorobiphenyl	70.5	30-130		6/25/19 18:18
2,4,6-Tribromophenol	63.2	15-110		6/25/19 18:18
p-Terphenyl-d14	72.9	30-130		6/25/19 18:18

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Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.30	0.27	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1221 [1]	ND	0.30	0.24	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1232 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1242 [1]	ND	0.30	0.26	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1248 [1]	ND	0.30	0.28	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1254 [1]	ND	0.30	0.16	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1260 [1]	ND	0.30	0.29	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1262 [1]	ND	0.30	0.20	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG
Aroclor-1268 [1]	ND	0.30	0.19	µg/L	1		SW-846 8082A	6/21/19	6/25/19 10:45	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.4	30-150		6/25/19 10:45
Decachlorobiphenyl [2]	86.9	30-150		6/25/19 10:45
Tetrachloro-m-xylene [1]	73.9	30-150		6/25/19 10:45
Tetrachloro-m-xylene [2]	80.4	30-150		6/25/19 10:45

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Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: DUP
Sampled: 6/19/2019 00:00

Sample ID: 19F1123-07

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	ND	0.80	0.64	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Barium	35	10	0.88	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Cadmium	0.25	0.20	0.038	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Chromium	0.91	1.0	0.24	µg/L	1	B, J	SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Lead	0.35	0.50	0.085	µg/L	1	J J	SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Mercury	ND	0.00010	0.000034	mg/L	1		SW-846 7470A	6/26/19	6/26/19 15:44	AJL
Selenium	15	5.0	1.6	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW
Silver	ND	0.20	0.18	µg/L	1		SW-846 6020B	6/25/19	6/28/19 10:04	QNW

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Project Location: 615 Broadway | Sample Description: | Work Order: 19F1123

Date Received: 6/20/2019

Field Sample #: Trip Blank | Sampled: 6/19/2019 00:00

Sample ID: 19F1123-08

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	3.8	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH

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Project Location: 615 Broadway
Sample Description:
Work Order: 19F1123
Date Received: 6/20/2019
Field Sample #: Trip Blank
Sampled: 6/19/2019 00:00
Sample ID: 19F1123-08
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	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Naphthalene	ND	2.0	0.31	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	6/21/19	6/21/19 12:14	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		6/21/19 12:14
Toluene-d8	97.5	70-130		6/21/19 12:14
4-Bromofluorobenzene	101	70-130		6/21/19 12:14

APPENDIX G

Data Usability Summary Reports (DUSRs) – November 2019

615
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Geology
Hydrology
Remediation
Water Supply

Data Usability Summary Report
for Con-Test Analytical Laboratory
Work Order No: 19K0535

6 Ground Water Samples, 1 Field Duplicate,
1 Soil Sample, and 1 Trip Blank
Collected November 5 and 6, 2019

Prepared by: Donald Anné
January 2, 2020

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results of volatile analyses for 6 ground water samples, 1 field duplicate, and 1 trip blank, and the result of the lead analysis for 1 soil sample.

The overall performances of the analyses are acceptable. Con-Test Analytical Laboratory did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The "not detected" volatile results for 1,2,3-trichlorobenzene were qualified as "estimated" (UJ) in the trip blank and samples MW-2, MW-4, MW-5, MW-6, and DUP because 2 of 2 percent recoveries for 1,2,3-trichlorobenzene were below control limits, but not below 30% in the associated aqueous LCS/LCSD.

All data are considered usable with estimated (UJ) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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January 2, 2020

Ms. Cailyn Locci, P.G.
Senior Project Manager
Weston & Sampson
1 Winners Circle, Suite 130
Albany, New York 12205

Re: Data Validation Report
Kingston, NY
November 2019 Soil and Ground Water Sampling Events

44-46 FRANKLIN
54 VAN DEUSEN
33 FRANKLIN

Dear Ms. Locci:

The data usability summary report (DUSR) and data validation summaries are attached to this letter for the Kingston, November 2019 soil and ground water sampling events. The data for Con-Test Analytical Laboratory work order numbers 19K0458, 19K0459, 19K0460, and 19K0535 are acceptable with some minor issues that are identified and discussed in the validation summaries. There are no data that are qualified as rejected, unusable (R) in the data packs.

615 BROADWAY

A list of common data validation acronyms is attached to this letter to assist you in interpreting the validation summaries. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist Weston & Sampson.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

DCA/bms
Via email

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Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

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QA/QC Review of Method 8260C Volatiles Data for Con-Test Analytical Laboratory, Work Order No: 19K0535

6 Ground Water Samples, 1 Field Duplicate, and 1 Trip Blank Collected November 5 and 6, 2019

Prepared by: Donald Anné
January 2, 2020

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for applicable compounds were above the method minimums, as required.

The average RRFs for target compounds were below the allowable minimum (0.001 for 1,4-dioxane, 0.010 for all other compounds) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for applicable compounds were above the method minimums, as required. The %Ds for bromomethane and chloromethane were above the method maximum on 11-12-19 (S042572-CCV1). The %Ds for bromomethane and chloromethane were above the method maximum on 11-13-19 (S042591-CCV1). No action is taken on fewer than 20% of the compounds with method criteria outside control limits per calibration, provided no RRF is less than 0.010.

The RRFs for target compounds were above the allowable minimum (0.0005 for 1,4-dioxane, 0.010 for all other compounds), as required.

The %Ds for bromomethane, naphthalene, and 1,2,3-trichlorobenzene were above the allowable maximum (25%) on 11-12-19 (S042572-CCV1). The %D for bromomethane was above the allowable maximum (25%) on 11-13-19 (S042591-CCV1). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analyses of the method and trip blanks reported target compounds as not detected.

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Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the ground water samples and trip blank.

Laboratory Control Sample: The relative percent differences (RPDs) for target compounds were below the allowable maximum and the percent recoveries (%Rs) were within QC limits for aqueous samples B245874-BS1 and B245874-BSD1.

The RPDs for target compounds were below the allowable maximum, but 2 of 2 %Rs for 1,2,3-trichlorobenzene were below QC limits, but not below 30% for aqueous samples B245767-BS1 and B245767-BSD1. Positive results for 1,2,3-trichlorobenzene should be considered estimated, biased low (J-) and "not detected" results estimated (UJ) in associated aqueous samples.

Field Duplicate: The relative percent difference for tetrachloroethylene was below the allowable maximum (20%) for aqueous field duplicate pair MW-1/DUP (attached table), as required.

Compound ID: Checked compounds and surrogates were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Volatiles

Calculations for Field Duplicate Relative Percent Difference (RPD)
SDG No. 19K0535

S1= MW-1 **S2=** DUP

Analyte	S1	S2	RPD (%)
tetrachloroethylene	1.0	1.1	10%
trichloroethylene	**0.24**	ND	NC

* RPD is above the allowable maximum 20%.
Results are in units of ug/L.

Bold numbers were values that below the CRQL or above the high standard.
ND - Not detected.
NC - Not calculated, both results must be within the linear range for valid RPDs to be calculated.

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 5030B
Batch:	B245767	Laboratory ID:	B245767-BS1
Column:		Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.	QC LIMITS REC.
Acetone	100	119	119	70 - 160
Acrylonitrile	10.0	9.53	95.3	70 - 130
tert-Amyl Methyl Ether (TAME)	10.0	8.70	87.0	70 - 130
Benzene	10.0	11.1	111	70 - 130
Bromobenzene	10.0	10.5	105	70 - 130
Bromochloromethane	10.0	11.0	110	70 - 130
Bromodichloromethane	10.0	10.7	107	70 - 130
Bromoform	10.0	10.5	105	70 - 130
Bromomethane	10.0	9.22	92.2	40 - 160
2-Butanone (MEK)	100	101	101	40 - 160
tert-Butyl Alcohol (TBA)	100	108	108	40 - 160
n-Butylbenzene	10.0	9.81	98.1	70 - 130
sec-Butylbenzene	10.0	11.6	116	70 - 130
tert-Butylbenzene	10.0	11.6	116	70 - 130
tert-Butyl Ethyl Ether (TBEE)	10.0	8.84	88.4	70 - 130
Carbon Disulfide	10.0	12.0	120	70 - 130
Carbon Tetrachloride	10.0	11.0	110	70 - 130
Chlorobenzene	10.0	11.9	119	70 - 130
Chlorodibromomethane	10.0	10.7	107	70 - 130
Chloroethane	10.0	10.8	108	70 - 130
Chloroform	10.0	10.9	109	70 - 130
Chloromethane	10.0	9.02	90.2	40 - 160
2-Chlorotoluene	10.0	11.0	110	70 - 130
4-Chlorotoluene	10.0	10.5	105	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	10.0	9.33	93.3	70 - 130
1,2-Dibromoethane (EDB)	10.0	10.9	109	70 - 130
Dibromomethane	10.0	11.2	112	70 - 130
1,2-Dichlorobenzene	10.0	11.4	114	70 - 130
1,3-Dichlorobenzene	10.0	12.0	120	70 - 130
1,4-Dichlorobenzene	10.0	11.8	118	70 - 130
trans-1,4-Dichloro-2-butene	10.0	9.48	94.8	70 - 130
Dichlorodifluoromethane (Freon 12)	10.0	8.13	81.3	40 - 160
1,1-Dichloroethane	10.0	11.2	112	70 - 130
1,2-Dichloroethane	10.0	10.5	105	70 - 130
1,1-Dichloroethylene	10.0	11.1	111	70 - 130
cis-1,2-Dichloroethylene	10.0	11.0	110	70 - 130
trans-1,2-Dichloroethylene	10.0	10.9	109	70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 5030B
Batch:	B245767	Laboratory ID:	B245767-BS1
Column:		Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.		QC LIMITS REC.
1,2-Dichloropropane	10.0	10.9	109		70 - 130
1,3-Dichloropropane	10.0	10.6	106		70 - 130
2,2-Dichloropropane	10.0	8.85	88.5		40 - 130
1,1-Dichloropropene	10.0	11.1	111		70 - 130
cis-1,3-Dichloropropene	10.0	10.4	104		70 - 130
trans-1,3-Dichloropropene	10.0	9.98	99.8		70 - 130
Diethyl Ether	10.0	10.7	107		70 - 130
Diisopropyl Ether (DIPE)	10.0	10.5	105		70 - 130
1,4-Dioxane	100	84.4	84.4		40 - 130
Ethylbenzene	10.0	11.1	111		70 - 130
Hexachlorobutadiene	10.0	9.61	96.1		70 - 130
2-Hexanone (MBK)	100	90.0	90.0		70 - 160
Isopropylbenzene (Cumene)	10.0	11.2	112		70 - 130
p-Isopropyltoluene (p-Cymene)	10.0	10.5	105		70 - 130
Methyl Acetate	10.0	10.5	105		70 - 130
Methyl tert-Butyl Ether (MTBE)	10.0	10.5	105		70 - 130
Methyl Cyclohexane	10.0	11.1	111		70 - 130
Methylene Chloride	10.0	11.5	115		70 - 130
4-Methyl-2-pentanone (MIBK)	100	92.8	92.8		70 - 160
Naphthalene	10.0	6.17	61.7		40 - 130
n-Propylbenzene	10.0	10.5	105		70 - 130
Styrene	10.0	10.5	105		70 - 130
1,1,1,2-Tetrachloroethane	10.0	11.9	119		70 - 130
1,1,2,2-Tetrachloroethane	10.0	11.1	111		70 - 130
Tetrachloroethylene	10.0	11.9	119		70 - 130
Tetrahydrofuran	10.0	10.4	104		70 - 130
Toluene	10.0	11.1	111		70 - 130
1,2,3-Trichlorobenzene	10.0	6.65	66.5	*	70 - 130
1,2,4-Trichlorobenzene	10.0	7.09	70.9		70 - 130
1,3,5-Trichlorobenzene	10.0	8.76	87.6		70 - 130
1,1,1-Trichloroethane	10.0	10.9	109		70 - 130
1,1,2-Trichloroethane	10.0	11.5	115		70 - 130
Trichloroethylene	10.0	11.8	118		70 - 130
Trichlorofluoromethane (Freon 11)	10.0	9.72	97.2		70 - 130
1,2,3-Trichloropropane	10.0	9.26	92.6		70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.0	11.8	118		70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 5030B
Batch:	B245767	Laboratory ID:	B245767-BS1
Column:		Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (µg/L)	LCS CONCENTRATION (µg/L)	LCS % REC.	QC LIMITS REC.
1,2,4-Trimethylbenzene	10.0	11.0	110	70 - 130
1,3,5-Trimethylbenzene	10.0	10.2	102	70 - 130
Vinyl Chloride	10.0	9.36	93.6	40 - 160
m+p Xylene	20.0	21.4	107	70 - 130
o-Xylene	10.0	11.3	113	70 - 130

ANALYTE	SPIKE ADDED (µg/L)	LCSD CONCENTRATION (µg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acetone	100	138	138	14.4	25	70 - 160
Acrylonitrile	10.0	8.99	89.9	5.83	25	70 - 130
tert-Amyl Methyl Ether (TAME)	10.0	8.68	86.8	0.230	25	70 - 130
Benzene	10.0	11.0	110	1.18	25	70 - 130
Bromobenzene	10.0	10.4	104	0.287	25	70 - 130
Bromochloromethane	10.0	11.2	112	1.08	25	70 - 130
Bromodichloromethane	10.0	11.0	110	2.76	25	70 - 130
Bromoform	10.0	10.6	106	1.33	25	70 - 130
Bromomethane	10.0	10.1	101	8.71	25	40 - 160
2-Butanone (MEK)	100	107	107	5.02	25	40 - 160
tert-Butyl Alcohol (TBA)	100	95.3	95.3	12.3	25	40 - 160
n-Butylbenzene	10.0	9.30	93.0	5.34	25	70 - 130
sec-Butylbenzene	10.0	11.5	115	0.347	25	70 - 130
tert-Butylbenzene	10.0	11.4	114	2.09	25	70 - 130
tert-Butyl Ethyl Ether (TBEE)	10.0	8.77	87.7	0.795	25	70 - 130
Carbon Disulfide	10.0	10.9	109	9.32	25	70 - 130
Carbon Tetrachloride	10.0	11.1	111	0.271	25	70 - 130
Chlorobenzene	10.0	11.9	119	0.505	25	70 - 130
Chlorodibromomethane	10.0	10.3	103	3.61	25	70 - 130
Chloroethane	10.0	10.9	109	1.20	25	70 - 130
Chloroform	10.0	11.1	111	1.09	25	70 - 130
Chloromethane	10.0	9.00	90.0	0.222	25	40 - 160
2-Chlorotoluene	10.0	10.7	107	2.30	25	70 - 130
4-Chlorotoluene	10.0	10.4	104	0.575	25	70 - 130
1,2-Dibromo-3-chloropropane (DBCP)	10.0	8.59	85.9	8.26	25	70 - 130
1,2-Dibromoethane (EDB)	10.0	11.2	112	2.98	25	70 - 130
Dibromomethane	10.0	11.0	110	1.80	25	70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 5030B
Batch:	B245767	Laboratory ID:	B245767-BSD1
Column:		Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (µg/L)	LCSD CONCENTRATION (µg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,2-Dichlorobenzene	10.0	11.4	114	0.350	25	70 - 130
1,3-Dichlorobenzene	10.0	11.9	119	0.669	25	70 - 130
1,4-Dichlorobenzene	10.0	11.4	114	3.72	25	70 - 130
trans-1,4-Dichloro-2-butene	10.0	9.17	91.7	3.32	25	70 - 130
Dichlorodifluoromethane (Freon 12)	10.0	8.15	81.5	0.246	25	40 - 160
1,1-Dichloroethane	10.0	11.0	110	1.62	25	70 - 130
1,2-Dichloroethane	10.0	10.7	107	1.88	25	70 - 130
1,1-Dichloroethylene	10.0	11.4	114	2.48	25	70 - 130
cis-1,2-Dichloroethylene	10.0	10.8	108	1.84	25	70 - 130
trans-1,2-Dichloroethylene	10.0	10.7	107	1.58	25	70 - 130
1,2-Dichloropropane	10.0	11.3	113	3.50	25	70 - 130
1,3-Dichloropropane	10.0	10.7	107	0.753	25	70 - 130
2,2-Dichloropropane	10.0	8.65	86.5	2.29	25	40 - 130
1,1-Dichloropropene	10.0	10.9	109	1.73	25	70 - 130
cis-1,3-Dichloropropene	10.0	10.1	101	2.73	25	70 - 130
trans-1,3-Dichloropropene	10.0	9.86	98.6	1.21	25	70 - 130
Diethyl Ether	10.0	10.9	109	1.76	25	70 - 130
Diisopropyl Ether (DIPE)	10.0	10.4	104	1.25	25	70 - 130
1,4-Dioxane	100	88.4	88.4	4.56	50	40 - 130
Ethylbenzene	10.0	11.2	112	0.180	25	70 - 130
Hexachlorobutadiene	10.0	9.38	93.8	2.42	25	70 - 130
2-Hexanone (MBK)	100	94.0	94.0	4.41	25	70 - 160
Isopropylbenzene (Cumene)	10.0	11.0	110	1.53	25	70 - 130
p-Isopropyltoluene (p-Cymene)	10.0	10.5	105	0.285	25	70 - 130
Methyl Acetate	10.0	10.3	103	1.35	25	70 - 130
Methyl tert-Butyl Ether (MTBE)	10.0	10.1	101	3.40	25	70 - 130
Methyl Cyclohexane	10.0	10.9	109	1.09	25	70 - 130
Methylene Chloride	10.0	11.4	114	0.701	25	70 - 130
4-Methyl-2-pentanone (MIBK)	100	91.2	91.2	1.77	25	70 - 160
Naphthalene	10.0	6.18	61.8	0.162	25	40 - 130
n-Propylbenzene	10.0	10.5	105	0.0950	25	70 - 130
Styrene	10.0	10.5	105	0.285	25	70 - 130
1,1,1,2-Tetrachloroethane	10.0	12.0	120	0.587	25	70 - 130
1,1,2,2-Tetrachloroethane	10.0	10.7	107	3.68	25	70 - 130
Tetrachloroethylene	10.0	11.9	119	0.336	25	70 - 130
Tetrahydrofuran	10.0	9.85	98.5	5.34	25	70 - 130

3 - FORM III

LCS / LCS DUPLICATE RECOVERY

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Matrix:	Water	Preparation:	SW-846 5030B
Batch:	B245767	Laboratory ID:	B245767-BSD1
Column:		Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (µg/L)	LCSD CONCENTRATION (µg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Toluene	10.0	11.2	112	1.07	25	70 - 130
1,2,3-Trichlorobenzene	10.0	6.47	64.7	2.74	25	70 - 130
1,2,4-Trichlorobenzene	10.0	7.23	72.3	1.96	25	70 - 130
1,3,5-Trichlorobenzene	10.0	8.90	89.0	1.59	25	70 - 130
1,1,1-Trichloroethane	10.0	10.9	109	0.183	25	70 - 130
1,1,2-Trichloroethane	10.0	11.7	117	1.38	25	70 - 130
Trichloroethylene	10.0	12.6	126	6.53	25	70 - 130
Trichlorofluoromethane (Freon 11)	10.0	9.73	97.3	0.103	25	70 - 130
1,2,3-Trichloropropane	10.0	9.86	98.6	6.28	25	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.0	11.7	117	0.681	25	70 - 130
1,2,4-Trimethylbenzene	10.0	10.7	107	2.31	25	70 - 130
1,3,5-Trimethylbenzene	10.0	10.1	101	0.689	25	70 - 130
Vinyl Chloride	10.0	9.40	94.0	0.426	25	40 - 160
m+p Xylene	20.0	21.7	108	1.21	25	70 - 130
o-Xylene	10.0	11.1	111	2.05	25	70 - 130

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1931629.D	Calibration Date:	05/16/19 09:46
Sequence:	S042572	Injection Date:	11/12/19
Lab Sample ID:	S042572-CCV1	Injection Time:	23:45

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100	89.6	0.1881665	0.1685004		-10.5	20	
Acrylonitrile	A	10.0	8.57	0.2484221	0.2129355		-14.3	20	
tert-Amyl Methyl Ether (TAME)	A	10.0	8.38	1.289385	1.081082		-16.2	20	
Benzene	A	10.0	11.1	1.72594	1.919482		11.2	20	
Bromobenzene	A	10.0	10.6	1.057032	1.121281		6.1	20	
Bromochloromethane	A	10.0	11.0	0.4131035	0.4542059		9.9	20	
Bromodichloromethane	A	10.0	10.8	0.3780762	0.4101639		8.5	20	
Bromoform	A	10.0	11.0	0.4654726	0.5111147		9.8	20	
Bromomethane	A	10.0	14.8	0.2847145	0.4224853		48.4	20	*
2-Butanone (MEK)	A	100	88.8	0.3378563	0.3000322		-11.2	20	
tert-Butyl Alcohol (TBA)	A	100	101	7.238849E-02	7.341497E-02		1.4	20	
n-Butylbenzene	A	10.0	9.95	1.769604	1.760469		-0.5	20	
sec-Butylbenzene	A	10.0	11.5	2.284017	2.617712		14.6	20	
tert-Butylbenzene	A	10.0	11.7	1.618806	1.895355		17.1	20	
tert-Butyl Ethyl Ether (TBEE)	A	10.0	8.95	1.451316	1.29962		-10.5	20	
Carbon Disulfide	A	100	114	1.119853	1.272214		13.6	20	
Carbon Tetrachloride	A	10.0	11.0	0.4997097	0.5483401		9.7	20	
Chlorobenzene	A	10.0	12.0	1.478802	1.767506		19.5	20	
Chlorodibromomethane	A	10.0	10.9	0.3139765	0.3429318		9.2	20	
Chloroethane	A	10.0	10.9	0.2881543	0.3129341		8.6	20	
Chloroform	A	10.0	11.2	0.7462329	0.8388843		12.4	20	
Chloromethane	A	10.0	12.3	0.6525361	0.8011783		22.8	20	*
2-Chlorotoluene	A	10.0	11.2	1.720424	1.933473		12.4	20	
4-Chlorotoluene	A	10.0	11.0	1.958256	2.145841		9.6	20	
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	8.24	0.1644986	0.1355238		-17.6	20	
1,2-Dibromoethane (EDB)	A	10.0	11.0	0.3046615	0.3335081		9.5	20	
Dibromomethane	A	10.0	11.0	0.1962563	0.2166383		10.4	20	
1,2-Dichlorobenzene	A	10.0	11.4	1.195438	1.360408		13.8	20	
1,3-Dichlorobenzene	A	10.0	11.7	1.185068	1.391457		17.4	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1931629.D	Calibration Date:	05/16/19 09:46
Sequence:	S042572	Injection Date:	11/12/19
Lab Sample ID:	S042572-CCV1	Injection Time:	23:45

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,4-Dichlorobenzene	A	10.0	11.2	1.256354	1.401093		11.5	20	
trans-1,4-Dichloro-2-butene	A	10.0	8.13	0.2217889	0.1802313		-18.7	20	
Dichlorodifluoromethane (Freon 12)	A	10.0	9.03	0.489052	0.441832		-9.7	20	
1,1-Dichloroethane	A	10.0	10.9	0.8050564	0.8801172		9.3	20	
1,2-Dichloroethane	A	10.0	10.8	0.4085792	0.4391681		7.5	20	
1,1-Dichloroethylene	A	10.0	11.4	0.580623	0.6610955		13.9	20	
cis-1,2-Dichloroethylene	A	10.0	10.9	0.7003627	0.7655681		9.3	20	
trans-1,2-Dichloroethylene	A	10.0	10.6	0.6012956	0.6363881		5.8	20	
1,2-Dichloropropane	A	10.0	11.4	0.3162404	0.3589801		13.5	20	
1,3-Dichloropropane	A	10.0	11.0	0.5087606	0.5596767		10.0	20	
2,2-Dichloropropane	A	10.0	9.01	0.6030733	0.5432011		-9.9	20	
1,1-Dichloropropene	A	10.0	11.4	0.5527761	0.6300601		14.0	20	
cis-1,3-Dichloropropene	A	10.0	11.1	0.4823059	0.5350712		10.9	20	
trans-1,3-Dichloropropene	A	10.0	9.63	0.4359988	0.4198675		-3.7	20	
Diethyl Ether	A	10.0	10.3	0.3702305	0.3818973		3.2	20	
Diisopropyl Ether (DIPE)	A	10.0	10.1	1.74122	1.761262		1.2	20	
1,4-Dioxane	A	100	83.2	4.635165E-03	3.854784E-03		-16.8	20	
Ethylbenzene	A	10.0	11.5	2.545889	2.92027		14.7	20	
Hexachlorobutadiene	A	10.0	9.65	0.2928132	0.2824716		-3.5	20	
2-Hexanone (MBK)	A	100	83.3	0.3344099	0.2785068		-16.7	20	
Isopropylbenzene (Cumene)	A	10.0	11.5	2.305934	2.661388		15.4	20	
p-Isopropyltoluene (p-Cymene)	A	10.0	10.8	1.967049	2.122526		7.9	20	
Methyl Acetate	A	10.0	10.8	0.5828072	0.6295361		8.0	20	
Methyl tert-Butyl Ether (MTBE)	A	10.0	9.65	1.31052	1.264292		-3.5	20	
Methyl Cyclohexane	A	10.0	11.0	0.3612119	0.3976212		10.1	20	
Methylene Chloride	A	10.0	11.6	0.6164331	0.7153673		16.0	20	
4-Methyl-2-pentanone (MIBK)	A	100	88.1	0.4656019	0.4101839		-11.9	20	
Naphthalene	A	10.0	6.11	2.298426	1.405369		-38.9	20	*
n-Propylbenzene	A	10.0	10.7	2.710896	2.904614		7.1	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1931629.D	Calibration Date:	05/16/19 09:46
Sequence:	S042572	Injection Date:	11/12/19
Lab Sample ID:	S042572-CCV1	Injection Time:	23:45

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Styrene	A	10.0	11.2	1.60354	1.797483		12.1	20	
1,1,1,2-Tetrachloroethane	A	10.0	11.9	0.5280217	0.6296587		19.2	20	
1,1,2,2-Tetrachloroethane	A	10.0	10.7	0.8779885	0.9401407		7.1	20	
Tetrachloroethylene	A	10.0	11.8	0.2684052	0.3179397		18.5	20	
Tetrahydrofuran	A	10.0	8.81	0.2017468	0.1777687		-11.9	20	
Toluene	A	10.0	11.1	1.159427	1.291459		11.4	20	
1,2,3-Trichlorobenzene	A	10.0	6.46	0.763704	0.4933998		-35.4	20	*
1,2,4-Trichlorobenzene	A	10.0	7.58	0.768892	0.5825258		-24.2	20	*
1,3,5-Trichlorobenzene	A	10.0	8.56	0.816296	0.6989991		-14.4	20	
1,1,1-Trichloroethane	A	10.0	11.0	0.5962929	0.6541025		9.7	20	
1,1,2-Trichloroethane	A	10.0	11.1	0.2729421	0.3034776		11.2	20	
Trichloroethylene	A	10.0	11.9	0.264012	0.314794		19.2	20	
Trichlorofluoromethane (Freon 11)	A	10.0	11.4	0.5804948	0.6590198		13.5	20	
1,2,3-Trichloropropane	A	10.0	9.86	0.7335319	0.7235677		-1.4	20	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	11.4	0.3179614	0.3624296		14.0	20	
1,2,4-Trimethylbenzene	A	10.0	11.6	2.04495	2.370406		15.9	20	
1,3,5-Trimethylbenzene	A	10.0	10.6	1.923032	2.042555		6.2	20	
Vinyl Chloride	A	10.0	10.9	0.5215649	0.5679891		8.9	20	
m+p Xylene	A	20.0	22.5	1.929171	2.168103		12.4	20	
o-Xylene	A	10.0	11.6	1.987587	2.306011		16.0	20	
1,2-Dichloroethane-d4	A	25.0	23.0	0.5643226	0.5183888		-8.1		
Toluene-d8	A	25.0	24.6	1.196284	1.177783		-1.5		
4-Bromofluorobenzene	A	25.0	24.4	0.8899582	0.8703384		-2.2		

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

* Values outside of QC limits

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1931703.D	Calibration Date:	05/16/19 09:46
Sequence:	S042591	Injection Date:	11/13/19
Lab Sample ID:	S042591-CCV1	Injection Time:	13:00

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100	94.8	0.1881665	0.1783091		-5.2	20	
Acrylonitrile	A	10.0	8.61	0.2484221	0.2139401		-13.9	20	
tert-Amyl Methyl Ether (TAME)	A	10.0	9.14	1.289385	1.178004		-8.6	20	
Benzene	A	10.0	10.9	1.72594	1.880137		8.9	20	
Bromobenzene	A	10.0	10.5	1.057032	1.11291		5.3	20	
Bromochloromethane	A	10.0	11.0	0.4131035	0.4555287		10.3	20	
Bromodichloromethane	A	10.0	10.9	0.3780762	0.4117363		8.9	20	
Bromoform	A	10.0	10.4	0.4654726	0.4864902		4.5	20	
Bromomethane	A	10.0	14.4	0.2847145	0.4104814		44.2	20	*
2-Butanone (MEK)	A	100	95.3	0.3378563	0.3218996		-4.7	20	
tert-Butyl Alcohol (TBA)	A	100	104	7.238849E-02	0.0749689		3.6	20	
n-Butylbenzene	A	10.0	10.2	1.769604	1.810939		2.3	20	
sec-Butylbenzene	A	10.0	11.3	2.284017	2.588004		13.3	20	
tert-Butylbenzene	A	10.0	11.4	1.618806	1.836769		13.5	20	
tert-Butyl Ethyl Ether (TBEE)	A	10.0	9.70	1.451316	1.408335		-3.0	20	
Carbon Disulfide	A	100	108	1.119853	1.21274		8.3	20	
Carbon Tetrachloride	A	10.0	10.7	0.4997097	0.5365586		7.4	20	
Chlorobenzene	A	10.0	11.9	1.478802	1.759968		19.0	20	
Chlorodibromomethane	A	10.0	11.0	0.3139765	0.3438271		9.5	20	
Chloroethane	A	10.0	10.8	0.2881543	0.3120528		8.3	20	
Chloroform	A	10.0	11.2	0.7462329	0.8326937		11.6	20	
Chloromethane	A	10.0	12.1	0.6525361	0.7919517		21.4	20	*
2-Chlorotoluene	A	10.0	10.9	1.720424	1.870802		8.7	20	
4-Chlorotoluene	A	10.0	10.5	1.958256	2.063674		5.4	20	
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	9.11	0.1644986	0.1499197		-8.9	20	
1,2-Dibromoethane (EDB)	A	10.0	11.4	0.3046615	0.3481081		14.3	20	
Dibromomethane	A	10.0	10.6	0.1962563	0.208335		6.2	20	
1,2-Dichlorobenzene	A	10.0	11.2	1.195438	1.343534		12.4	20	
1,3-Dichlorobenzene	A	10.0	11.7	1.185068	1.3907		17.4	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1931703.D	Calibration Date:	05/16/19 09:46
Sequence:	S042591	Injection Date:	11/13/19
Lab Sample ID:	S042591-CCV1	Injection Time:	13:00

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,4-Dichlorobenzene	A	10.0	11.2	1.256354	1.408703		12.1	20	
trans-1,4-Dichloro-2-butene	A	10.0	9.07	0.2217889	0.2011928		-9.3	20	
Dichlorodifluoromethane (Freon 12)	A	10.0	8.45	0.489052	0.413108		-15.5	20	
1,1-Dichloroethane	A	10.0	10.7	0.8050564	0.859572		6.8	20	
1,2-Dichloroethane	A	10.0	11.0	0.4085792	0.447851		9.6	20	
1,1-Dichloroethylene	A	10.0	11.0	0.580623	0.6418598		10.5	20	
cis-1,2-Dichloroethylene	A	10.0	11.0	0.7003627	0.7708203		10.1	20	
trans-1,2-Dichloroethylene	A	10.0	10.9	0.6012956	0.653176		8.6	20	
1,2-Dichloropropane	A	10.0	11.0	0.3162404	0.3495699		10.5	20	
1,3-Dichloropropane	A	10.0	11.1	0.5087606	0.5627863		10.6	20	
2,2-Dichloropropane	A	10.0	9.90	0.6030733	0.596852		-1.0	20	
1,1-Dichloropropene	A	10.0	11.1	0.5527761	0.6134411		11.0	20	
cis-1,3-Dichloropropene	A	10.0	11.0	0.4823059	0.5285119		9.6	20	
trans-1,3-Dichloropropene	A	10.0	10.3	0.4359988	0.4500568		3.2	20	
Diethyl Ether	A	10.0	10.5	0.3702305	0.3883231		4.9	20	
Diisopropyl Ether (DIPE)	A	10.0	10.3	1.74122	1.789509		2.8	20	
1,4-Dioxane	A	100	87.7	4.635165E-03	4.063067E-03		-12.3	20	
Ethylbenzene	A	10.0	11.3	2.545889	2.88419		13.3	20	
Hexachlorobutadiene	A	10.0	10.5	0.2928132	0.3084988		5.4	20	
2-Hexanone (MBK)	A	100	93.6	0.3344099	0.312911		-6.4	20	
Isopropylbenzene (Cumene)	A	10.0	11.2	2.305934	2.582686		12.0	20	
p-Isopropyltoluene (p-Cymene)	A	10.0	10.9	1.967049	2.137352		8.7	20	
Methyl Acetate	A	10.0	10.5	0.5828072	0.6139743		5.3	20	
Methyl tert-Butyl Ether (MTBE)	A	10.0	9.95	1.31052	1.303469		-0.5	20	
Methyl Cyclohexane	A	10.0	10.6	0.3612119	0.3810904		5.5	20	
Methylene Chloride	A	10.0	11.5	0.6164331	0.7069325		14.7	20	
4-Methyl-2-pentanone (MIBK)	A	100	94.8	0.4656019	0.441205		-5.2	20	
Naphthalene	A	10.0	7.87	2.298426	1.808469		-21.3	20	*
n-Propylbenzene	A	10.0	10.9	2.710896	2.963209		9.3	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260C-D

Laboratory:	Con-Test Analytical Laboratory	Work Order:	19K0535
Client:	Weston & Sampson Engineers MA	Project:	Kingston Brownfields
Instrument ID:	GCMSVOA3	Calibration:	1900192
Lab File ID:	C1931703.D	Calibration Date:	05/16/19 09:46
Sequence:	S042591	Injection Date:	11/13/19
Lab Sample ID:	S042591-CCV1	Injection Time:	13:00

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Styrene	A	10.0	10.6	1.60354	1.703137		6.2	20
1,1,1,2-Tetrachloroethane	A	10.0	11.8	0.5280217	0.6232926		18.0	20
1,1,2,2-Tetrachloroethane	A	10.0	11.0	0.8779885	0.9668078		10.1	20
Tetrachloroethylene	A	10.0	11.6	0.2684052	0.3116671		16.1	20
Tetrahydrofuran	A	10.0	9.62	0.2017468	0.1940727		-3.8	20
Toluene	A	10.0	11.0	1.159427	1.280812		10.5	20
1,2,3-Trichlorobenzene	A	10.0	8.03	0.763704	0.6135457		-19.7	20
1,2,4-Trichlorobenzene	A	10.0	8.60	0.768892	0.6615153		-14.0	20
1,3,5-Trichlorobenzene	A	10.0	9.71	0.816296	0.792509		-2.9	20
1,1,1-Trichloroethane	A	10.0	10.9	0.5962929	0.6522675		9.4	20
1,1,2-Trichloroethane	A	10.0	11.4	0.2729421	0.310375		13.7	20
Trichloroethylene	A	10.0	11.9	0.264012	0.3149301		19.3	20
Trichlorofluoromethane (Freon 11)	A	10.0	10.9	0.5804948	0.6347305		9.3	20
1,2,3-Trichloropropane	A	10.0	10.7	0.7335319	0.7839695		6.9	20
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	10.8	0.3179614	0.3438485		8.1	20
1,2,4-Trimethylbenzene	A	10.0	11.2	2.04495	2.284147		11.7	20
1,3,5-Trimethylbenzene	A	10.0	10.5	1.923032	2.021146		5.1	20
Vinyl Chloride	A	10.0	10.6	0.5215649	0.5524959		5.9	20
m+p Xylene	A	20.0	22.3	1.929171	2.146705		11.3	20
o-Xylene	A	10.0	11.4	1.987587	2.255459		13.5	20
1,2-Dichloroethane-d4	A	25.0	23.2	0.5643226	0.5245236		-7.1	
Toluene-d8	A	25.0	25.0	1.196284	1.198658		0.2	
4-Bromofluorobenzene	A	25.0	24.8	0.8899582	0.8820289		-0.9	

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

* Values outside of QC limits

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Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Lead Data for
Con-Test Analytical Laboratory
Work Order No: 19K0535

1 Soil Sample
Collected November 6, 2019

Prepared by: Donald Anné
January 2, 2020

Holding Times: The sample was analyzed within USEPA SW-846 holding times.

Initial and Continuing Calibration Verification: The percent recoveries for lead were within control limits (90-110%).

Low Level Calibration Verification: The percent recovery for lead was within laboratory QC limits (70-130%) for sample S043771-LCV1.

Blanks: The analyses of initial and continuing calibration and method blanks reported lead as not detected.

ICP Interference Check Sample: The percent recovery for lead was within control limits (80-120%).

Laboratory Control Sample: The relative percent difference for lead was below the allowable maximum (20%) and the percent recoveries were within control limits (80-120%) for soil sample B245947-BS1.

Percent Solids: The percent solids for the soil sample was above 50%.

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Qualified Data

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield
Sample Description:
Work Order: 19K0535
Date Received: 11/8/2019
Field Sample #: MW-1
Sampled: 11/5/2019 13:58
Sample ID: 19K0535-01
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	3.8	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-1 | Sampled: 11/5/2019 13:58

Sample ID: 19K0535-01

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	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Tetrachloroethylene	1.0	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Trichloroethylene	0.24	1.0	0.24	µg/L	1	J	SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:12	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.2	70-130		11/13/19 15:12
Toluene-d8	99.3	70-130		11/13/19 15:12
4-Bromofluorobenzene	97.4	70-130		11/13/19 15:12

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-2 | Sampled: 11/6/2019 09:00

Sample ID: 19K0535-02

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-2 | Sampled: 11/6/2019 09:00

Sample ID: 19K0535-02

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Tetrachloroethylene	6.6	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	UJ L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Trichloroethylene	14	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 5:29	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.2	70-130		11/13/19 5:29
Toluene-d8	97.3	70-130		11/13/19 5:29
4-Bromofluorobenzene	91.3	70-130		11/13/19 5:29

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-3 | Sampled: 11/6/2019 09:55

Sample ID: 19K0535-03

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	3.8	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-3 | Sampled: 11/6/2019 09:55

Sample ID: 19K0535-03

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	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Trichloroethylene	1.9	1.0	0.24	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/13/19	11/13/19 15:38	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	96.7	70-130		11/13/19 15:38
Toluene-d8	97.3	70-130		11/13/19 15:38
4-Bromofluorobenzene	95.0	70-130		11/13/19 15:38

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-4 | Sampled: 11/6/2019 11:15

Sample ID: 19K0535-04

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-4 | Sampled: 11/6/2019 11:15

Sample ID: 19K0535-04

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Tetrachloroethylene	0.92	1.0	0.18	µg/L	1	J	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	UJ L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Trichloroethylene	1.2	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:22	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.7	70-130		11/13/19 6:22
Toluene-d8	98.8	70-130		11/13/19 6:22
4-Bromofluorobenzene	90.9	70-130		11/13/19 6:22

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535
Date Received: 11/8/2019
Field Sample #: MW-5 | Sampled: 11/6/2019 12:35
Sample ID: 19K0535-05
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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-5 | Sampled: 11/6/2019 12:35

Sample ID: 19K0535-05

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Tetrachloroethylene	1.3	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	UJ L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 6:48	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.1	70-130		11/13/19 6:48
Toluene-d8	98.0	70-130		11/13/19 6:48
4-Bromofluorobenzene	94.8	70-130		11/13/19 6:48

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-6 | Sampled: 11/5/2019 14:45

Sample ID: 19K0535-06

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chloroform	0.24	2.0	0.17	µg/L	1	J	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: MW-6 | Sampled: 11/5/2019 14:45

Sample ID: 19K0535-06

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Tetrachloroethylene	12	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	UJ L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Trichloroethylene	12	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:15	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	94.8	70-130		11/13/19 7:15
Toluene-d8	99.9	70-130		11/13/19 7:15
4-Bromofluorobenzene	96.6	70-130		11/13/19 7:15

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: DUP | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-07

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: DUP | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-07

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Tetrachloroethylene	1.1	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	UJ L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 7:41	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	92.1	70-130		11/13/19 7:41
Toluene-d8	96.8	70-130		11/13/19 7:41
4-Bromofluorobenzene	92.1	70-130		11/13/19 7:41

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: 615 Broadway soil | Sampled: 11/6/2019 13:11

Sample ID: 19K0535-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	94.0		% Wt	1		SM 2540G	11/12/19	11/12/19 16:14	adb

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: 615 Broadway soil | Sampled: 11/6/2019 13:11

Sample ID: 19K0535-08

Sample Matrix: Soil

TCLP - Metals Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Lead	ND	0.10	0.0060	mg/L	1		SW-846 6010D	11/13/19	11/13/19 21:15	TBC

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: Trip Blank | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-09

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	3.8	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Acrylonitrile	ND	5.0	0.52	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromochloromethane	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromoform	ND	1.0	0.46	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Bromomethane	ND	2.0	0.78	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2-Butanone (MEK)	ND	20	1.9	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.2	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
n-Butylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
sec-Butylbenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Butylbenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Carbon Disulfide	ND	5.0	4.4	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Carbon Tetrachloride	ND	5.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chlorodibromomethane	ND	0.50	0.21	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chloroethane	ND	2.0	0.35	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Chloromethane	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.53	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.19	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Dibromomethane	ND	1.0	0.37	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dichlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.26	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dichloroethane	ND	1.0	0.41	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1-Dichloroethylene	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.31	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3-Dichloropropane	ND	0.50	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2,2-Dichloropropane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1-Dichloropropene	ND	2.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
cis-1,3-Dichloropropene	ND	0.50	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
trans-1,3-Dichloropropene	ND	0.50	0.23	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Diethyl Ether	ND	2.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH

con-test® ANALYTICAL LABORATORY
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Project Location: Kingston Brownfield | Sample Description: | Work Order: 19K0535

Date Received: 11/8/2019

Field Sample #: Trip Blank | Sampled: 11/6/2019 00:00

Sample ID: 19K0535-09

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	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,4-Dioxane	ND	50	22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methyl Acetate	ND	1.0	0.42	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methyl Cyclohexane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Methylene Chloride	ND	5.0	0.34	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.7	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Naphthalene	ND	2.0	0.31	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.27	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.22	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Tetrachloroethylene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Tetrahydrofuran	ND	10	0.51	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Toluene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.57	µg/L	1	UJ L-04, V-05	SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.40	µg/L	1	V-05	SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,1-Trichloroethane	ND	1.0	0.20	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,2-Trichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Trichloroethylene	ND	1.0	0.24	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.33	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,3-Trichloropropane	ND	2.0	0.25	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.32	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
Vinyl Chloride	ND	2.0	0.45	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
m+p Xylene	ND	2.0	0.30	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH
o-Xylene	ND	1.0	0.17	µg/L	1		SW-846 8260C-D	11/12/19	11/13/19 1:57	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	95.6	70-130		11/13/19 1:57	
Toluene-d8	98.2	70-130		11/13/19 1:57	
4-Bromofluorobenzene	91.3	70-130		11/13/19 1:57	

September 30, 2024

Alex Malamet
New York Department of Environmental Conservation (NYSDEC)
21 S Putt Corners Road,
New Paltz, New York 12561

Re: Supplemental Subsurface Investigation Report
615 Broadway
Kingston, New York
Langan Project No.: 170803001
NYSDEC BCP Site No.: C356066

Dear Mr. Malamet:

Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology D.P.C. (Langan) completed a supplemental subsurface investigation (SSI) on behalf of 615 Broadway LLC for the property at 615 Broadway in Kingston, New York (the site). This SSI was conducted to supplement the findings of the July 2020 Phase II Environmental Site Assessment (ESA) prepared by Weston & Sampson PE, LS, LA, PC (Weston & Sampson) and demonstrate the site's eligibility for tangible property credits under the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP).

Based on email correspondence from the NYSDEC dated June 25, 2024 and a subsequent phone communication with you, Langan collected soil and soil vapor samples at the site as part of the SSI. The focus of the SSI was to further identify soil contamination attributed to historical site operations, and confirm that a vapor encroachment condition (VEC) exists at the site due to known chlorinated solvent contamination in groundwater.

Field Investigation

A supplemental subsurface investigation was implemented on August 12, 2024, and included the following:

- A geophysical survey to locate potential underground storage tanks (UST) and other subsurface structures;
- Advancement of 10 soil borings up to 20 feet below grade surface (bgs) and collection of 10 soil samples; and
- Installation of three soil vapor points and collection of three soil vapor samples.

Geophysical Survey

NOVA Geophysical Services (NOVA) conducted a geophysical survey under the supervision of Langan field personnel to identify USTs and other subsurface structures beneath the site and adjacent sidewalks. The survey included ground penetrating radar (GPR) and electromagnetic (EM) detectors. A copy of the geophysical survey report is provided as Attachment 1.

Soil Investigation

A total of ten soil borings (SB01 through SB10) were advanced by Lakewood Environmental Services, Corp. (Lakewood) on August 12, 2024. Langan field personnel documented drilling activities and collected samples. Soil boring locations are shown on Figure 1. Soil borings were advanced from surface grade to between 5 and 20 feet bgs using a direct-push drill rig. Soil samples were inspected for visual and olfactory evidence of impacts and screened for organic vapors with a photoionization detector (PID). Soil samples were collected from the uncontrolled fill layer and/or where greatest impacts were observed. Soil boring logs are provided as Attachment 2.

A total of ten grab soil samples were collected into laboratory-supplied containers and delivered via courier under standard chain-of-custody protocol to Pace Analytical (Pace) for laboratory analysis using the latest United States Environmental Protection Agency (USEPA) methods. Pace is a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory in Westborough, Massachusetts. Samples were analyzed for Part 375/Target Compound List (TCL) volatile organic compounds (VOC), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides and/or Target Analyte List (TAL) metals.

Soil Vapor Investigation

A total of three soil vapor points (SV01, SV02, and SV03) were installed at a depth of about 5 feet bgs. Dedicated 1.875-inch polyethylene implants and teflon-lined polyethylene tubing was inserted into a 2-inch-diameter borehole. The annulus around the tubing was filled with clean No. 2 sand to about 3 feet bgs. Hydrated bentonite was then used to seal the top of the sample point. Soil vapor point locations are shown on Figure 2.

One soil vapor sample was collected from each soil vapor point. Before sampling, the soil vapor points were purged using a MultiRAE five-gas meter at an approximate rate of 0.2 liters per minute (L/min) to evacuate a minimum of three tubing/vapor point volumes prior to sample collection. The soil vapor sample was collected into laboratory-supplied, batch-certified, 2.7-liter Summa canister with a flow controller calibrated for a 2-hour sampling period. The canisters were labeled and transported via courier to Pace under chain-of-custody protocols. The soil vapor samples were analyzed for VOCs via USEPA Method TO-15. Soil vapor sampling logs are provided in Attachment 3.

Observations and Analytical Results

The following sections summarize field observations and analytical results for the sampled media. A sample summary is presented on Table 1. Soil and soil vapor analytical results are presented on Tables 2 and 3, respectively. Laboratory analytical reports are provided as Attachment 4.

Geophysical Survey

NOVA's geophysical survey identified sewer, electric, and unspecified utilities, as well as sewer mains and an electric box within the site. In addition, a geophysical anomaly was identified in the western part of the site which may indicate the presence of a UST.

Subsurface Observations

The site is underlain by fill, predominantly consisting of brown to tannish-brown fine-grained sand with varying amounts of fine gravel, silt, brick, glass, and slag which extends to between about 1 to 3 feet bgs. Tannish-brown to dark-brown fine sand with varying amounts of fine gravel and silt was observed below the fill layer. A maximum PID reading of 1.9 ppm was observed in soil boring SB07 at about 1.75 feet bgs. Staining and/or odors were not observed.

Groundwater was observed at about 19 feet bgs in soil borings advanced to 20 feet across the site (SB01, SB07, and SB09). Based on the findings of the July 2020 Phase II ESA performed by Weston & Sampson, the inferred groundwater flow direction at the site is to the south-southwest.

Analytical Results

- Soil: SVOCs, specifically polyaromatic hydrocarbons (PAHs), and metals were detected in soil samples across the site at concentrations exceeding the Title 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 Restricted Use Restricted-Residential (RURR) soil cleanup objectives (SCOs). SVOCs including benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, and ideno(1,2,3-cd)pyrene were detected above RURR SCOs in soil borings SB07 and SB10. One additional SVOC, dibenz(a,h)anthracene, was also identified above the RURR SCO in soil boring SB10. Lead was detected above the RURR SCO in soil borings SB07 and SB09. Mercury was also detected above the RURR SCO in soil boring SB07.
- Soil Vapor: Total VOC concentrations detected in soil vapor samples ranged from 1,185.678 micrograms per cubic meter (µg/m^3) in SV03 to 1,596.302 µg/m^3 in SV01. Maximum trichloroethene (TCE) and tetrachloroethene (PCE) concentrations of 176 µg/m^3 and 228 µg/m^3 were detected in SV03 and SV01, respectively. Total benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations ranged from 219.32 µg/m^3 in SV01 to 275.19 µg/m^3 in SV02.

Soil sample analytical results that exceeded the RURR from the July 2020 Phase II ESA and the SSI are shown in Figure 1. Soil vapor analytical results are shown in Figure 2.

Conclusions

Soil sample analytical results identified additional SVOCs and metals at concentrations above their respective RURR SCOs in soil borings advanced throughout the site. SVOCS have been identified in four borings across the site at concentrations that warrant soil remediation. Lead was identified at a potentially hazardous concentration in SB07, located approximately 75 feet southwest of the boring where a similar concentration was detected during the July 2020 Phase II ESA, indicating that potentially hazardous concentrations of lead are located across a larger area in the western part of the site. In addition to lead, the presence of mercury in SB07 is likely also linked to industrial processes that may have historically occurred at the site (e.g., coal combustion). The geophysical survey identified a potential UST in the western part of the site, in the vicinity of soil boring SB-3 from the July 2020 Phase II ESA where hazardous levels of lead were identified. Additional delineation of the potentially hazardous lead will need to be completed during the Remedial Investigation.

VOCs, specifically CVOCs, were detected in soil vapor at concentrations that confirm a VEC exists at the site; maximum TCE and PCE concentrations of 176 µg/m^3 and 228 µg/m^3 were detected in SV03 and SV01, respectively. These levels of TCE and PCE in soil vapor will warrant mitigation beneath the new development (e.g. sub-membrane depressurization system [SMDS]).

Although the scope of this SSI was limited, we feel it establishes that contamination is not solely emanating from an off-site source and that the site is eligible for tangible property tax credits. Further delineation of these impacts as well as other impacts across the site will be further assessed during the Remedial Investigation.

Sincerely,

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

Brian Gochenaur, QEP
Associate Principal/Vice President

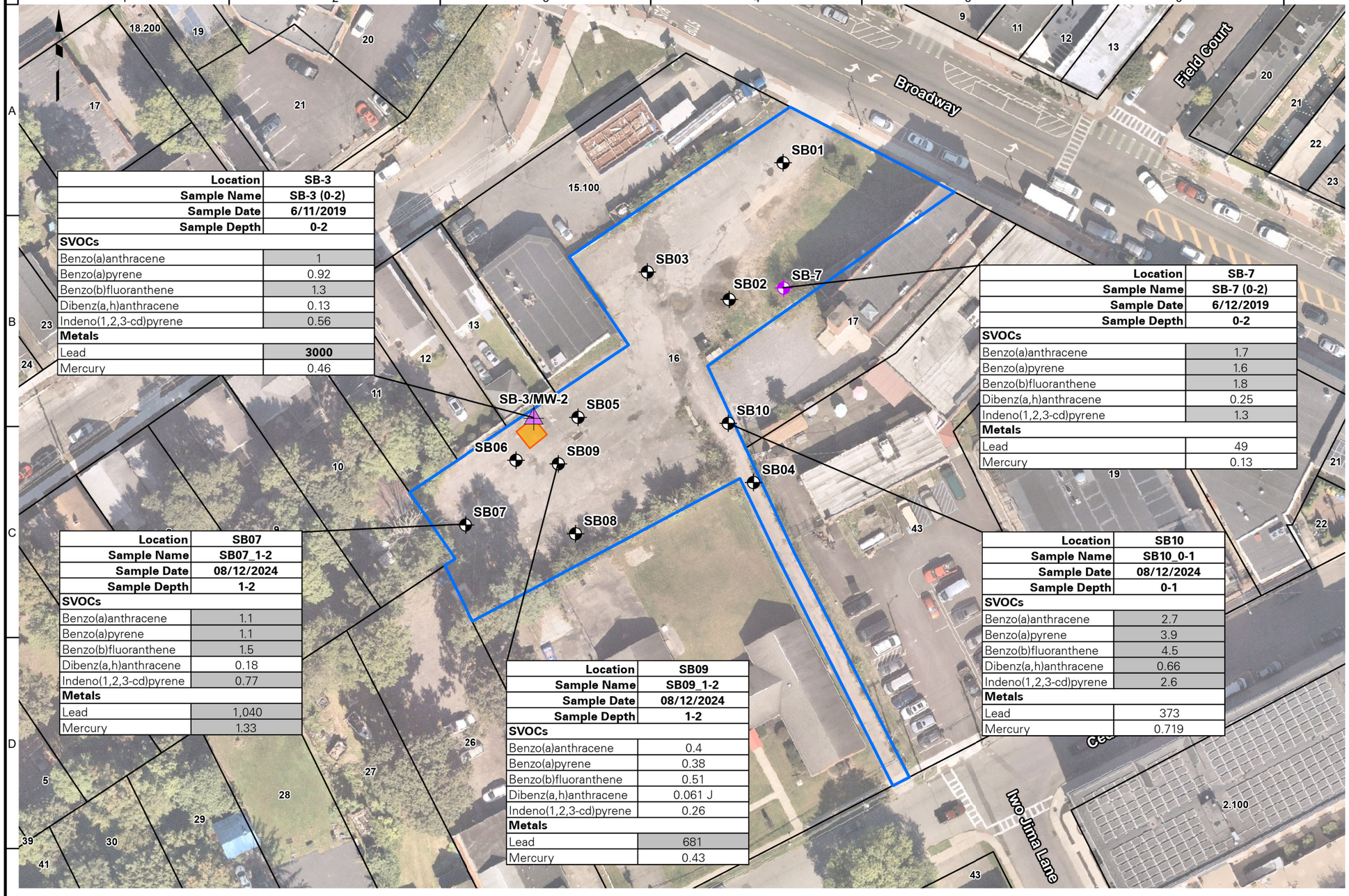
Attachments:

Figure 1 – Soil Sample Analytical Results
Figure 2 – Soil Vapor Sample Analytical Results

Table 1 – Sample Summary
Table 2 – Soil Sample Analytical Results
Table 3 – Soil Vapor Sample Analytical Results

Attachment 1 – Geophysical Survey
Attachment 2 – Soil Boring Logs
Attachment 3 – Soil Vapor Construction and Sampling Logs
Attachment 4 – Laboratory Analytical Report

FIGURES



Location	SB-3
Sample Name	SB-3 (0-2)
Sample Date	6/11/2019
Sample Depth	0-2
SVOCs	
Benzo(a)anthracene	1
Benzo(a)pyrene	0.92
Benzo(b)fluoranthene	1.3
Dibenz(a,h)anthracene	0.13
Indeno(1,2,3-cd)pyrene	0.56
Metals	
Lead	**3000**
Mercury	0.46

Location	SB-7
Sample Name	SB-7 (0-2)
Sample Date	6/12/2019
Sample Depth	0-2
SVOCs	
Benzo(a)anthracene	1.7
Benzo(a)pyrene	1.6
Benzo(b)fluoranthene	1.8
Dibenz(a,h)anthracene	0.25
Indeno(1,2,3-cd)pyrene	1.3
Metals	
Lead	49
Mercury	0.13

Location	SB07
Sample Name	SB07_1-2
Sample Date	08/12/2024
Sample Depth	1-2
SVOCs	
Benzo(a)anthracene	1.1
Benzo(a)pyrene	1.1
Benzo(b)fluoranthene	1.5
Dibenz(a,h)anthracene	0.18
Indeno(1,2,3-cd)pyrene	0.77
Metals	
Lead	1,040
Mercury	1.33

Location	SB09
Sample Name	SB09_1-2
Sample Date	08/12/2024
Sample Depth	1-2
SVOCs	
Benzo(a)anthracene	0.4
Benzo(a)pyrene	0.38
Benzo(b)fluoranthene	0.51
Dibenz(a,h)anthracene	0.061 J
Indeno(1,2,3-cd)pyrene	0.26
Metals	
Lead	681
Mercury	0.43

Location	SB10
Sample Name	SB10_0-1
Sample Date	08/12/2024
Sample Depth	0-1
SVOCs	
Benzo(a)anthracene	2.7
Benzo(a)pyrene	3.9
Benzo(b)fluoranthene	4.5
Dibenz(a,h)anthracene	0.66
Indeno(1,2,3-cd)pyrene	2.6
Metals	
Lead	373
Mercury	0.719

Legend

- Site Boundary
- Tax Parcel
- Potential UST Location
- Soil Boring Location
- Soil Boring Location (July 2020 Phase II ESA)
- Soil Boring/Monitoring Well Location (July 2020 Phase II ESA)

Analyte	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs
SVOCs	
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Dibenz(a,h)anthracene	0.33
Indeno(1,2,3-cd)pyrene	0.5
Metals	
Lead	400
Mercury	0.81

Exceedance Summary:

10 - Result exceeds Restricted Use Restricted-Residential SCOs

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 9/22/2023.
2. Parcel data provided by Ulster County GIS.
3. All locations are approximate.
4. Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Restricted Use Restricted-Residential (RURR) Soil Cleanup Objectives (SCO).
5. Soil sample results from June 2019 were taken from the Phase II Environmental Site Assessment (ESA) prepared by Weston & Sampson, dated July 2020.
6. Results are shown in mg/kg (milligrams per kilogram)
7. UST - Underground Storage Tank

Qualifiers:
J - The analyte was detected above the method detection limit (MDL), but below the reporting limit (RL); therefore, the result is an estimated concentration.

WARNING: It is a violation of the NYS Education Law Article 145 for any person, unless acting under the direction of a licensed professional engineer, land surveyor or geologist, to alter this item in any way.

60 0 60
SCALE IN FEET

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
615 BROADWAY
BLOCK No. 3, LOT No. 16
KINGSTON
ULSTER COUNTY NEW YORK

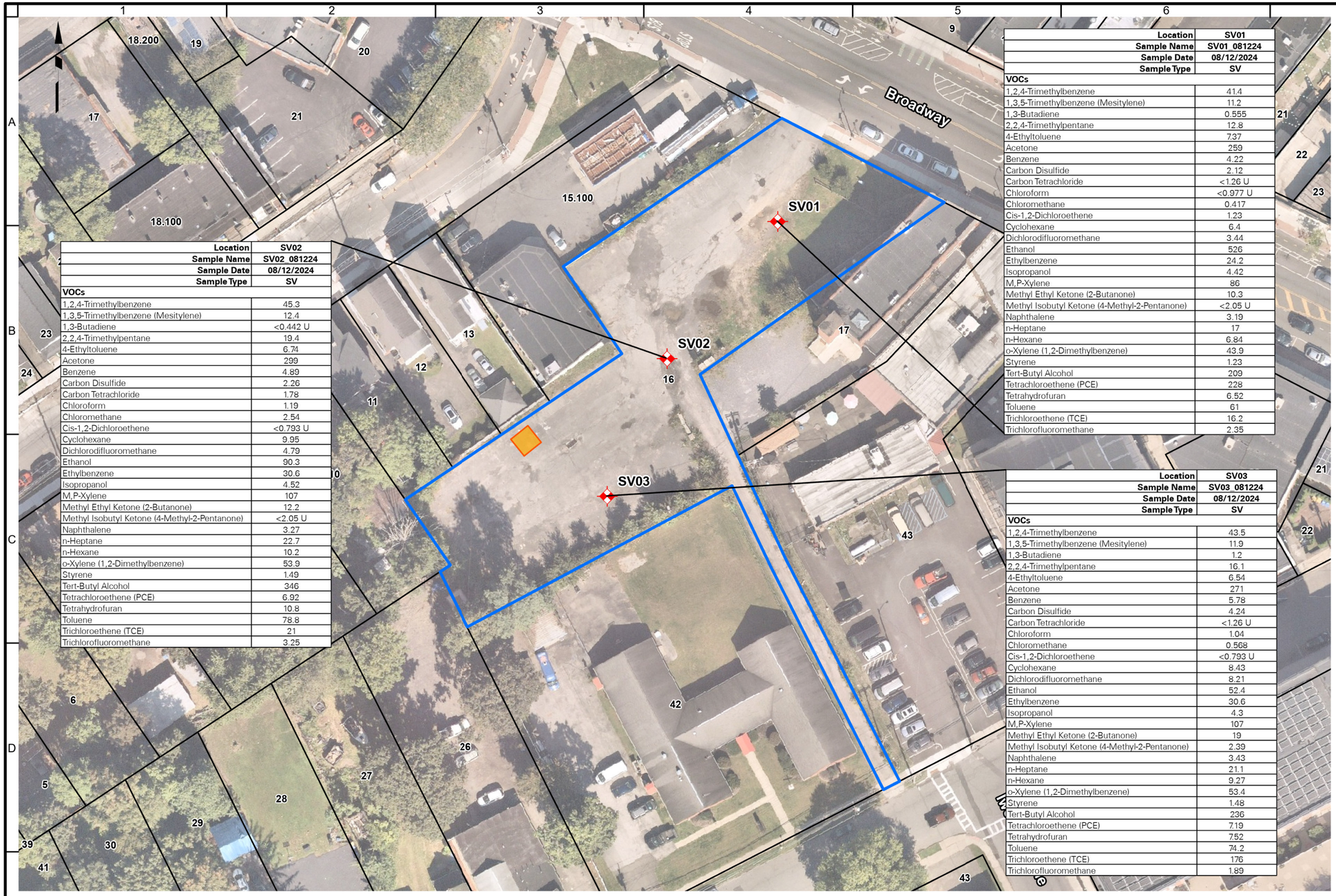
Figure Title
SOIL SAMPLE ANALYTICAL RESULTS MAP

Project No. 170803001
Date 9/3/2024
Scale 1"=60'
Drawn By GS

Figure No. 1

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Path: \\langan.com\data\NYC\data0\170803001\Project Data\ArcGIS\APRX\170803001\170803001.aprx Date: 9/3/2024 User: Gsajbel Time: 11:54 AM



Location	SV02
Sample Name	SV02_081224
Sample Date	08/12/2024
Sample Type	SV
VOCs	
1,2,4-Trimethylbenzene	45.3
1,3,5-Trimethylbenzene (Mesitylene)	12.4
1,3-Butadiene	<0.442 U
2,2,4-Trimethylpentane	19.4
4-Ethyltoluene	6.74
Acetone	299
Benzene	4.89
Carbon Disulfide	2.26
Carbon Tetrachloride	1.78
Chloroform	1.19
Chloromethane	2.54
Cis-1,2-Dichloroethene	<0.793 U
Cyclohexane	9.95
Dichlorodifluoromethane	4.79
Ethanol	90.3
Ethylbenzene	30.6
Isopropanol	4.52
M,P-Xylene	107
Methyl Ethyl Ketone (2-Butanone)	12.2
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	<2.05 U
Naphthalene	3.27
n-Heptane	22.7
n-Hexane	10.2
o-Xylene (1,2-Dimethylbenzene)	53.9
Styrene	1.49
Tert-Butyl Alcohol	346
Tetrachloroethene (PCE)	6.92
Tetrahydrofuran	10.8
Toluene	78.8
Trichloroethene (TCE)	21
Trichlorofluoromethane	3.25

Location	SV01
Sample Name	SV01_081224
Sample Date	08/12/2024
Sample Type	SV
VOCs	
1,2,4-Trimethylbenzene	41.4
1,3,5-Trimethylbenzene (Mesitylene)	11.2
1,3-Butadiene	0.555
2,2,4-Trimethylpentane	12.8
4-Ethyltoluene	7.37
Acetone	259
Benzene	4.22
Carbon Disulfide	2.12
Carbon Tetrachloride	<1.26 U
Chloroform	<0.977 U
Chloromethane	0.417
Cis-1,2-Dichloroethene	1.23
Cyclohexane	6.4
Dichlorodifluoromethane	3.44
Ethanol	526
Ethylbenzene	24.2
Isopropanol	4.42
M,P-Xylene	86
Methyl Ethyl Ketone (2-Butanone)	10.3
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	<2.05 U
Naphthalene	3.19
n-Heptane	17
n-Hexane	6.84
o-Xylene (1,2-Dimethylbenzene)	43.9
Styrene	1.23
Tert-Butyl Alcohol	209
Tetrachloroethene (PCE)	228
Tetrahydrofuran	6.52
Toluene	61
Trichloroethene (TCE)	16.2
Trichlorofluoromethane	2.35

Location	SV03
Sample Name	SV03_081224
Sample Date	08/12/2024
Sample Type	SV
VOCs	
1,2,4-Trimethylbenzene	43.5
1,3,5-Trimethylbenzene (Mesitylene)	11.9
1,3-Butadiene	1.2
2,2,4-Trimethylpentane	16.1
4-Ethyltoluene	6.54
Acetone	271
Benzene	5.78
Carbon Disulfide	4.24
Carbon Tetrachloride	<1.26 U
Chloroform	1.04
Chloromethane	0.568
Cis-1,2-Dichloroethene	<0.793 U
Cyclohexane	8.43
Dichlorodifluoromethane	8.21
Ethanol	52.4
Ethylbenzene	30.6
Isopropanol	4.3
M,P-Xylene	107
Methyl Ethyl Ketone (2-Butanone)	19
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	2.39
Naphthalene	3.43
n-Heptane	21.1
n-Hexane	9.27
o-Xylene (1,2-Dimethylbenzene)	53.4
Styrene	1.48
Tert-Butyl Alcohol	236
Tetrachloroethene (PCE)	7.19
Tetrahydrofuran	7.52
Toluene	74.2
Trichloroethene (TCE)	176
Trichlorofluoromethane	1.89

Legend

- Site Boundary
- Tax Parcel
- Potential UST Location
- Soil Vapor Point Location

Notes:
1. Aerial imagery provided through Langan's subscription to NearMap.com, flown 9/22/2023.
2. Parcel data provided by Ulster County GIS.
3. All locations are approximate.
4. Results are shown in µg/m^3 (micrograms per cubic meter)
5. UST - Underground Storage Tank

Qualifiers:
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the reporting limit (RL); the value shown in the table is the RL.

WARNING: It is a violation of the NYS Education Law Article 145 for any person, unless acting under the direction of a licensed professional engineer, land surveyor or geologist, to alter this item in any way.

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SCALE IN FEET

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
615 BROADWAY
BLOCK No. 3, LOT No. 16
KINGSTON
ULSTER COUNTY NEW YORK

Figure Title
SOIL VAPOR SAMPLE ANALYTICAL RESULTS MAP

Project No. 170803001
Date 9/3/2024
Scale 1"=60'
Drawn By GS

Figure No. 2

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Path: \\langan.com\data\NYC\data0\170803001\Project Data\ArcGIS\APRX\170803001\170803001.aprx Date: 9/3/2024 User: Gsajbel Time: 11:55 AM

TABLES

Table 1
Supplemental Subsurface Investigation Report
Sample Summary

615 Broadway
Kingston, New York
NYSDEC BCP Site No. C356066
Langan Project No. 170803001

SOIL						
Location ID	**Sample Name**	**Sample Interval (feet bgs)**	**Date**	**Maximum PID Reading (ppm)**	**Proposed Sample Interval**	**Analysis**
SB01	SB01_1-2	1 - 2	8/12/2024	0.0	Greatest degree of impacts or fill	Part 375/TCL VOCs, SVOCs, and TAL Metals including hex/tri chromium and total cyanide
SB02	SB02_1-2	1 - 2	8/12/2024	0.0		
SB03	SB03_0-1	0 - 1	8/12/2024	0.0		
SB04	SB04_0.5-1.5	0.5 - 1.5	8/12/2024	0.0		Part 375/TCL VOCs, SVOCs, PCBs, pesticides, and TAL Metals including hex/tri chromium and total cyanide
SB05	SB05_0-1	0 - 1	8/12/2024	0.0		Part 375/TCL VOCs, SVOCs, and TAL Metals including hex/tri chromium and total cyanide
SB06	SB06_0-1	0 - 1	8/12/2024	0.0		
SB07	SB07_1-2	1 - 2	8/12/2024	1.9		Part 375/TCL VOCs, SVOCs, PCBs, pesticides, and TAL Metals including hex/tri chromium and total cyanide
SB08	SB08_1-2	1 - 2	8/12/2024	0.00		Part 375/TCL VOCs, SVOCs, and TAL Metals including hex/tri chromium and total cyanide
SB09	SB09_1-2	1 - 2	8/12/2024	0.00		
SB10	SB10_0-1	0 - 1	8/12/2024	0.00		Part 375/TCL VOCs, SVOCs, PCBs, pesticides, and TAL Metals including hex/tri chromium and total cyanide
SOIL VAPOR						
SV01	SV01_081224	5	8/12/2024	N/A	5 feet bgs	TO-15 VOCs
SV02	SV02_081224	5	8/12/2024	N/A		
SV03	SV03_081224	5	8/12/2024	N/A		

Notes:

1. Soil samples analyzed for New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules and Regulations (6 NYCRR) Part 375-list compounds.
2. PID = Photoionization Detector
3. VOC = volatile organic compound
4. SVOC = semivolatile organic compound
5. PCB = polychlorinated biphenyl
6. TCL = Target Compound List
7. TAL = Target Analyte List
8. bgs = below grade surface
9. ppm = parts per million
10. N/A = Not Applicable

Table 2
Supplemental Subsurface Investigation Report
Soil Sample Analytical Results

615 Broadway
Kingston, New York
NYSDEC BCP Site No.: C356066
Langan Project No.: 170803001

Analyte	CAS Number	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	Location	SB01	SB02	SB03	SB04	SB05	SB06	SB07	SB08	SB09	SB10
			Sample Name	SB01_1-2	SB02_1-2	SB03_0-1	SB04_0.5-1.5	SB05_0-1	SB06_0-1	SB07_1-2	SB08_1-2	SB09_1-2	SB10_0-1
			Sample Date	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024
			Sample Depth	1-2	1-2	0-1	0.5-1.5	0-1	0-1	1-2	1-2	1-2	0-1
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Volatile Organic Compounds													
1,1,1,2-Tetrachloroethane	630-20-6	NS	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
1,1,1-Trichloroethane	71-55-6	100	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
1,1,2,2-Tetrachloroethane	79-34-5	NS	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
1,1,2-Trichloroethane	79-00-5	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
1,1-Dichloroethane	75-34-3	26	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
1,1-Dichloroethene	75-35-4	100	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
1,1-Dichloropropene	563-58-6	NS	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
1,2,3-Trichlorobenzene	87-61-6	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,2,3-Trichloropropane	96-18-4	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,2,4,5-Tetramethylbenzene	95-93-2	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,2,4-Trichlorobenzene	120-82-1	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,2,4-Trimethylbenzene	95-63-6	52	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,2-Dibromo-3-Chloropropane	96-12-8	NS	mg/kg	<0.003 U	<0.0032 U	<0.003 U	<0.0038 U	<0.0031 U	<0.0031 U	<0.0029 U	<0.003 U	<0.0034 U	<0.0038 U
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
1,2-Dichlorobenzene	95-50-1	100	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,2-Dichloroethane	107-06-2	3.1	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
1,2-Dichloropropane	78-87-5	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	52	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,3-Dichlorobenzene	541-73-1	49	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,3-Dichloropropane	142-28-9	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,4-Dichlorobenzene	106-46-7	13	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,4-Diethyl Benzene	105-05-5	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
1,4-Dioxane (P-Dioxane)	123-91-1	13	mg/kg	<0.08 U	<0.084 U	<0.079 U	<0.1 U	<0.083 U	<0.082 U	<0.078 U	<0.08 U	<0.09 U	<0.1 U
2,2-Dichloropropane	594-20-7	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
2-Chlorotoluene	95-49-8	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
2-Hexanone (MBK)	591-78-6	NS	mg/kg	<0.01 U	<0.01 U	<0.0099 U	<0.012 U	<0.01 U	<0.01 U	<0.0097 U	<0.01 U	<0.011 U	<0.012 U
4-Chlorotoluene	106-43-4	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
4-Ethyltoluene	622-96-8	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Acetone	67-64-1	100	mg/kg	0.0096 J	0.0051 J	<0.0099 U	<0.012 U	<0.01 U	<0.01 U	<0.0097 U	<0.01 U	<0.011 U	<0.012 U
Acrylonitrile	107-13-1	NS	mg/kg	<0.004 U	<0.0042 U	<0.0039 U	<0.005 U	<0.0042 U	<0.0041 U	<0.0039 U	<0.004 U	<0.0045 U	<0.005 U
Benzene	71-43-2	4.8	mg/kg	0.00023 J	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
Bromobenzene	108-86-1	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Bromochloromethane	74-97-5	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Bromodichloromethane	75-27-4	NS	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
Bromoform	75-25-2	NS	mg/kg	<0.004 U	<0.0042 U	<0.0039 U	<0.005 U	<0.0042 U	<0.0041 U	<0.0039 U	<0.004 U	<0.0045 U	<0.005 U
Bromomethane	74-83-9	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Carbon Disulfide	75-15-0	NS	mg/kg	<0.01 U	<0.01 U	<0.0099 U	<0.012 U	<0.01 U	<0.01 U	<0.0097 U	<0.01 U	<0.011 U	<0.012 U
Carbon Tetrachloride	56-23-5	2.4	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Chlorobenzene	108-90-7	100	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
Chloroethane	75-00-3	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Chloroform	67-66-3	49	mg/kg	<0.0015 U	<0.0016 U	<0.0015 U	<0.0019 U	<0.0016 U	<0.0015 U	<0.0014 U	<0.0015 U	<0.0017 U	<0.0019 U
Chloromethane	74-87-3	NS	mg/kg	<0.004 U	<0.0042 U	<0.0039 U	<0.005 U	<0.0042 U	<0.0041 U	<0.0039 U	<0.004 U	<0.0045 U	<0.005 U
Cis-1,2-Dichloroethene	156-59-2	100	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Cis-1,3-Dichloropropene	10061-01-5	NS	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
Cymene	99-87-6	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Dibromochloromethane	124-48-1	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Dibromomethane	74-95-3	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Dichlorodifluoromethane	75-71-8	NS	mg/kg	<0.01 U	<0.01 U	<0.0099 U	<0.012 U	<0.01 U	<0.01 U	<0.0097 U	<0.01 U	<0.011 U	<0.012 U
Diethyl Ether (Ethyl Ether)	60-29-7	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Ethylbenzene	100-41-4	41	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Hexachlorobutadiene	87-68-3	NS	mg/kg	<0.004 U	<0.0042 U	<0.0039 U	<0.005 U	<0.0042 U	<0.0041 U	<0.0039 U	<0.004 U	<0.0045 U	<0.005 U
Isopropylbenzene (Cumene)	98-82-8	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
M,P-Xylene	179601-23-1	NS	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Methyl Ethyl Ketone (2-Butanone)	78-93-3	100	mg/kg	<0.01 U	<0.01 U	<0.0099 U	<0.012 U	<0.01 U	<0.01 U	<0.0097 U	<0.01 U	<0.011 U	<0.012 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	NS	mg/kg	<0.01 U	<0.01 U	<0.0099 U	<0.012 U	<0.01 U	<0.01 U	<0.0097 U	<0.01 U	<0.011 U	<0.012 U
Methylene Chloride	75-09-2	100	mg/kg	<0.005 U	<0.0053 U	<0.0049 U	<0.0062 U	<0.0052 U	<0.0051 U	<0.0048 U	<0.005 U	<0.0056 U	<0.0063 U
Naphthalene	91-20-3	100	mg/kg	<0.004 U	<0.0042 U	<0.0039 U	<0.005 U	<0.0042 U	<0.0041 U	<0.0039 U	<0.004 U	<0.0045 U	<0.005 U
n-Butylbenzene	104-51-8	100	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
n-Propylbenzene	103-65-1	100	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
o-Xylene (1,2-Dimethylbenzene)	95-47-6	NS	mg/kg	0.00062 J	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Sec-Butylbenzene	135-98-8	100	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Styrene	100-42-5	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
T-Butylbenzene	98-06-6	100	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Tert-Butyl Methyl Ether	1634-04-4	100	mg/kg	<0.002 U	<0.0021 U	<0.002 U	<0.0025 U	<0.0021 U	<0.002 U	<0.0019 U	<0.002 U	<0.0022 U	<0.0025 U
Tetrachloroethene (PCE)	127-18-4	19	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
Toluene	108-88-3	100	mg/kg	0.002	0.00073 J	0.00056 J	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Total 1,2-Dichloroethene (Cis and Trans)	540-59-0	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Total Xylenes	1330-20-7	100	mg/kg	0.00062 J	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Total, 1,3-Dichloropropene (Cis And Trans)	542-75-6	NS	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
Trans-1,2-Dichloroethene	156-60-5	100	mg/kg	<0.0015 U	<0.0016 U	<0.0015 U	<0.0019 U	<0.0016 U	<0.0015 U	<0.0014 U	<0.0015 U	<0.0017 U	<0.0019 U
Trans-1,3-Dichloropropene	10061-02-6	NS	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Trans-1,4-Dichloro-2-Butene	110-57-6	NS	mg/kg	<0.005 U	<0.0053 U	<0.0049 U	<0.0062 U	<0.0052 U	<0.0051 U	<0.0048 U	<0.005 U	<0.0056 U	<0.0063 U
Trichloroethene (TCE)	79-01-6	21	mg/kg	<0.0005 U	<0.00053 U	<0.00049 U	<0.00062 U	<0.00052 U	<0.00051 U	<0.00048 U	<0.0005 U	<0.00056 U	<0.00063 U
Trichlorofluoromethane	75-69-4	NS	mg/kg	<0.004 U	<0.0042 U	<0.0039 U	<0.005 U	<0.0042 U	<0.0041 U	<0.0039 U	<0.004 U	<0.0045 U	<0.005 U
Vinyl Acetate	108-05-4	NS	mg/kg	<0.01 U	<0.01 U	<0.0099 U	<0.012 U	<0.01 U	<0.01 U	<0.0097 U	<0.01 U	<0.011 U	<0.012 U
Vinyl Chloride	75-01-4	0.9	mg/kg	<0.001 U	<0.001 U	<0.00099 U	<0.0012 U	<0.001 U	<0.001 U	<0.00097 U	<0.001 U	<0.0011 U	<0.0012 U
Total BTEX	BTEX	NS	mg/kg	0.00285	0.00073	0.00056	ND	ND	ND	ND	ND	ND	ND
Total VOCs	TOTALVOCS	NS	mg/kg	0.01307	0.00583	0.00056	ND	ND	ND	ND	ND	ND	ND

Table 2
Supplemental Subsurface Investigation Report
Soil Sample Analytical Results

615 Broadway
Kingston, New York
NYSDEC BCP Site No.: C356066
Langan Project No.: 170803001

Analyte	CAS Number	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	Location	SB01	SB02	SB03	SB04	SB05	SB06	SB07	SB08	SB09	SB10
			Sample Name	SB01_1-2	SB02_1-2	SB03_0-1	SB04_0.5-1.5	SB05_0-1	SB06_0-1	SB07_1-2	SB08_1-2	SB09_1-2	SB10_0-1
			Sample Date	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024
			Sample Depth	1-2	1-2	0-1	0.5-1.5	0-1	0-1	1-2	1-2	1-2	0-1
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Semi-Volatile Organic Compounds													
1,2,4,5-Tetrachlorobenzene	95-94-3	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
1,2,4-Trichlorobenzene	120-82-1	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
1,2-Dichlorobenzene	95-50-1	100	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
1,3-Dichlorobenzene	541-73-1	49	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
1,4-Dichlorobenzene	106-46-7	13	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
1,4-Dioxane (P-Dioxane)	123-91-1	13	mg/kg	<0.025 U	<0.026 U	<0.13 U	<0.13 U	<0.026 U	<0.026 U	<0.027 U	<0.026 U	<0.027 U	<0.029 U
2,4,5-Trichlorophenol	95-95-4	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2,4,6-Trichlorophenol	88-06-2	NS	mg/kg	<0.1 U	<0.1 U	<0.52 U	<0.5 U	<0.1 U	<0.11 U	<0.11 U	<0.1 U	<0.11 U	<0.12 U
2,4-Dichlorophenol	120-83-2	NS	mg/kg	<0.15 U	<0.16 U	<0.78 U	<0.76 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.17 U
2,4-Dimethylphenol	105-67-9	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2,4-Dinitrophenol	51-28-5	NS	mg/kg	<0.81 U	<0.84 U	<4.1 U	<4 U	<0.83 U	<0.85 U	<0.86 U	<0.85 U	<0.87 U	<0.92 U
2,4-Dinitrotoluene	121-14-2	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2,6-Dinitrotoluene	606-20-2	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2-Chloronaphthalene	91-58-7	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2-Chlorophenol	95-57-8	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2-Methylnaphthalene	91-57-6	NS	mg/kg	<0.2 U	<0.21 U	<1 U	<1 U	<0.21 U	<0.21 U	0.026 J	<0.21 U	<0.22 U	0.077 J
2-Methylphenol (o-Cresol)	95-48-7	100	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2-Nitroaniline	88-74-4	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
2-Nitrophenol	88-75-5	NS	mg/kg	<0.36 U	<0.38 U	<1.9 U	<1.8 U	<0.37 U	<0.38 U	<0.39 U	<0.38 U	<0.39 U	<0.42 U
3 & 4 Methylphenol (m&p Cresol)	65794-96-9	100	mg/kg	<0.24 U	<0.25 U	<1.2 U	<1.2 U	<0.25 U	<0.26 U	<0.26 U	<0.25 U	<0.26 U	0.041 J
3,3'-Dichlorobenzidine	91-94-1	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
3-Nitroaniline	99-09-2	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
4,6-Dinitro-2-Methylphenol	534-52-1	NS	mg/kg	<0.44 U	<0.45 U	<2.2 U	<2.2 U	<0.45 U	<0.46 U	<0.47 U	<0.46 U	<0.47 U	<0.5 U
4-Bromophenyl Phenyl Ether	101-55-3	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
4-Chloro-3-Methylphenol	59-50-7	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
4-Chloroaniline	106-47-8	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
4-Chlorophenyl Phenyl Ether	7005-72-3	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
4-Nitroaniline	100-01-6	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
4-Nitrophenol	100-02-7	NS	mg/kg	<0.24 U	<0.24 U	<1.2 U	<1.2 U	<0.24 U	<0.25 U	<0.25 U	<0.25 U	<0.25 U	<0.27 U
Acenaphthene	83-32-9	100	mg/kg	<0.14 U	<0.14 U	<0.69 U	<0.67 U	<0.14 U	0.019 J	0.028 J	<0.14 U	0.027 J	0.036 J
Acenaphthylene	208-96-8	100	mg/kg	<0.14 U	<0.14 U	<0.69 U	<0.67 U	<0.14 U	0.036 J	0.22	<0.14 U	0.05 J	0.67
Acetophenone	98-86-2	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Anthracene	120-12-7	100	mg/kg	<0.1 U	0.053 J	<0.52 U	<0.5 U	<0.1 U	0.078 J	0.25	<0.1 U	0.098 J	0.4
Benzo(a)anthracene	56-55-3	**1**	mg/kg	0.037 J	0.13	<0.52 U	0.13 J	0.05 J	0.32	**1.1**	0.12	0.4	**2.7**
Benzo(a)pyrene	50-32-8	**1**	mg/kg	<0.14 U	0.12 J	<0.69 U	<0.67 U	0.048 J	0.3	**1.1**	0.25	0.38	**3.9**
Benzo(b)fluoranthene	205-99-2	**1**	mg/kg	0.053 J	0.15	<0.52 U	0.17 J	0.066 J	0.41	**1.5**	0.3	0.51	**4.5**
Benzo(g,h,i)Perylene	191-24-2	100	mg/kg	0.043 J	0.081 J	<0.69 U	0.13 J	0.036 J	0.22	0.79	0.26	0.28	2.9
Benzo(k)fluoranthene	207-08-9	3.9	mg/kg	<0.1 U	0.037 J	<0.52 U	<0.5 U	<0.1 U	0.11	0.51	0.076 J	0.15	0.98
Benzoic Acid	65-85-0	NS	mg/kg	<0.55 U	<0.56 U	<2.8 U	<2.7 U	<0.56 U	<0.57 U	<0.58 U	<0.57 U	<0.58 U	<0.62 U
Benzyl Alcohol	100-51-6	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Benzyl Butyl Phthalate	85-68-7	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Biphenyl (Diphenyl)	92-52-4	NS	mg/kg	<0.39 U	<0.4 U	<2 U	<1.9 U	<0.39 U	<0.4 U	<0.41 U	<0.4 U	<0.41 U	<0.44 U
Bis(2-chloroethoxy) methane	111-91-1	NS	mg/kg	<0.18 U	<0.19 U	<0.93 U	<0.91 U	<0.19 U	<0.19 U	<0.19 U	<0.19 U	<0.2 U	<0.21 U
Bis(2-chloroethyl) ether (2-chloroethyl ether)	111-44-4	NS	mg/kg	<0.15 U	<0.16 U	<0.78 U	<0.76 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.17 U
Bis(2-chloroisopropyl) ether	108-60-1	NS	mg/kg	<0.2 U	<0.21 U	<1 U	<1 U	<0.21 U	<0.21 U	<0.22 U	<0.21 U	<0.22 U	<0.23 U
Bis(2-ethylhexyl) phthalate	117-81-7	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	0.17 J	<0.18 U	<0.19 U
Carbazole	86-74-8	NS	mg/kg	<0.17 U	0.025 J	<0.86 U	<0.84 U	<0.17 U	0.037 J	0.17 J	<0.18 U	0.044 J	0.12 J
Chrysene	218-01-9	3.9	mg/kg	0.038 J	0.13	<0.52 U	0.14 J	0.045 J	0.32	1.2	0.12	0.37	2.6
Dibenz(a,h)anthracene	53-70-3	**0.33**	mg/kg	<0.1 U	<0.1 U	<0.52 U	<0.5 U	<0.1 U	0.049 J	0.18	0.051 J	0.061 J	**0.66**
Dibenzofuran	132-64-9	59	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	0.031 J	<0.18 U	<0.18 U	0.052 J
Dibutyl phthalate	84-74-2	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Diethyl phthalate	84-66-2	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Dimethyl phthalate	131-11-3	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Dioctyl phthalate	117-84-0	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Fluoranthene	206-44-0	100	mg/kg	0.059 J	0.29	<0.52 U	0.23 J	0.091 J	0.66	2.6	0.17	0.79	2.8
Fluorene	86-73-7	100	mg/kg	<0.17 U	0.017 J	<0.86 U	<0.84 U	<0.17 U	0.019 J	0.052 J	<0.18 U	0.026 J	0.087 J
Hexachlorobenzene	118-74-1	1.2	mg/kg	<0.1 U	<0.1 U	<0.52 U	<0.5 U	<0.1 U	<0.11 U	<0.11 U	<0.1 U	<0.11 U	<0.12 U
Hexachlorobutadiene	87-68-3	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Hexachlorocyclopentadiene	77-47-4	NS	mg/kg	<0.48 U	<0.5 U	<2.5 U	<2.4 U	<0.49 U	<0.51 U	<0.51 U	<0.5 U	<0.52 U	<0.55 U
Hexachloroethane	67-72-1	NS	mg/kg	<0.14 U	<0.14 U	<0.69 U	<0.67 U	<0.14 U	<0.14 U	<0.14 U	<0.14 U	<0.14 U	<0.15 U
Indeno(1,2,3-cd)pyrene	193-39-5	**0.5**	mg/kg	0.032 J	0.072 J	<0.69 U	<0.67 U	0.035 J	0.2	**0.77**	0.23	0.26	**2.6**
Isophorone	78-59-1	NS	mg/kg	<0.15 U	<0.16 U	<0.78 U	<0.76 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.17 U
Naphthalene	91-20-3	100	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	0.043 J	<0.18 U	<0.18 U	0.19
Nitrobenzene	98-95-3	NS	mg/kg	<0.15 U	<0.16 U	<0.78 U	<0.76 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.16 U	<0.17 U
n-Nitrosodi-N-Propylamine	621-64-7	NS	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
n-Nitrosodiphenylamine	86-30-6	NS	mg/kg	<0.14 U	<0.14 U	<0.69 U	<0.67 U	<0.14 U	<0.14 U	<0.14 U	<0.14 U	<0.14 U	<0.15 U
Pentachlorophenol	87-86-5	6.7	mg/kg	<0.14 U	<0.14 U	<0.69 U	<0.67 U	<0.14 U	<0.14 U	<0.14 U	<0.14 U	<0.14 U	<0.15 U
Phenanthrene	85-01-8	100	mg/kg	0.022 J	0.24	<0.52 U	0.12 J	0.039 J	0.4	1.1	0.073 J	0.45	0.93
Phenol	108-95-2	100	mg/kg	<0.17 U	<0.17 U	<0.86 U	<0.84 U	<0.17 U	<0.18 U	<0.18 U	<0.18 U	<0.18 U	<0.19 U
Pyrene	129-00-0	100	mg/kg	0.058 J	0.26	<0.52 U	0.23 J	0.084 J	0.65	2.2	0.18	0.69	3.4

Table 2
Supplemental Subsurface Investigation Report
Soil Sample Analytical Results

615 Broadway
Kingston, New York
NYSDEC BCP Site No.: C356066
Langan Project No.: 170803001

Analyte	CAS Number	NYSDEC Part 375 Restricted Use Restricted-Residential SCOs	Location	SB01	SB02	SB03	SB04	SB05	SB06	SB07	SB08	SB09	SB10
			Sample Name	SB01_1-2	SB02_1-2	SB03_0-1	SB04_0.5-1.5	SB05_0-1	SB06_0-1	SB07_1-2	SB08_1-2	SB09_1-2	SB10_0-1
			Sample Date	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024	08/12/2024
			Sample Depth	1-2	1-2	0-1	0.5-1.5	0-1	0-1	1-2	1-2	1-2	0-1
			Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
Pesticides													
4,4'-DDD	72-54-8	13	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
4,4'-DDE	72-55-9	8.9	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	0.00104 J	NA	NA	<0.00181 U
4,4'-DDT	50-29-3	7.9	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
Aldrin	309-00-2	0.097	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
Alpha BHC (Alpha Hexachlorocyclohexane)	319-84-6	0.48	mg/kg	NA	NA	NA	<0.000664 U	NA	NA	<0.000718 U	NA	NA	<0.000753 U
Alpha Chlordane	5103-71-9	4.2	mg/kg	NA	NA	NA	<0.00199 U	NA	NA	<0.00215 U	NA	NA	<0.00226 U
Alpha Endosulfan	959-98-8	24	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
Beta Bhc (Beta Hexachlorocyclohexane)	319-85-7	0.36	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
Beta Endosulfan	33213-65-9	24	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
Chlordane (alpha and gamma)	57-74-9	NS	mg/kg	NA	NA	NA	<0.0133 U	NA	NA	<0.0144 U	NA	NA	<0.0151 U
Delta Bhc (Delta Hexachlorocyclohexane)	319-86-8	100	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
Dieldrin	60-57-1	0.2	mg/kg	NA	NA	NA	<0.000996 U	NA	NA	<0.00108 U	NA	NA	<0.00113 U
Endosulfan Sulfate	1031-07-8	24	mg/kg	NA	NA	NA	<0.000664 U	NA	NA	<0.000718 U	NA	NA	<0.000753 U
Endrin	72-20-8	11	mg/kg	NA	NA	NA	<0.000664 U	NA	NA	<0.000718 U	NA	NA	<0.000753 U
Endrin Aldehyde	7421-93-4	NS	mg/kg	NA	NA	NA	<0.00199 U	NA	NA	<0.00215 U	NA	NA	<0.00226 U
Endrin Ketone	53494-70-5	NS	mg/kg	NA	NA	NA	<0.00159 U	NA	NA	<0.00172 U	NA	NA	<0.00181 U
Gamma Bhc (Lindane)	58-89-9	1.3	mg/kg	NA	NA	NA	<0.000664 U	NA	NA	<0.000718 U	NA	NA	<0.000753 U
Gamma Chlordane (Trans)	5103-74-2	NS	mg/kg	NA	NA	NA	<0.00199 U	NA	NA	<0.00215 U	NA	NA	<0.00226 U
Heptachlor	76-44-8	2.1	mg/kg	NA	NA	NA	<0.000796 U	NA	NA	<0.000861 U	NA	NA	<0.000904 U
Heptachlor Epoxide	1024-57-3	NS	mg/kg	NA	NA	NA	<0.00299 U	NA	NA	<0.00323 U	NA	NA	<0.00339 U
Methoxychlor	72-43-5	NS	mg/kg	NA	NA	NA	<0.00299 U	NA	NA	<0.00323 U	NA	NA	<0.00339 U
Toxaphene	8001-35-2	NS	mg/kg	NA	NA	NA	<0.0299 U	NA	NA	<0.0323 U	NA	NA	<0.0339 U
Polychlorinated Biphenyl													
PCB-1016 (Aroclor 1016)	12674-11-2	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1221 (Aroclor 1221)	11104-28-2	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1232 (Aroclor 1232)	11141-16-5	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1242 (Aroclor 1242)	53469-21-9	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1248 (Aroclor 1248)	12672-29-6	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1254 (Aroclor 1254)	11097-69-1	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1260 (Aroclor 1260)	11096-82-5	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1262 (Aroclor 1262)	37324-23-5	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
PCB-1268 (Aroclor 1268)	11100-14-4	NS	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
Total PCBs	1336-36-3	1	mg/kg	NA	NA	NA	<0.0496 U	NA	NA	<0.0503 U	NA	NA	<0.0568 U
Metals													
Aluminum	7429-90-5	NS	mg/kg	5,910	5,730	6,440	4,890	4,910	7,060	6,720	6,050	6,770	6,630
Antimony	7440-36-0	NS	mg/kg	<3.99 U	<4.16 U	<3.99 U	0.386 J	<4 U	<4.16 U	<4.17 U	<4.22 U	1.08 J	<4.55 U
Arsenic	7440-38-2	16	mg/kg	6.49	3.94	6.89	7.73	2.92	5.43	7.88	5.18	11.8	7.05
Barium	7440-39-3	400	mg/kg	35	48.8	34.1	80.4	43.3	67.8	206	141	83.4	128
Beryllium	7440-41-7	72	mg/kg	0.317 J	0.278 J	0.355 J	0.309 J	0.242 J	0.361 J	0.407 J	0.295 J	0.362 J	0.432 J
Cadmium	7440-43-9	4.3	mg/kg	0.312 J	0.082 J	0.269 J	0.159 J	<0.801 U	0.196 J	0.676 J	0.263 J	0.225 J	0.904 J
Calcium	7440-70-2	NS	mg/kg	21,400	2,160	16,500	30,000	1,380	998	2,810	5,490	3,220	7,100
Chromium, Hexavalent	18540-29-9	110	mg/kg	<0.823 U	<0.858 U	<0.839 U	<0.827 U	<0.836 U	<0.861 U	<0.872 U	<0.85 U	<0.884 U	<0.942 U
Chromium, Total	7440-47-3	NS	mg/kg	8.82	6.93	10.1	8.73	5.88	9.11	11.4	9.13	11.8	10.5
Chromium, Trivalent	16065-83-1	180	mg/kg	8.82	6.93	10.1	8.73	5.88	9.11	11.4	9.13	11.8	10.5
Cobalt	7440-48-4	NS	mg/kg	7.65	4.6	7.88	5.14	3.42	5.68	5.83	5.89	6.68	5.75
Copper	7440-50-8	270	mg/kg	15.7	11.6	15.9	46.3	8.53	16.5	32.6	15.2	25.4	27.5
Cyanide	57-12-5	27	mg/kg	<0.96 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1 U	<1.2 U
Iron	7439-89-6	NS	mg/kg	15,900	12,200	17,600	13,200	9,680	14,600	23,500	14,200	24,600	13,600
Lead	7439-92-1	**400**	mg/kg	13.9	35.7	13	217	60.7	117	**1,040**	234	**681**	373
Magnesium	7439-95-4	NS	mg/kg	2,420	1,860	2,670	2,440	1,250	2,000	1,760	2,150	2,020	1,940
Manganese	7439-96-5	2000	mg/kg	410	448	380	245	335	472	611	349	511	656
Mercury	7439-97-6	**0.81**	mg/kg	<0.072 U	0.103	<0.07 U	0.312	0.26	0.09	**1.33**	0.109	0.43	0.719
Nickel	7440-02-0	310	mg/kg	25.2	11.2	23.2	11.7	8.24	13.7	15.4	16.4	16	14.1
Potassium	7440-09-7	NS	mg/kg	270	304	297	349	316	275	397	254	269	385
Selenium	7782-49-2	180	mg/kg	<1.6 U	<1.66 U	1.79	<1.61 U	0.347 J	<1.66 U	<1.67 U	0.227 J	<1.7 U	<1.82 U
Silver	7440-22-4	180	mg/kg	<0.399 U	<0.416 U	<0.399 U	<0.404 U	<0.4 U	<0.416 U	0.317 J	<0.422 U	<0.425 U	<0.455 U
Sodium	7440-23-5	NS	mg/kg	86.2 J	22.3 J	29.2 J	117 J	73.2 J	47.3 J	36.8 J	28.1 J	33.9 J	247
Thallium	7440-28-0	NS	mg/kg	0.476 J	<1.66 U	0.406 J	<1.61 U	<1.6 U	<1.66 U	<1.67 U	<1.69 U	<1.7 U	<1.82 U
Vanadium	7440-62-2	NS	mg/kg	10.7	7.96	11.6	14.2	7.38	10.8	15	9.62	11.3	14.8
Zinc	7440-66-6	10000	mg/kg	58.2	49.9	56	104	46.2	105	245	132	96.3	314
General Chemistry													
Solids, Percent	SOLID	NS	Percent	97.2	93.2	95.3	96.7	95.7	92.9	91.7	94.1	90.5	84.9

Table 2
Supplemental Subsurface Investigation Report
Soil Sample Analytical Results

615 Broadway
Kingston, New York
NYSDEC BCP Site No.: C356066
Langan Project No.: 170803001

Notes:

CAS - Chemical Abstract Service
NS - No standard
mg/kg - milligram per kilogram
NA - Not analyzed
RL - Reporting limit
<RL - Not detected
Soil sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 375 Restricted Use Restricted-Residential Soil Cleanup Objectives (SCO).
Criterion comparisons for 3- & 4-methylphenol (m&p cresol) are provided for reference. Promulgated SCOs are for 3-methylphenol (m-cresol) and 4-methylphenol (p-cresol).

Qualifiers:

J - The analyte was detected above the method detection limit (MDL), but below the RL; therefore, the result is an estimated concentration.
U - The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.

Exceedance Summary:

10 - Result exceeds Restricted Use Restricted-Residential SCOs

Table 3
Supplemental Subsurface Investigation Report
Soil Vapor Sample Analytical Results

615 Broadway
Kingston, New York
NYSDEC BCP Site No.: C356066
Langan Project No.: 170803001

Analyte	CAS Number	Location	SV01	SV02	SV03
		Sample Name	SV01_081224	SV02_081224	SV03_081224
		Sample Date	08/12/2024	08/12/2024	08/12/2024
		Sample Type	SV	SV	SV
		Unit	Result	Result	Result
Volatile Organic Compounds					
1,1,1-Trichloroethane	71-55-6	ug/m3	<1.09 U	<1.09 U	<1.09 U
1,1,2,2-Tetrachloroethane	79-34-5	ug/m3	<1.37 U	<1.37 U	<1.37 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	ug/m3	<1.53 U	<1.53 U	<1.53 U
1,1,2-Trichloroethane	79-00-5	ug/m3	<1.09 U	<1.09 U	<1.09 U
1,1-Dichloroethane	75-34-3	ug/m3	<0.809 U	<0.809 U	<0.809 U
1,1-Dichloroethene	75-35-4	ug/m3	<0.793 U	<0.793 U	<0.793 U
1,2,4-Trichlorobenzene	120-82-1	ug/m3	<1.48 U	<1.48 U	<1.48 U
1,2,4-Trimethylbenzene	95-63-6	ug/m3	41.4	45.3	43.5
1,2-Dibromoethane (Ethylene Dibromide)	106-93-4	ug/m3	<1.54 U	<1.54 U	<1.54 U
1,2-Dichlorobenzene	95-50-1	ug/m3	<1.2 U	<1.2 U	<1.2 U
1,2-Dichloroethane	107-06-2	ug/m3	<0.809 U	<0.809 U	<0.809 U
1,2-Dichloropropane	78-87-5	ug/m3	<0.924 U	<0.924 U	<0.924 U
1,2-Dichlorotetrafluoroethane	76-14-2	ug/m3	<1.4 U	<1.4 U	<1.4 U
1,3,5-Trimethylbenzene (Mesitylene)	108-67-8	ug/m3	11.2	12.4	11.9
1,3-Butadiene	106-99-0	ug/m3	0.555	<0.442 U	1.2
1,3-Dichlorobenzene	541-73-1	ug/m3	<1.2 U	<1.2 U	<1.2 U
1,4-Dichlorobenzene	106-46-7	ug/m3	<1.2 U	<1.2 U	<1.2 U
1,4-Dioxane (P-Dioxane)	123-91-1	ug/m3	<0.721 U	<0.721 U	<0.721 U
2,2,4-Trimethylpentane	540-84-1	ug/m3	12.8	19.4	16.1
2-Hexanone (MBK)	591-78-6	ug/m3	<0.82 U	<0.82 U	<0.82 U
4-Ethyltoluene	622-96-8	ug/m3	7.37	6.74	6.54
Acetone	67-64-1	ug/m3	259	299	271
Allyl Chloride (3-Chloropropene)	107-05-1	ug/m3	<0.626 U	<0.626 U	<0.626 U
Benzene	71-43-2	ug/m3	4.22	4.89	5.78
Benzyl Chloride	100-44-7	ug/m3	<1.04 U	<1.04 U	<1.04 U
Bromodichloromethane	75-27-4	ug/m3	<1.34 U	<1.34 U	<1.34 U
Bromoethene	593-60-2	ug/m3	<0.874 U	<0.874 U	<0.874 U
Bromoform	75-25-2	ug/m3	<2.07 U	<2.07 U	<2.07 U
Bromomethane	74-83-9	ug/m3	<0.777 U	<0.777 U	<0.777 U
Carbon Disulfide	75-15-0	ug/m3	2.12	2.26	4.24
Carbon Tetrachloride	56-23-5	ug/m3	<1.26 U	1.78	<1.26 U
Chlorobenzene	108-90-7	ug/m3	<0.921 U	<0.921 U	<0.921 U
Chloroethane	75-00-3	ug/m3	<0.528 U	<0.528 U	<0.528 U
Chloroform	67-66-3	ug/m3	<0.977 U	1.19	1.04
Chloromethane	74-87-3	ug/m3	0.417	2.54	0.568
Cis-1,2-Dichloroethene	156-59-2	ug/m3	1.23	<0.793 U	<0.793 U
Cis-1,3-Dichloropropene	10061-01-5	ug/m3	<0.908 U	<0.908 U	<0.908 U
Cyclohexane	110-82-7	ug/m3	6.4	9.95	8.43
Dibromochloromethane	124-48-1	ug/m3	<1.7 U	<1.7 U	<1.7 U
Dichlorodifluoromethane	75-71-8	ug/m3	3.44	4.79	8.21
Ethanol	64-17-5	ug/m3	526	90.3	52.4
Ethyl Acetate	141-78-6	ug/m3	<1.8 U	<1.8 U	<1.8 U
Ethylbenzene	100-41-4	ug/m3	24.2	30.6	30.6
Hexachlorobutadiene	87-68-3	ug/m3	<2.13 U	<2.13 U	<2.13 U
Isopropanol	67-63-0	ug/m3	4.42	4.52	4.3
M,P-Xylene	179601-23-1	ug/m3	86	107	107
Methyl Ethyl Ketone (2-Butanone)	78-93-3	ug/m3	10.3	12.2	19
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	108-10-1	ug/m3	<2.05 U	<2.05 U	2.39
Methylene Chloride	75-09-2	ug/m3	<1.74 U	<1.74 U	<1.74 U
Naphthalene	91-20-3	ug/m3	3.19	3.27	3.43
n-Heptane	142-82-5	ug/m3	17	22.7	21.1
n-Hexane	110-54-3	ug/m3	6.84	10.2	9.27
o-Xylene (1,2-Dimethylbenzene)	95-47-6	ug/m3	43.9	53.9	53.4
Styrene	100-42-5	ug/m3	1.23	1.49	1.48
Tert-Butyl Alcohol	75-65-0	ug/m3	209	346	236
Tert-Butyl Methyl Ether	1634-04-4	ug/m3	<0.721 U	<0.721 U	<0.721 U
Tetrachloroethene (PCE)	127-18-4	ug/m3	228	6.92	7.19
Tetrahydrofuran	109-99-9	ug/m3	6.52	10.8	7.52
Toluene	108-88-3	ug/m3	61	78.8	74.2
Trans-1,2-Dichloroethene	156-60-5	ug/m3	<0.793 U	<0.793 U	<0.793 U
Trans-1,3-Dichloropropene	10061-02-6	ug/m3	<0.908 U	<0.908 U	<0.908 U
Trichloroethene (TCE)	79-01-6	ug/m3	16.2	21	176
Trichlorofluoromethane	75-69-4	ug/m3	2.35	3.25	1.89
Vinyl Chloride	75-01-4	ug/m3	<0.511 U	<0.511 U	<0.511 U
Total BTEX	BTEX	ug/m3	219.32	275.19	270.98
Total VOCs	TOTALVOCS	ug/m3	1,596.302	1,213.19	1,185.678

Table 3
Supplemental Subsurface Investigation Report
Soil Vapor Sample Analytical Results

615 Broadway
Kingston, New York
NYSDEC BCP Site No.: C356066
Langan Project No.: 170803001

Notes:

SV - Soil Vapor
CAS - Chemical Abstract Service
NS - No standard
ug/m3 - microgram per cubic meter
NA - Not analyzed
RL - Reporting limit
<RL - Not detected

Qualifiers:

U - The analyte was analyzed for, but was not detected at a level greater than or equal to the RL; the value shown in the table is the RL.

ATTACHMENT 1

GEOPHYSICAL SURVEY

GEOPHYSICAL ENGINEERING SURVEY REPORT

Vacant Lot
615 Broadway
Kingston, NY 12401

NOVA PROJECT NUMBER:
24-4288

DATED:
August 13, 2024

PREPARED FOR:

LANGAN

21 Penn Plaza
360 West 31st Street, 8th Floor
New York, New York 10001
www.langan.com

PREPARED BY:

NOVA
GEOPHYSICAL
ENGINEERING
Subsurface Mapping Solutions
56-01 Marathon Parkway # 765
Douglaston, New York 11362
347-556-7787 (PHONE)
718-261-1527(FAX)
www.nova-gsi.com

NOVA GEOPHYSICAL SERVICES

Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765, Douglaston, NY 11362
Ph. 347-556-7787 Fax. 718-261-1527
www.novagsi.com

August 13, 2024

Lexi Haley
Senior Staff Engineer

LANGAN

360 West 31st Street, 8th Floor
New York, NY 10001
D: 212.479.5499 x5656 M: 332.208.2127 E: Lhaley@langan.com

Re: Geophysical Survey Report
615 Broadway, Kingston, NY 12401

Dear Ms. Haley,

Nova Geophysical Services (NOVA) is pleased to provide the findings of the geophysical engineering survey (GES) at the above referenced project site: 615 Broadway, Kingston, NY (the "Site").

INTRODUCTION TO GEOPHYSICAL ENGINEERING SURVEY (GES)

NOVA performed a geophysical engineering survey (GES) consisting of a Ground Penetrating Radar (GPR) and Electromagnetic (EM) survey at the site. The purpose of this survey is to locate and identify utilities, underground storage tanks (USTs) and other substructures in the vicinity of proposed boring areas on August 12nd, 2024.

The equipment selected for this investigation was a Sensors and Software Noggin 250 MHz ground penetrating radar (GPR) with a shielded antenna and a RadioDetection RD7100 Electromagnetic utility locator. A GPR system consists of a radar control unit, control cable, and transducer (antenna). The control unit transmits a trigger pulse at a normal repetition rate of 250 MHz. The trigger pulse is sent to the

transmitter electronics in the transducer via the control cable. The transmitter electronics amplify the trigger pulse into bipolar pulses that are radiated to the surface. The transformed pulses vary in shape and frequency according to the transducer used. In the subsurface, variations of the signal occur at boundaries where there is a dielectric contrast (void, steel, soil type, etc.). Signal reflections travel back to the control unit and are represented as color graphic images for interpolation.

A typical electromagnetic (EM) utility locating system consists of a transmitter unit and a receiver unit. The receiver unit can be used independently of the transmitter unit in order to detect utility lines with an inherent EM signature (electric utility lines, water lines, etc.). If needed a current at a specific frequency can also be placed on a utility that is being located. This can be done via the transmitter unit by either direct connection or induction via an EM field varying at specific frequency. The receiver unit is then set to the selected frequency and the electromagnetic field created by the current running through the utility can be located allowing the utility to be marked.

GEOPHYSICAL METHODS

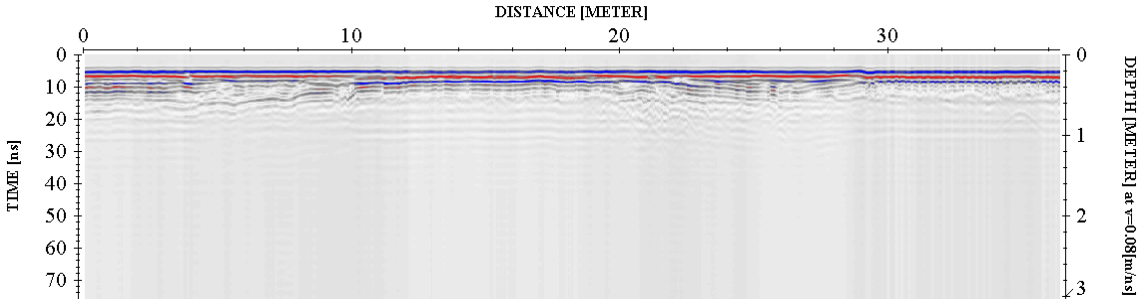
The project site was screened using GPR to search the specified area and inspected for reflections, which could be indicative of substructures and utilities within the subsurface. An EM utility locator was used to help determine the locations of utilities within the survey area.

EM data was collected and interpreted on site and suspected utilities marked as needed. GPR data profiles were collected for the areas of the Site specified by the client and processed as specified below.

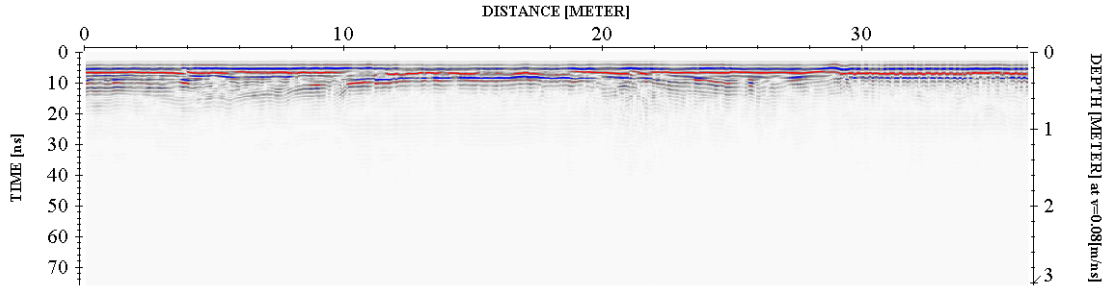
DATA PROCESSING

To improve the quality of the results and to better identify anomalies NOVA processed the collected data. The processing workflow is briefly described in this section.

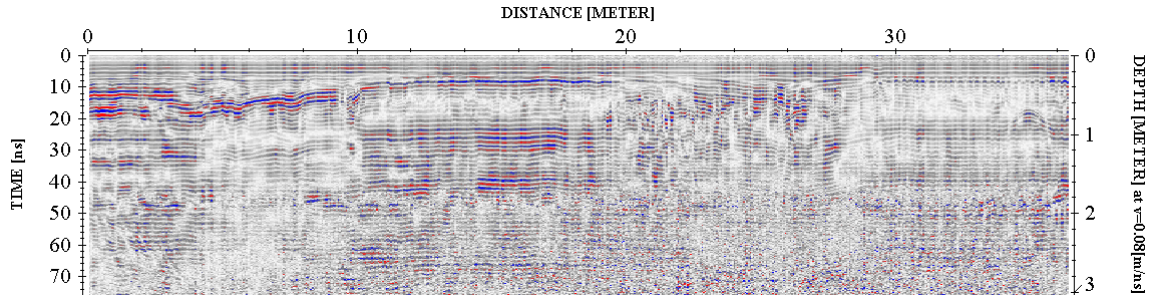
Step 1. Import Raw RAMAC data to standard processing format



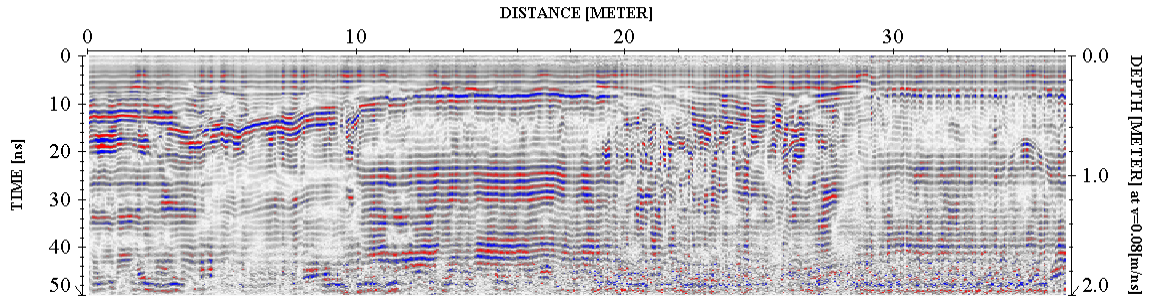
Step 2. Remove instrument noise *(dewow)*



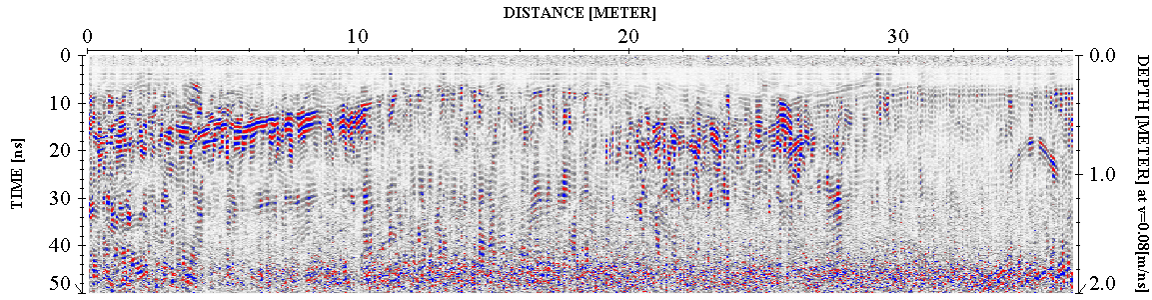
Step 3. Correct for attenuation losses *(energy decay function)*



Step 4. Remove static from bottom of profile *(time cut)*



Step 5. Mute horizontal ringing/noise *(subtracting average)*



The above example shows the significance of data processing. The last image (step 5) has higher resolution than the starting image (raw data – step 1) and represents the subsurface anomalies much more accurately.

PHYSICAL SETTINGS

NOVA observed the following physical conditions at the time of the survey.

Weather: Sunny

Temperature: 68° F

Surface: Concrete/ Pavement/ vegetation

Survey Parameters: A GPR grid scan was conducted within the survey areas as shown on the survey plan. The approximate line spacing of the grid survey was approximately 5'. Additional GPR data was collected over features of interest.

Limitations: The geophysical noise level (GNL) at the site was moderate due to being in a suburban environment.

RESULTS

The results of the geophysical engineering survey (GES) identified the following at the project site:

- Anomalies resembling potential subsurface utilities (such as electric, sewage, water, and gas) were identified. The approximate locations are shown in the survey plan.

- The GES identified the only two utilities (sewer and electric) to enter the survey area. Their respective mains are located on Broadway. The water and gas mains are also located on Broadway, but do not enter the survey area.

- The GEs confirmed that the sewer drains were found to be interconnected in the project area, with two storm drains in the survey area, and one on Broadway.

- The GES identified an electric line that was to connect to an electric circuit box, but this line was not live at the time of the survey.

- The GES identified a linear geophysical anomaly in the northern area of the survey area. Due to excessive geophysical noise, the exact nature of this anomaly could not be determined.

- The GES identified a geophysical anomaly located along the southern side of the survey area. The location of this anomaly is shown within the survey map.

- NOVA cleared all proposed boring locations on-site and adjusted boring locations as needed.

If you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

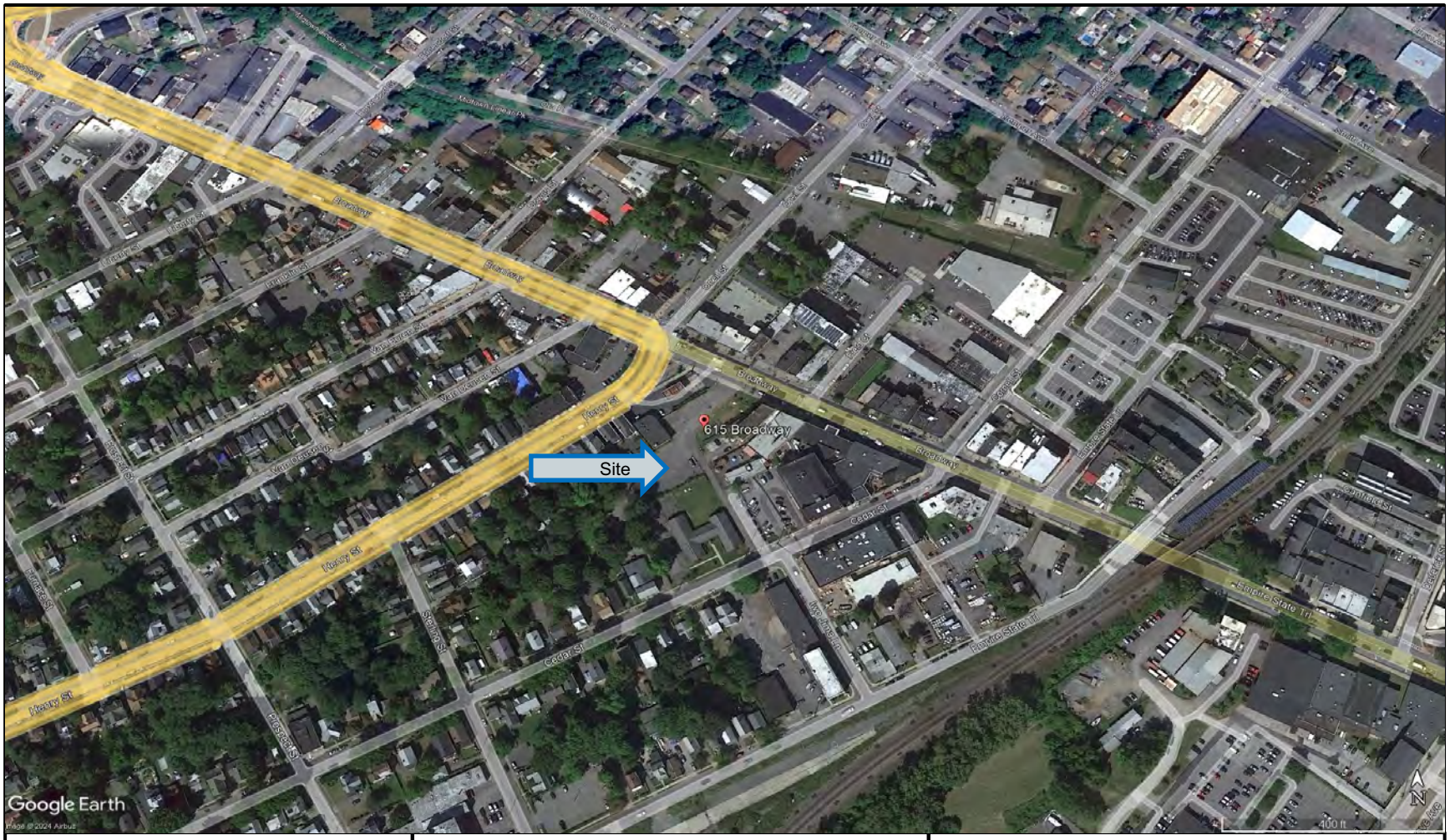
NOVA Geophysical Services



Levent Eskicakit, P.G., E.P.
Project Manager

Attachments:

Location Map
Survey Plan
Geophysical Images

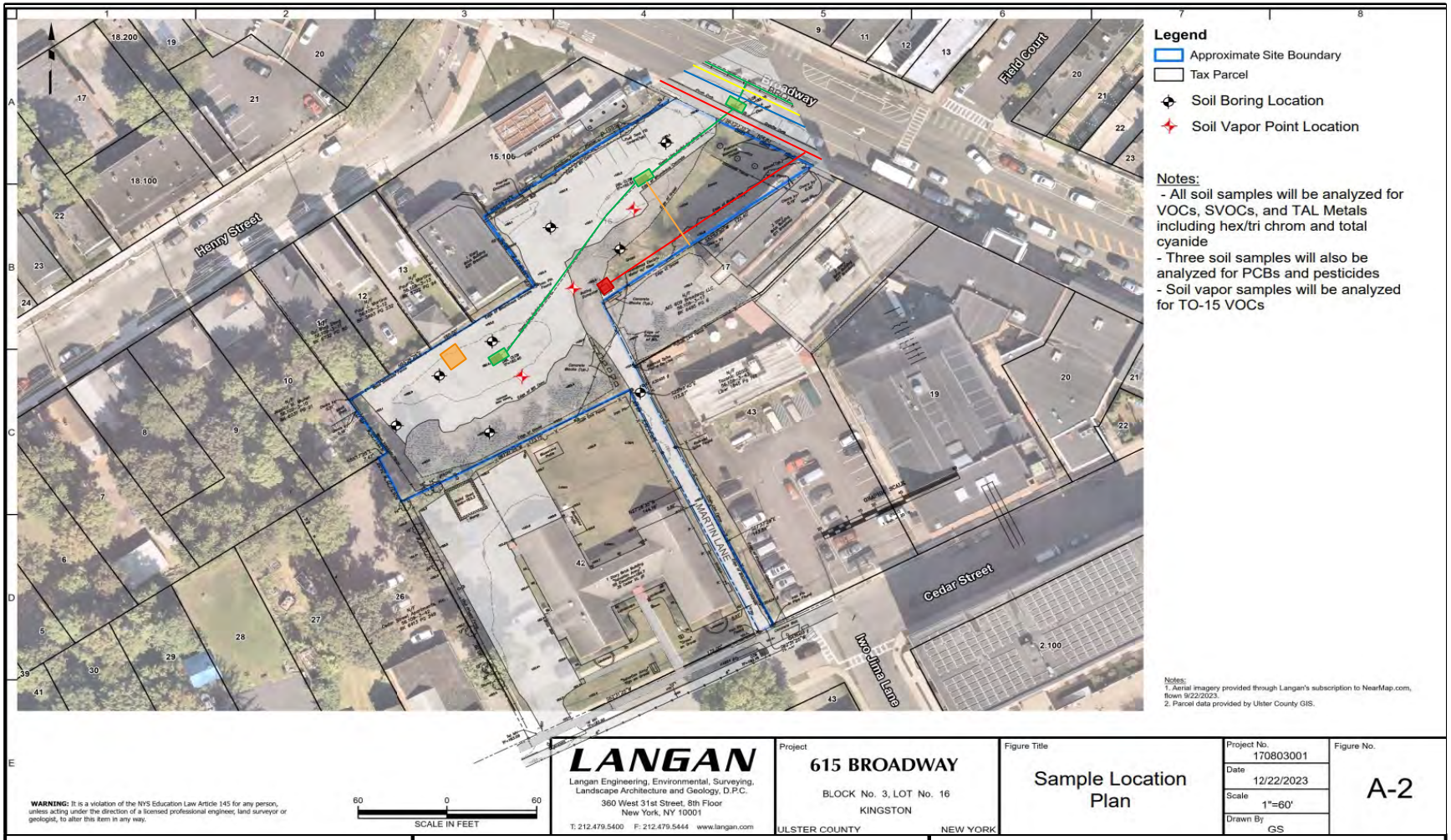


NOVA
Geophysical Services
Subsurface Mapping Solutions
56-01 Marathon Parkway, # 765
Douglaston, New York 11362
Phone (347) 556-7787 * Fax (718) 261-1527
www.novagsi.com

Site Location

SITE:	**Vacant Lot** 615 Broadway, Kingston, NY 12401
CLIENT:	Langan
DATE:	August 12th, 2024
AUTH:	Jason Staunton/ Tolga Yuksekbas

Legend



SURVEY PLAN

SITE:	**Vacant Lot** 615 Broadway, Kingston, NY 12401
CLIENT:	Langan
DATE:	August 12th, 2024
AUTH:	Jason Staunton/ Tolga Yuksekbas

Legend

- Sewage
- Water
- Gas
- Electric
- Linear anomaly
- Geophysical Anomaly
- Sewer Drain
- Electric box

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GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024









GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024









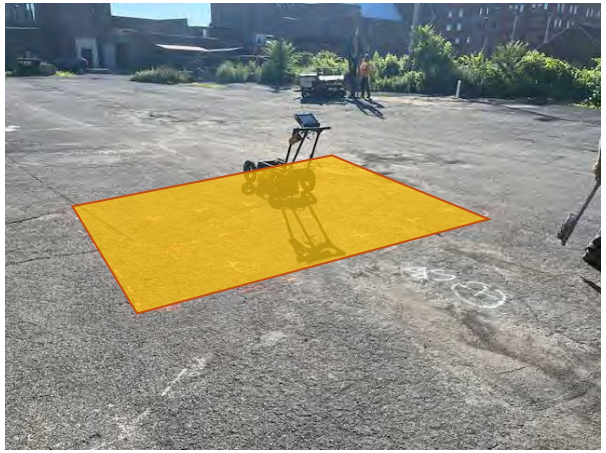
GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024









GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024





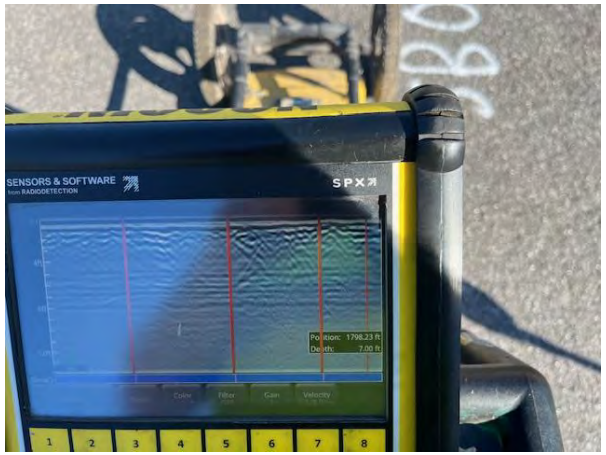




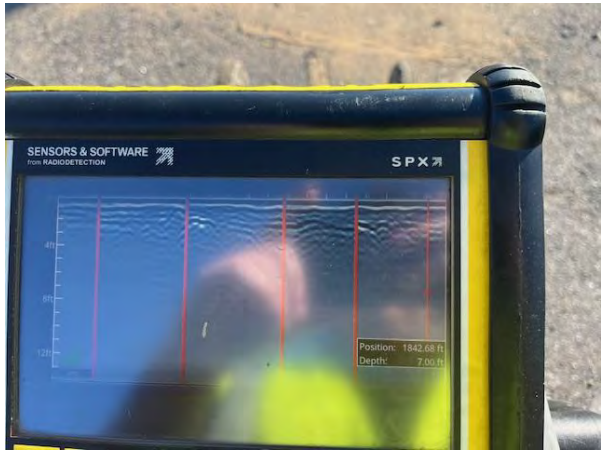
GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024









GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024









GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024









GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024









GEOPHYSICAL IMAGES

Vacant Lot

615 Broadway,
Kingston, NY 12401
August 12th, 2024





ATTACHMENT 2

SOIL BORING LOGS

LANGAN

Log of Boring **SB01** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 / Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 20.0 ft / Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 5 / Undisturbed 0 / Core 0
Casing Diameter (in): N/A / Casing Depth (ft): N/A	Water Level (ft.): First ▽ 19.0 / Completion ▼ N/A / 24 HR. ▼ N/A
Casing Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	ASPHALT	0	PD-1		0/3			
	N/A	Tannish brown to brown fine SAND, trace fine gravel, trace silt, slag (moist) [FILL]	1	A PD-1 B				0.0	SB01_1-2
			2	M-1A	Macrocore	35/45		0.0	
	N/A		3					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]		M-1B					
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	4					0.0	
			5					0.0	
			6	M-2	Macrocore	28/48		0.0	
			7						
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	8					0.0	
			9					0.0	
			10	M-3	Macrocore	40/48		0.0	
			11					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	12					0.0	
			13					0.0	
			14	M-4	Macrocore	38/48		0.0	
			15					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	16					0.0	
			17					0.0	
			18	M-5A	Macrocore	36/48		0.0	
			19 ▽					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (wet) [SP-SM]		M-5B					
	N/A	End of Boring at 20.0ft.	20						Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB02** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 / Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 10.0 ft / Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 3 / Undisturbed 0 / Core 0
Casing Diameter (in): N/A / Casing Depth (ft): N/A	Water Level (ft.): First ▽ N/A / Completion ▼ N/A / 24 HR. ⧩ N/A
Casing Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [FILL]	0					0.0	
			1	M-1A	Macrocore	40/48		0.0	SB02_1-2
			2					0.0	
	N/A	Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	3	M-1B				0.0	
			4					0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	5	M-2	Macrocore	36/48		0.0	
			6					0.0	
			7					0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	8	M-3	Macrocore	14/24		0.0	
	N/A		9					0.0	
		End of Boring at 10.0ft.	10						Boring backfilled to grade with clean drill cuttings
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB03** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 / Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 10.0 ft / Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 3 / Undisturbed 0 / Core 0
Casing Diameter (in): N/A / Casing Depth (ft): N/A	Water Level (ft.): First ▽ N/A / Completion ▼ N/A / 24 HR. ⧩ N/A
Casing Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	ASPHALT	0	PD-1		0/3		0.0	
	N/A	Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [FILL]	1	A PD-1 B M-1A	Macrocore	36/45		0.0	SB03_0-1
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	2	M-1B	Macrocore	36/45		0.0	
			3					0.0	
			4					0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	5	M-2	Macrocore	40/48		0.0	
			6					0.0	
			7					0.0	
			8					0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	9	M-3	Macrocore	15/24		0.0	
	N/A	End of Boring at 10.0ft.	10						Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB04** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 / Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 10.0 ft / Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 3 / Undisturbed 0 / Core 0
Casing Diameter (in): N/A / Casing Depth (ft): N/A	Water Level (ft.): First ▽ N/A / Completion ▼ N/A / 24 HR. ▼ N/A
Casing Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Number	Sample Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	ASPHALT	0	PD-1		0/3		0.0	
	N/A	Brown to dark brown fine SAND, trace fine gravel, trace silt, brick (moist) [FILL]	1	A PD-1 B M-1A	Macrocore	38/45		0.0	SB04_0.5-1.5
	N/A	Brown to dark brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	2					0.0	
			3	M-1B				0.0	
		Brown to dark brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	4					0.0	
			5					0.0	
			6	M-2	Macrocore	36/48		0.0	
			7					0.0	
		Brown to dark brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	8					0.0	
			9	M-3	Macrocore	29/24		0.0	
	N/A	End of Boring at 10.0ft.	10					0.0	Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB05** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 / Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 5.0 ft / Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 2 / Undisturbed 0 / Core 0
Casing Diameter (in): N/A / Casing Depth (ft): N/A	Water Level (ft.): First ▽ N/A / Completion ▼ N/A / 24 HR. ⧩ N/A
Casing Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	ASPHALT	0	PD-1		0/3		0.0	
	N/A	Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [FILL]	1	A PD-1 B M-1A	Macrocore	30/45		0.0 0.0 0.0	SB05_0-1
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	2	M-1B				0.0 0.0	
			3						
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	4	M-2	Macrocore	10/12		0.0 0.0	
	N/A	End of Boring at 5.0ft.	5						Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
			6						
			7						
			8						
			9						
			10						
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB06** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 / Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 10.0 ft / Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 3 / Undisturbed 0 / Core 0
Casing Diameter (in): N/A / Casing Depth (ft): N/A	Water Level (ft.): First ▽ N/A / Completion ▼ N/A / 24 HR. ⧩ N/A
Casing Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Number	Sample Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	ASPHALT	0	PD-1		0/3		0.0	
	N/A	Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [FILL]	1	A PD-1 B M-1A				0.0	SB06_0-1
	N/A	Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	2	M-1B	Macrocore	38/45		0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	3					0.0	
			4					0.0	
			5	M-2	Macrocore	40/48		0.0	
			6					0.0	
			7					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	8					0.0	
			9	M-3	Macrocore	15/24		0.0	
	N/A	End of Boring at 10.0ft.	10						Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB07** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 — Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 20.0 ft — Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 5 — Undisturbed 0 — Core 0
Casing Diameter (in): N/A — Casing Depth (ft): N/A	Water Level (ft.): First ▽ 19.0 — Completion ▼ N/A — 24 HR. ▼ N/A
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	ASPHALT	0	PD-1		0/3		0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt, glass (moist) [FILL]	1	A PD-1 B				0.0	
				M-1A	Macrocore	31/45		0.0	SB07_1-2
	N/A		2					1.9	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	3	M-1B				0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	4					0.0	
			5					0.0	
				M-2	Macrocore	31/48		0.0	
			6					0.0	
		Tannish brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	7					0.0	
			8					0.0	
			9					0.0	
				M-3	Macrocore	31/48		0.0	
			10					0.0	
		Tannish brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	11					0.0	
			12					0.0	
			13					0.0	
				M-4	Macrocore	34/48		0.0	
			14					0.0	
		Tannish brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	15					0.0	
			16					0.0	
			17					0.0	
				M-5A	Macrocore	40/48		0.0	
			18					0.0	
		Tannish brown fine SAND, trace fine gravel, trace silt (wet) [SP-SM] ▽	19					0.0	
	N/A			M-5B				0.0	
		End of Boring at 20.0ft.	20						Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB08** Sheet 1 of 1

Project: 615 Broadway		Project No.: 170803001	
Location: Kingston, New York		Elevation and Datum: N/A	
Drilling Company: Lakewood Environmental Services Corp.		Date Started: 8/12/2024	Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT		Completion Depth: 10.0 ft	Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD		Number of Samples: Disturbed 3	Undisturbed 0 / Core 0
Casing Diameter (in): N/A	Casing Depth (ft): N/A	Water Level (ft.): First ▽ N/A	Completion ▼ N/A / 24 HR. ▼ N/A
Casing Hammer: N/A	Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly	
Sampler: 48-inch Macrocore		Field Engineer: Andrew Ashley	
Sampler Hammer: N/A	Weight (lbs): N/A / Drop (in): N/A		

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [FILL]	0					0.0	
								0.0	
			1	M-1A	Macrocore	35/48		0.0	SB08_1-2
								0.0	
	N/A		2					0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]						0.0	
			3	M-1B					
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	4					0.0	
								0.0	
			5					0.0	
								0.0	
			6	M-2	Macrocore	38/48		0.0	
								0.0	
			7					0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	8					0.0	
								0.0	
			9	M-3	Macrocore	20/24		0.0	
	N/A							0.0	
		End of Boring at 10.0ft.	10						Boring backfilled to grade with clean drill cuttings
			11						
			12						
			13						
			14						
			15						
			16						
			17						
			18						
			19						
			20						
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB09** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 — Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 20.0 ft — Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 5 — Undisturbed 0 — Core 0
Casing Diameter (in): N/A — Casing Depth (ft): N/A	Water Level (ft.): First ▽ 19.0 — Completion ▼ N/A — 24 HR. ▼ N/A
Casing Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A — Weight (lbs): N/A — Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description	Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
	N/A	ASPHALT	0	PD-1		0/3		0.0	
	N/A	Gray fine GRAVEL (dry) [FILL]		A					
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [FILL]	1	PD-1 B				0.0	SB09_1-2
	N/A			M-1A				0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]		M-1B	Macrocore	36/45		0.0	
			2					0.0	
			3	M-1C				0.0	
		Dark brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	4					0.0	
			5					0.0	
								0.0	
			6	M-2	Macrocore	39/48		0.0	
								0.0	
			7					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	8					0.0	
			9					0.0	
								0.0	
			10	M-3	Macrocore	43/48		0.0	
								0.0	
			11					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	12					0.0	
			13					0.0	
								0.0	
			14	M-4	Macrocore	44/48		0.0	
								0.0	
			15					0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (moist) [SP-SM]	16					0.0	
			17					0.0	
				M-5A				0.0	
			18					0.0	
								0.0	
		Tannish brown to brown fine SAND, trace fine gravel, trace silt (wet) [SP-SM] ▽	19	M-5B	Macrocore	45/48		0.0	
	N/A							0.0	
		End of Boring at 20.0ft.	20						Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
			21						
			22						
			23						
			24						

LANGAN

Log of Boring **SB10** Sheet 1 of 1

Project: 615 Broadway	Project No.: 170803001
Location: Kingston, New York	Elevation and Datum: N/A
Drilling Company: Lakewood Environmental Services Corp.	Date Started: 8/12/2024 / Date Finished: 8/12/2024
Drilling Equipment: Geoprobe 54DT	Completion Depth: 5.0 ft / Rock Depth: Not Encountered
Size and Type of Bit: 2-inch Diameter ID x 2.25-inch Diameter OD	Number of Samples: Disturbed 2 / Undisturbed 0 / Core 0
Casing Diameter (in): N/A / Casing Depth (ft): N/A	Water Level (ft.): First ▽ N/A / Completion ▼ N/A / 24 HR. ▼ N/A
Casing Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	Drilling Foreman: Tim Kelly
Sampler: 48-inch Macrocore	Field Engineer: Andrew Ashley
Sampler Hammer: N/A / Weight (lbs): N/A / Drop (in): N/A	

Material Symbol	Elev. (ft)	Sample Description
	N/A	ASPHALT
	N/A	Brown to dark brown SAND, trace fine gravel, trace silt (moist) [FILL]
	N/A	Brown to dark brown SAND, trace fine gravel, trace silt (moist) [SP-SM]
	N/A	Tannish brown SAND, trace fine gravel, trace silt (moist) [SP-SM]
		End of Boring at 5.0ft.

Depth Scale	Sample Data: Number	Type	Recov. (in)	Penetr-resist BL/6in	PID Reading (ppm)	Remarks (Drilling Fluid, Casing Depth, Fluid Loss, Drilling Resistance, etc.)
0	PD-1	DST	0/3		0.0	
1	A PD-1 B M-1A	Macrocore	37/45		0.0	SB10_0-1
2					0.0	
3	M-1B				0.0	
4	M-2	Macrocore	12/12		0.0	
5					0.0	Boring backfilled to grade with clean drill cuttings and patched at grade with asphalt
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

ATTACHMENT 3

SOIL VAPOR CONSTRUCTION AND SAMPLING LOGS

SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV01

PROJECT: 615 Broadway	**PROJECT NO.:** 170803001	
LOCATION: Kingston, NY	**SURFACE ELEVATION AND DATUM:** N/A	
DRILLING FIRM OR LANGAN INSTALLER: Lakewood Environmental Services Corp.	**INSTALLATION DATE STARTED:** 8/12/2024	**DATE FINISHED:** 8/12/2024
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 8/12/2024	**DATE FINISHED:** 8/12/2024
INSTALLATION EQUIPMENT: Geoprobe® 54DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister	
INSPECTOR: Andrew Ashley	**SAMPLER:** Andrew Ashley	
POTENTIAL SAMPLE INTERFERENCES: N/A	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 59 - 77 F Wind: N at 10 - 15 mph Precipitation: N/A Pressure: 29.9 in Hg	

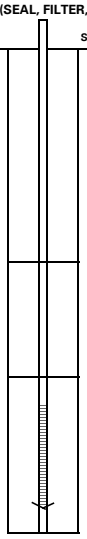
METHOD OF INSTALLATION AND PURGING:

Lakewood Environmental Services Corp. (Lakewood) advanced a Geoprobe® 54DT to about 5 foot below grade surface (bgs) and installed the vapor point. The borehole was backfilled to about 3 feet bgs with No. 2 sand. The remainder of the borehole was sealed with hydrated bentonite. The flow controller was zeroed and valve opened to initiate the 2-hour sample collection. The sample and flow controller were checked every 30 minutes during sampling to ensure proper operation.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.81	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0	
HELIUM TESTS	Pre-Sampling	Post-Sampling
HELIUM TEST IN BUCKET (%):	29.1%	18.9%
HELIUM TEST IN TUBE (PPM):	0.0	0.0
SAMPLE START TIME:	10:38	
SAMPLE STOP TIME:	12:28	
TOTAL SAMPLE TIME (MIN):	110	
REGULATOR FLOW RATE (L/MIN):	0.02	
VOLUME OF SAMPLE (LITERS):	2.7	
PID AFTER SAMPLE (PPM):	0	
SAMPLE MOISTURE CONTENT:	N/A	
CAN SERIAL NUMBER:	4417	
REGULATOR SERIAL NUMBER:	01167	
CAN START VACUUM PRESS. (" HG):	-30.25	
CAN STOP VACUUM PRESS. (" HG):	-6.77	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)



	DEPTH (FEET FROM SURFACE)	NOTES
SURFACE		
Top of Seal	0.00	
Top of Pack	3.00	
Probe Depth	5.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV02

PROJECT: 615 Broadway	**PROJECT NO.:** 170803001	
LOCATION: Kingston, NY	**SURFACE ELEVATION AND DATUM:** N/A	
DRILLING FIRM OR LANGAN INSTALLER: Lakewood Environmental Services Corp.	**INSTALLATION DATE STARTED:** 8/12/2024	**DATE FINISHED:** 8/12/2024
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 8/12/2024	**DATE FINISHED:** 8/12/2024
INSTALLATION EQUIPMENT: Geoprobe® 54DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister	
INSPECTOR: Andrew Ashley	**SAMPLER:** Andrew Ashley	
POTENTIAL SAMPLE INTERFERENCES: N/A	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 59 - 77 F Wind: N at 10 - 15 mph Precipitation: N/A Pressure: 29.9 in Hg	

METHOD OF INSTALLATION AND PURGING:

Lakewood Environmental Services Corp. (Lakewood) advanced a Geoprobe® 54DT to about 5 foot below grade surface (bgs) and installed the vapor point. The borehole was backfilled to about 3 feet bgs with No. 2 sand. The remainder of the borehole was sealed with hydrated bentonite. The flow controller was zeroed and valve opened to initiate the 2-hour sample collection. The sample and flow controller were checked every 30 minutes during sampling to ensure proper operation.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.81	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0	
HELIUM TESTS	Pre-Sampling	Post-Sampling
HELIUM TEST IN BUCKET(%):	20.4%	19.5%
HELIUM TEST IN TUBE (PPM):	0.0	0.0
SAMPLE START TIME:	10:40	
SAMPLE STOP TIME:	12:29	
TOTAL SAMPLE TIME (MIN):	109	
REGULATOR FLOW RATE (L/MIN):	0.02	
VOLUME OF SAMPLE (LITERS):	2.7	
PID AFTER SAMPLE (PPM):	0.0	
SAMPLE MOISTURE CONTENT:	N/A	
CAN SERIAL NUMBER:	195	
REGULATOR SERIAL NUMBER:	02091	
CAN START VACUUM PRESS. (" HG):	-29.75	
CAN STOP VACUUM PRESS. (" HG):	-6.89	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (FEET FROM SURFACE)**	**NOTES**
SURFACE		
Top of Seal	0.00	
Top of Pack	3.00	
Probe Depth	5.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

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SOIL VAPOR SAMPLING LOG SHEET

Sample Number: SV03

PROJECT: 615 Broadway	**PROJECT NO.:** 170803001	
LOCATION: Kingston, NY	**SURFACE ELEVATION AND DATUM:** N/A	
DRILLING FIRM OR LANGAN INSTALLER: Lakewood Environmental Services Corp.	**INSTALLATION DATE STARTED:** 8/12/2024	**DATE FINISHED:** 8/12/2024
INSTALLATION FOREMAN: Tim Kelly	**SAMPLE DATE STARTED:** 8/12/2024	**DATE FINISHED:** 8/12/2024
INSTALLATION EQUIPMENT: Geoprobe® 54DT	**TYPE OF SAMPLING DEVICE:** 2.7-Liter Summa Canister	
INSPECTOR: Andrew Ashley	**SAMPLER:** Andrew Ashley	
POTENTIAL SAMPLE INTERFERENCES: N/A	**WEATHER CONDITIONS (PRECIP., TEMP., PRESS., WIND SPEED AND DIR.):** Temp: 59 - 77 F Wind: N at 10 - 15 mph Precipitation: N/A Pressure: 29.9 in Hg	

METHOD OF INSTALLATION AND PURGING:

Lakewood Environmental Services Corp. (Lakewood) advanced a Geoprobe® 54DT to about 5 foot below grade surface (bgs) and installed the vapor point. The borehole was backfilled to about 3 feet bgs with No. 2 sand. The remainder of the borehole was sealed with hydrated bentonite. The flow controller was zeroed and valve opened to initiate the 2-hour sample collection. The sample and flow controller were checked every 30 minutes during sampling to ensure proper operation.

TUBING TYPE/DIAMETER: 3/16-inch ID, 1/4-inch OD Teflon-Lined Polyethylene Tubing	**TYPE OF MATERIAL ABOVE SEAL:** Bentonite
IMPLANT SCREEN TYPE/LENGTH/DIAMETER: 2-Inch Polyethylene Probe	**SEAL MATERIAL (Bentonite, Beeswax, Modeling Clay, etc.):** Bentonite
BOREHOLE DIAMETER: 2 inch	**FILTER PACK MATERIAL (Sand or Glass Beads):** No. 2 Sand

PURGE VOLUME (L):	0.81	
PURGE FLOW RATE (ML/MIN):	200	
PID AFTER PURGE (PPM):	0	
HELIUM TESTS	Pre-sampling	Post-sampling
HELIUM TEST IN BUCKET(%):	18.6%	20.1%
HELIUM TEST IN TUBE (PPM):	0.0	0.0
SAMPLE START TIME:	10:42	
SAMPLE STOP TIME:	12:46	
TOTAL SAMPLE TIME (MIN):	124	
REGULATOR FLOW RATE (L/MIN):	0.02	
VOLUME OF SAMPLE (LITERS):	2.7	
PID AFTER SAMPLE (PPM):	0.0	
SAMPLE MOISTURE CONTENT:	N/A	
CAN SERIAL NUMBER:	327	
REGULATOR SERIAL NUMBER:	02106	
CAN START VACUUM PRESS. (" HG):	-29.99	
CAN STOP VACUUM PRESS. (" HG):	-4.53	

IMPLANT/PROBE DETAILS (SEAL, FILTER, ETC.)	**DEPTH (FEET FROM SURFACE)**	**NOTES**
SURFACE		
Top of Seal	0.00	
Top of Pack	3.00	
Probe Depth	5.00	

SAMPLE LOCATION SKETCH

See Sample Location Plan

NOTES

Langan Engineering, Environmental, Surveying, Landscape Architecture, and Geology D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York, New York 10001-2727

ATTACHMENT 4

LABORATORY ANALYTICAL REPORT

ANALYTICAL REPORT

Lab Number:	L2445541
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Lamees Esmail
Phone:	(212) 479-5717
Project Name:	615 BROADWAY
Project Number:	170803001
Report Date:	08/19/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2445541-01	SB07_1-2	SOIL	KINGSTON, NEW YORK	08/12/24 11:00	08/12/24
L2445541-02	SB04_0.5-1.5	SOIL	KINGSTON, NEW YORK	08/12/24 12:00	08/12/24
L2445541-03	SB01_1-2	SOIL	KINGSTON, NEW YORK	08/12/24 12:15	08/12/24
L2445541-04	SB02_1-2	SOIL	KINGSTON, NEW YORK	08/12/24 12:30	08/12/24
L2445541-05	SB03_0-1	SOIL	KINGSTON, NEW YORK	08/12/24 11:00	08/12/24
L2445541-06	SB05_0-1	SOIL	KINGSTON, NEW YORK	08/12/24 11:15	08/12/24
L2445541-07	SB06_0-1	SOIL	KINGSTON, NEW YORK	08/12/24 11:30	08/12/24
L2445541-08	SB08_1-2	SOIL	KINGSTON, NEW YORK	08/12/24 11:45	08/12/24
L2445541-09	SB09_1-2	SOIL	KINGSTON, NEW YORK	08/12/24 13:00	08/12/24
L2445541-10	SB10_0-1	SOIL	KINGSTON, NEW YORK	08/12/24 14:00	08/12/24

Project Name:	615 BROADWAY	**Lab Number:**	L2445541
Project Number:	170803001	**Report Date:**	08/19/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	615 BROADWAY	**Lab Number:**	L2445541
Project Number:	170803001	**Report Date:**	08/19/24

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Semivolatile Organics

L2445541-02D and -05D: The sample has elevated detection limits due to the dilution required by the sample matrix.

Total Metals

L2445541-01 through -10: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by the sample matrix.

Cyanide, Total

The WG1959165-2 LCS recovery for cyanide, total (78%), associated with L2445541-01 through -08, is outside our in-house acceptance criteria, but within the vendor-certified acceptance limits. The results of the original analyses are reported.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Tiffani Morrissey - Tiffani Morrissey

Title: Technical Director/Representative Date: 08/19/24

ORGANICS

VOLATILES

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01
Client ID: SB07_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/16/24 10:57
Analyst: AJK
Percent Solids: 92%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.8	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.97	0.14	1
Chloroform	ND		ug/kg	1.4	0.14	1
Carbon tetrachloride	ND		ug/kg	0.97	0.22	1
1,2-Dichloropropane	ND		ug/kg	0.97	0.12	1
Dibromochloromethane	ND		ug/kg	0.97	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.97	0.26	1
Tetrachloroethene	ND		ug/kg	0.48	0.19	1
Chlorobenzene	ND		ug/kg	0.48	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.67	1
1,2-Dichloroethane	ND		ug/kg	0.97	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.48	0.16	1
Bromodichloromethane	ND		ug/kg	0.48	0.10	1
trans-1,3-Dichloropropene	ND		ug/kg	0.97	0.26	1
cis-1,3-Dichloropropene	ND		ug/kg	0.48	0.15	1
1,3-Dichloropropene, Total	ND		ug/kg	0.48	0.15	1
1,1-Dichloropropene	ND		ug/kg	0.48	0.15	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.48	0.16	1
Benzene	ND		ug/kg	0.48	0.16	1
Toluene	ND		ug/kg	0.97	0.53	1
Ethylbenzene	ND		ug/kg	0.97	0.14	1
Chloromethane	ND		ug/kg	3.9	0.90	1
Bromomethane	ND		ug/kg	1.9	0.56	1
Vinyl chloride	ND		ug/kg	0.97	0.32	1
Chloroethane	ND		ug/kg	1.9	0.44	1
1,1-Dichloroethene	ND		ug/kg	0.97	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.4	0.13	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01 Date Collected: 08/12/24 11:00

Client ID: SB07_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.48	0.13	1
1,2-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	1.9	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	1.9	0.16	1
Methyl tert butyl ether	ND		ug/kg	1.9	0.20	1
p/m-Xylene	ND		ug/kg	1.9	0.54	1
o-Xylene	ND		ug/kg	0.97	0.28	1
Xylenes, Total	ND		ug/kg	0.97	0.28	1
cis-1,2-Dichloroethene	ND		ug/kg	0.97	0.17	1
1,2-Dichloroethene, Total	ND		ug/kg	0.97	0.13	1
Dibromomethane	ND		ug/kg	1.9	0.23	1
Styrene	ND		ug/kg	0.97	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.7	0.89	1
Acetone	ND		ug/kg	9.7	4.7	1
Carbon disulfide	ND		ug/kg	9.7	4.4	1
2-Butanone	ND		ug/kg	9.7	2.2	1
Vinyl acetate	ND		ug/kg	9.7	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.7	1.2	1
1,2,3-Trichloropropane	ND		ug/kg	1.9	0.12	1
2-Hexanone	ND		ug/kg	9.7	1.1	1
Bromochloromethane	ND		ug/kg	1.9	0.20	1
2,2-Dichloropropane	ND		ug/kg	1.9	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.97	0.27	1
1,3-Dichloropropane	ND		ug/kg	1.9	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.48	0.13	1
Bromobenzene	ND		ug/kg	1.9	0.14	1
n-Butylbenzene	ND		ug/kg	0.97	0.16	1
sec-Butylbenzene	ND		ug/kg	0.97	0.14	1
tert-Butylbenzene	ND		ug/kg	1.9	0.11	1
o-Chlorotoluene	ND		ug/kg	1.9	0.18	1
p-Chlorotoluene	ND		ug/kg	1.9	0.10	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	2.9	0.97	1
Hexachlorobutadiene	ND		ug/kg	3.9	0.16	1
Isopropylbenzene	ND		ug/kg	0.97	0.10	1
p-Isopropyltoluene	ND		ug/kg	0.97	0.10	1
Naphthalene	ND		ug/kg	3.9	0.63	1
Acrylonitrile	ND		ug/kg	3.9	1.1	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01 Date Collected: 08/12/24 11:00

Client ID: SB07_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.97	0.16	1
1,2,3-Trichlorobenzene	ND		ug/kg	1.9	0.31	1
1,2,4-Trichlorobenzene	ND		ug/kg	1.9	0.26	1
1,3,5-Trimethylbenzene	ND		ug/kg	1.9	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	1.9	0.32	1
1,4-Dioxane	ND		ug/kg	78	34.	1
p-Diethylbenzene	ND		ug/kg	1.9	0.17	1
p-Ethyltoluene	ND		ug/kg	1.9	0.37	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	1.9	0.18	1
Ethyl ether	ND		ug/kg	1.9	0.33	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.8	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	108		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02
Client ID: SB04_0.5-1.5
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 12:52
Analyst: MKS
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.2	2.9	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.18	1
Chloroform	ND		ug/kg	1.9	0.18	1
Carbon tetrachloride	ND		ug/kg	1.2	0.29	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.16	1
Dibromochloromethane	ND		ug/kg	1.2	0.18	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.33	1
Tetrachloroethene	ND		ug/kg	0.62	0.24	1
Chlorobenzene	ND		ug/kg	0.62	0.16	1
Trichlorofluoromethane	ND		ug/kg	5.0	0.87	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.32	1
1,1,1-Trichloroethane	ND		ug/kg	0.62	0.21	1
Bromodichloromethane	ND		ug/kg	0.62	0.14	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.34	1
cis-1,3-Dichloropropene	ND		ug/kg	0.62	0.20	1
1,3-Dichloropropene, Total	ND		ug/kg	0.62	0.20	1
1,1-Dichloropropene	ND		ug/kg	0.62	0.20	1
Bromoform	ND		ug/kg	5.0	0.31	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.62	0.21	1
Benzene	ND		ug/kg	0.62	0.21	1
Toluene	ND		ug/kg	1.2	0.68	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	5.0	1.2	1
Bromomethane	ND		ug/kg	2.5	0.73	1
Vinyl chloride	ND		ug/kg	1.2	0.42	1
Chloroethane	ND		ug/kg	2.5	0.56	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.30	1
trans-1,2-Dichloroethene	ND		ug/kg	1.9	0.17	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02 Date Collected: 08/12/24 12:00

Client ID: SB04_0.5-1.5 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.62	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,4-Dichlorobenzene	ND		ug/kg	2.5	0.21	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.25	1
p/m-Xylene	ND		ug/kg	2.5	0.70	1
o-Xylene	ND		ug/kg	1.2	0.36	1
Xylenes, Total	ND		ug/kg	1.2	0.36	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.22	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.17	1
Dibromomethane	ND		ug/kg	2.5	0.30	1
Styrene	ND		ug/kg	1.2	0.24	1
Dichlorodifluoromethane	ND		ug/kg	12	1.1	1
Acetone	ND		ug/kg	12	6.0	1
Carbon disulfide	ND		ug/kg	12	5.7	1
2-Butanone	ND		ug/kg	12	2.8	1
Vinyl acetate	ND		ug/kg	12	2.7	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.6	1
1,2,3-Trichloropropane	ND		ug/kg	2.5	0.16	1
2-Hexanone	ND		ug/kg	12	1.5	1
Bromochloromethane	ND		ug/kg	2.5	0.26	1
2,2-Dichloropropane	ND		ug/kg	2.5	0.25	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.35	1
1,3-Dichloropropane	ND		ug/kg	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.62	0.16	1
Bromobenzene	ND		ug/kg	2.5	0.18	1
n-Butylbenzene	ND		ug/kg	1.2	0.21	1
sec-Butylbenzene	ND		ug/kg	1.2	0.18	1
tert-Butylbenzene	ND		ug/kg	2.5	0.15	1
o-Chlorotoluene	ND		ug/kg	2.5	0.24	1
p-Chlorotoluene	ND		ug/kg	2.5	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.8	1.2	1
Hexachlorobutadiene	ND		ug/kg	5.0	0.21	1
Isopropylbenzene	ND		ug/kg	1.2	0.14	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.14	1
Naphthalene	ND		ug/kg	5.0	0.81	1
Acrylonitrile	ND		ug/kg	5.0	1.4	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02 Date Collected: 08/12/24 12:00

Client ID: SB04_0.5-1.5 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.2	0.21	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.5	0.40	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.5	0.34	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.5	0.24	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.5	0.42	1
1,4-Dioxane	ND		ug/kg	100	44.	1
p-Diethylbenzene	ND		ug/kg	2.5	0.22	1
p-Ethyltoluene	ND		ug/kg	2.5	0.48	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.5	0.24	1
Ethyl ether	ND		ug/kg	2.5	0.43	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.2	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	107		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03
Client ID: SB01_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 13:18
Analyst: MKS
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.0	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.23	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.12	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27	1
Tetrachloroethene	ND		ug/kg	0.50	0.20	1
Chlorobenzene	ND		ug/kg	0.50	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.0	0.70	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.26	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17	1
Bromodichloromethane	ND		ug/kg	0.50	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.50	0.16	1
Bromoform	ND		ug/kg	4.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17	1
Benzene	0.23	J	ug/kg	0.50	0.17	1
Toluene	2.0		ug/kg	1.0	0.55	1
Ethylbenzene	ND		ug/kg	1.0	0.14	1
Chloromethane	ND		ug/kg	4.0	0.94	1
Bromomethane	ND		ug/kg	2.0	0.58	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
Chloroethane	ND		ug/kg	2.0	0.46	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03 Date Collected: 08/12/24 12:15

Client ID: SB01_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.50	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.56	1
o-Xylene	0.62	J	ug/kg	1.0	0.29	1
Xylenes, Total	0.62	J	ug/kg	1.0	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.24	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.92	1
Acetone	9.6	J	ug/kg	10	4.8	1
Carbon disulfide	ND		ug/kg	10	4.6	1
2-Butanone	ND		ug/kg	10	2.2	1
Vinyl acetate	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.21	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.28	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13	1
Bromobenzene	ND		ug/kg	2.0	0.14	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.19	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.0	0.17	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.0	0.65	1
Acrylonitrile	ND		ug/kg	4.0	1.2	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03 Date Collected: 08/12/24 12:15

Client ID: SB01_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.34	1
1,4-Dioxane	ND		ug/kg	80	35.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.18	1
p-Ethyltoluene	ND		ug/kg	2.0	0.39	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19	1
Ethyl ether	ND		ug/kg	2.0	0.34	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	105		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04
Client ID: SB02_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 13:45
Analyst: MKS
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.28	1
Tetrachloroethene	ND		ug/kg	0.53	0.21	1
Chlorobenzene	ND		ug/kg	0.53	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.2	0.73	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Bromodichloromethane	ND		ug/kg	0.53	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	0.17	1
1,3-Dichloropropene, Total	ND		ug/kg	0.53	0.17	1
1,1-Dichloropropene	ND		ug/kg	0.53	0.17	1
Bromoform	ND		ug/kg	4.2	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	0.17	1
Benzene	ND		ug/kg	0.53	0.17	1
Toluene	0.73	J	ug/kg	1.0	0.57	1
Ethylbenzene	ND		ug/kg	1.0	0.15	1
Chloromethane	ND		ug/kg	4.2	0.98	1
Bromomethane	ND		ug/kg	2.1	0.61	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
Chloroethane	ND		ug/kg	2.1	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04 Date Collected: 08/12/24 12:30

Client ID: SB02_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.53	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	ND		ug/kg	2.1	0.59	1
o-Xylene	ND		ug/kg	1.0	0.31	1
Xylenes, Total	ND		ug/kg	1.0	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.1	0.25	1
Styrene	ND		ug/kg	1.0	0.21	1
Dichlorodifluoromethane	ND		ug/kg	10	0.96	1
Acetone	5.1	J	ug/kg	10	5.1	1
Carbon disulfide	ND		ug/kg	10	4.8	1
2-Butanone	ND		ug/kg	10	2.3	1
Vinyl acetate	ND		ug/kg	10	2.3	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.1	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.1	0.22	1
2,2-Dichloropropane	ND		ug/kg	2.1	0.21	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.29	1
1,3-Dichloropropane	ND		ug/kg	2.1	0.18	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.53	0.14	1
Bromobenzene	ND		ug/kg	2.1	0.15	1
n-Butylbenzene	ND		ug/kg	1.0	0.18	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.1	0.12	1
o-Chlorotoluene	ND		ug/kg	2.1	0.20	1
p-Chlorotoluene	ND		ug/kg	2.1	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.2	0.18	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.2	0.68	1
Acrylonitrile	ND		ug/kg	4.2	1.2	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04 Date Collected: 08/12/24 12:30

Client ID: SB02_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	0.34	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.29	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	0.35	1
1,4-Dioxane	ND		ug/kg	84	37.	1
p-Diethylbenzene	ND		ug/kg	2.1	0.19	1
p-Ethyltoluene	ND		ug/kg	2.1	0.40	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.1	0.20	1
Ethyl ether	ND		ug/kg	2.1	0.36	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.3	1.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	108		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05
Client ID: SB03_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 14:12
Analyst: MKS
Percent Solids: 95%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	4.9	2.2	1
1,1-Dichloroethane	ND		ug/kg	0.99	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	0.99	0.23	1
1,2-Dichloropropane	ND		ug/kg	0.99	0.12	1
Dibromochloromethane	ND		ug/kg	0.99	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	0.99	0.26	1
Tetrachloroethene	ND		ug/kg	0.49	0.19	1
Chlorobenzene	ND		ug/kg	0.49	0.12	1
Trichlorofluoromethane	ND		ug/kg	3.9	0.68	1
1,2-Dichloroethane	ND		ug/kg	0.99	0.25	1
1,1,1-Trichloroethane	ND		ug/kg	0.49	0.16	1
Bromodichloromethane	ND		ug/kg	0.49	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	0.99	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.49	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.49	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.49	0.16	1
Bromoform	ND		ug/kg	3.9	0.24	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.49	0.16	1
Benzene	ND		ug/kg	0.49	0.16	1
Toluene	0.56	J	ug/kg	0.99	0.54	1
Ethylbenzene	ND		ug/kg	0.99	0.14	1
Chloromethane	ND		ug/kg	3.9	0.92	1
Bromomethane	ND		ug/kg	2.0	0.57	1
Vinyl chloride	ND		ug/kg	0.99	0.33	1
Chloroethane	ND		ug/kg	2.0	0.44	1
1,1-Dichloroethene	ND		ug/kg	0.99	0.23	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05 Date Collected: 08/12/24 11:00

Client ID: SB03_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.49	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.55	1
o-Xylene	ND		ug/kg	0.99	0.29	1
Xylenes, Total	ND		ug/kg	0.99	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	0.99	0.17	1
1,2-Dichloroethene, Total	ND		ug/kg	0.99	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.23	1
Styrene	ND		ug/kg	0.99	0.19	1
Dichlorodifluoromethane	ND		ug/kg	9.9	0.90	1
Acetone	ND		ug/kg	9.9	4.7	1
Carbon disulfide	ND		ug/kg	9.9	4.5	1
2-Butanone	ND		ug/kg	9.9	2.2	1
Vinyl acetate	ND		ug/kg	9.9	2.1	1
4-Methyl-2-pentanone	ND		ug/kg	9.9	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.12	1
2-Hexanone	ND		ug/kg	9.9	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.20	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	0.99	0.28	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.16	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.49	0.13	1
Bromobenzene	ND		ug/kg	2.0	0.14	1
n-Butylbenzene	ND		ug/kg	0.99	0.16	1
sec-Butylbenzene	ND		ug/kg	0.99	0.14	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.19	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	0.98	1
Hexachlorobutadiene	ND		ug/kg	3.9	0.17	1
Isopropylbenzene	ND		ug/kg	0.99	0.11	1
p-Isopropyltoluene	ND		ug/kg	0.99	0.11	1
Naphthalene	ND		ug/kg	3.9	0.64	1
Acrylonitrile	ND		ug/kg	3.9	1.1	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05 Date Collected: 08/12/24 11:00

Client ID: SB03_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	0.99	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33	1
1,4-Dioxane	ND		ug/kg	79	35.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.17	1
p-Ethyltoluene	ND		ug/kg	2.0	0.38	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19	1
Ethyl ether	ND		ug/kg	2.0	0.34	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	4.9	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	108		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06
Client ID: SB05_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 14:38
Analyst: MKS
Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.2	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.6	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.28	1
Tetrachloroethene	ND		ug/kg	0.52	0.20	1
Chlorobenzene	ND		ug/kg	0.52	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.2	0.72	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.52	0.17	1
Bromodichloromethane	ND		ug/kg	0.52	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.28	1
cis-1,3-Dichloropropene	ND		ug/kg	0.52	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.52	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.52	0.16	1
Bromoform	ND		ug/kg	4.2	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.52	0.17	1
Benzene	ND		ug/kg	0.52	0.17	1
Toluene	ND		ug/kg	1.0	0.57	1
Ethylbenzene	ND		ug/kg	1.0	0.15	1
Chloromethane	ND		ug/kg	4.2	0.97	1
Bromomethane	ND		ug/kg	2.1	0.60	1
Vinyl chloride	ND		ug/kg	1.0	0.35	1
Chloroethane	ND		ug/kg	2.1	0.47	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06 Date Collected: 08/12/24 11:15

Client ID: SB05_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.52	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	ND		ug/kg	2.1	0.58	1
o-Xylene	ND		ug/kg	1.0	0.30	1
Xylenes, Total	ND		ug/kg	1.0	0.30	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.1	0.25	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.95	1
Acetone	ND		ug/kg	10	5.0	1
Carbon disulfide	ND		ug/kg	10	4.7	1
2-Butanone	ND		ug/kg	10	2.3	1
Vinyl acetate	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.1	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.1	0.21	1
2,2-Dichloropropane	ND		ug/kg	2.1	0.21	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.29	1
1,3-Dichloropropane	ND		ug/kg	2.1	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.52	0.14	1
Bromobenzene	ND		ug/kg	2.1	0.15	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.1	0.12	1
o-Chlorotoluene	ND		ug/kg	2.1	0.20	1
p-Chlorotoluene	ND		ug/kg	2.1	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.2	0.18	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.2	0.68	1
Acrylonitrile	ND		ug/kg	4.2	1.2	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06 Date Collected: 08/12/24 11:15

Client ID: SB05_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	0.34	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.28	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.1	0.35	1
1,4-Dioxane	ND		ug/kg	83	37.	1
p-Diethylbenzene	ND		ug/kg	2.1	0.18	1
p-Ethyltoluene	ND		ug/kg	2.1	0.40	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.1	0.20	1
Ethyl ether	ND		ug/kg	2.1	0.36	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.2	1.5	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	106		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07
Client ID: SB06_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 15:05
Analyst: MKS
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.1	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.15	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.13	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27	1
Tetrachloroethene	ND		ug/kg	0.51	0.20	1
Chlorobenzene	ND		ug/kg	0.51	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.1	0.71	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.26	1
1,1,1-Trichloroethane	ND		ug/kg	0.51	0.17	1
Bromodichloromethane	ND		ug/kg	0.51	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.28	1
cis-1,3-Dichloropropene	ND		ug/kg	0.51	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.51	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.51	0.16	1
Bromoform	ND		ug/kg	4.1	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.51	0.17	1
Benzene	ND		ug/kg	0.51	0.17	1
Toluene	ND		ug/kg	1.0	0.56	1
Ethylbenzene	ND		ug/kg	1.0	0.14	1
Chloromethane	ND		ug/kg	4.1	0.96	1
Bromomethane	ND		ug/kg	2.0	0.60	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
Chloroethane	ND		ug/kg	2.0	0.46	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07 Date Collected: 08/12/24 11:30

Client ID: SB06_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.51	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.21	1
p/m-Xylene	ND		ug/kg	2.0	0.57	1
o-Xylene	ND		ug/kg	1.0	0.30	1
Xylenes, Total	ND		ug/kg	1.0	0.30	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.24	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.94	1
Acetone	ND		ug/kg	10	4.9	1
Carbon disulfide	ND		ug/kg	10	4.7	1
2-Butanone	ND		ug/kg	10	2.3	1
Vinyl acetate	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.21	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.21	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.29	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.51	0.14	1
Bromobenzene	ND		ug/kg	2.0	0.15	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.20	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.1	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.1	0.17	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.1	0.67	1
Acrylonitrile	ND		ug/kg	4.1	1.2	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07 Date Collected: 08/12/24 11:30

Client ID: SB06_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.33	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.28	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.20	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.34	1
1,4-Dioxane	ND		ug/kg	82	36.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.18	1
p-Ethyltoluene	ND		ug/kg	2.0	0.39	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.20	1
Ethyl ether	ND		ug/kg	2.0	0.35	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.1	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	106		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08
Client ID: SB08_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:45
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 15:32
Analyst: MKS
Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.0	2.3	1
1,1-Dichloroethane	ND		ug/kg	1.0	0.14	1
Chloroform	ND		ug/kg	1.5	0.14	1
Carbon tetrachloride	ND		ug/kg	1.0	0.23	1
1,2-Dichloropropane	ND		ug/kg	1.0	0.12	1
Dibromochloromethane	ND		ug/kg	1.0	0.14	1
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27	1
Tetrachloroethene	ND		ug/kg	0.50	0.20	1
Chlorobenzene	ND		ug/kg	0.50	0.13	1
Trichlorofluoromethane	ND		ug/kg	4.0	0.70	1
1,2-Dichloroethane	ND		ug/kg	1.0	0.26	1
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17	1
Bromodichloromethane	ND		ug/kg	0.50	0.11	1
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27	1
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16	1
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16	1
1,1-Dichloropropene	ND		ug/kg	0.50	0.16	1
Bromoform	ND		ug/kg	4.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17	1
Benzene	ND		ug/kg	0.50	0.17	1
Toluene	ND		ug/kg	1.0	0.55	1
Ethylbenzene	ND		ug/kg	1.0	0.14	1
Chloromethane	ND		ug/kg	4.0	0.94	1
Bromomethane	ND		ug/kg	2.0	0.58	1
Vinyl chloride	ND		ug/kg	1.0	0.34	1
Chloroethane	ND		ug/kg	2.0	0.45	1
1,1-Dichloroethene	ND		ug/kg	1.0	0.24	1
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08 Date Collected: 08/12/24 11:45

Client ID: SB08_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.50	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14	1
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15	1
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17	1
Methyl tert butyl ether	ND		ug/kg	2.0	0.20	1
p/m-Xylene	ND		ug/kg	2.0	0.56	1
o-Xylene	ND		ug/kg	1.0	0.29	1
Xylenes, Total	ND		ug/kg	1.0	0.29	1
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18	1
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14	1
Dibromomethane	ND		ug/kg	2.0	0.24	1
Styrene	ND		ug/kg	1.0	0.20	1
Dichlorodifluoromethane	ND		ug/kg	10	0.92	1
Acetone	ND		ug/kg	10	4.8	1
Carbon disulfide	ND		ug/kg	10	4.6	1
2-Butanone	ND		ug/kg	10	2.2	1
Vinyl acetate	ND		ug/kg	10	2.2	1
4-Methyl-2-pentanone	ND		ug/kg	10	1.3	1
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13	1
2-Hexanone	ND		ug/kg	10	1.2	1
Bromochloromethane	ND		ug/kg	2.0	0.21	1
2,2-Dichloropropane	ND		ug/kg	2.0	0.20	1
1,2-Dibromoethane	ND		ug/kg	1.0	0.28	1
1,3-Dichloropropane	ND		ug/kg	2.0	0.17	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13	1
Bromobenzene	ND		ug/kg	2.0	0.14	1
n-Butylbenzene	ND		ug/kg	1.0	0.17	1
sec-Butylbenzene	ND		ug/kg	1.0	0.15	1
tert-Butylbenzene	ND		ug/kg	2.0	0.12	1
o-Chlorotoluene	ND		ug/kg	2.0	0.19	1
p-Chlorotoluene	ND		ug/kg	2.0	0.11	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0	1
Hexachlorobutadiene	ND		ug/kg	4.0	0.17	1
Isopropylbenzene	ND		ug/kg	1.0	0.11	1
p-Isopropyltoluene	ND		ug/kg	1.0	0.11	1
Naphthalene	ND		ug/kg	4.0	0.65	1
Acrylonitrile	ND		ug/kg	4.0	1.2	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08 Date Collected: 08/12/24 11:45

Client ID: SB08_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.0	0.17	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.34	1
1,4-Dioxane	ND		ug/kg	80	35.	1
p-Diethylbenzene	ND		ug/kg	2.0	0.18	1
p-Ethyltoluene	ND		ug/kg	2.0	0.39	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19	1
Ethyl ether	ND		ug/kg	2.0	0.34	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	106		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09
Client ID: SB09_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 13:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 15:59
Analyst: MKS
Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	5.6	2.6	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.16	1
Chloroform	ND		ug/kg	1.7	0.16	1
Carbon tetrachloride	ND		ug/kg	1.1	0.26	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.14	1
Dibromochloromethane	ND		ug/kg	1.1	0.16	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.30	1
Tetrachloroethene	ND		ug/kg	0.56	0.22	1
Chlorobenzene	ND		ug/kg	0.56	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.5	0.78	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.29	1
1,1,1-Trichloroethane	ND		ug/kg	0.56	0.19	1
Bromodichloromethane	ND		ug/kg	0.56	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.31	1
cis-1,3-Dichloropropene	ND		ug/kg	0.56	0.18	1
1,3-Dichloropropene, Total	ND		ug/kg	0.56	0.18	1
1,1-Dichloropropene	ND		ug/kg	0.56	0.18	1
Bromoform	ND		ug/kg	4.5	0.28	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.56	0.19	1
Benzene	ND		ug/kg	0.56	0.19	1
Toluene	ND		ug/kg	1.1	0.61	1
Ethylbenzene	ND		ug/kg	1.1	0.16	1
Chloromethane	ND		ug/kg	4.5	1.0	1
Bromomethane	ND		ug/kg	2.2	0.65	1
Vinyl chloride	ND		ug/kg	1.1	0.38	1
Chloroethane	ND		ug/kg	2.2	0.51	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.27	1
trans-1,2-Dichloroethene	ND		ug/kg	1.7	0.15	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09 Date Collected: 08/12/24 13:00

Client ID: SB09_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.56	0.15	1
1,2-Dichlorobenzene	ND		ug/kg	2.2	0.16	1
1,3-Dichlorobenzene	ND		ug/kg	2.2	0.17	1
1,4-Dichlorobenzene	ND		ug/kg	2.2	0.19	1
Methyl tert butyl ether	ND		ug/kg	2.2	0.23	1
p/m-Xylene	ND		ug/kg	2.2	0.63	1
o-Xylene	ND		ug/kg	1.1	0.33	1
Xylenes, Total	ND		ug/kg	1.1	0.33	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.20	1
1,2-Dichloroethene, Total	ND		ug/kg	1.1	0.15	1
Dibromomethane	ND		ug/kg	2.2	0.27	1
Styrene	ND		ug/kg	1.1	0.22	1
Dichlorodifluoromethane	ND		ug/kg	11	1.0	1
Acetone	ND		ug/kg	11	5.4	1
Carbon disulfide	ND		ug/kg	11	5.1	1
2-Butanone	ND		ug/kg	11	2.5	1
Vinyl acetate	ND		ug/kg	11	2.4	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
1,2,3-Trichloropropane	ND		ug/kg	2.2	0.14	1
2-Hexanone	ND		ug/kg	11	1.3	1
Bromochloromethane	ND		ug/kg	2.2	0.23	1
2,2-Dichloropropane	ND		ug/kg	2.2	0.23	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.31	1
1,3-Dichloropropane	ND		ug/kg	2.2	0.19	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.56	0.15	1
Bromobenzene	ND		ug/kg	2.2	0.16	1
n-Butylbenzene	ND		ug/kg	1.1	0.19	1
sec-Butylbenzene	ND		ug/kg	1.1	0.16	1
tert-Butylbenzene	ND		ug/kg	2.2	0.13	1
o-Chlorotoluene	ND		ug/kg	2.2	0.21	1
p-Chlorotoluene	ND		ug/kg	2.2	0.12	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.4	1.1	1
Hexachlorobutadiene	ND		ug/kg	4.5	0.19	1
Isopropylbenzene	ND		ug/kg	1.1	0.12	1
p-Isopropyltoluene	ND		ug/kg	1.1	0.12	1
Naphthalene	ND		ug/kg	4.5	0.73	1
Acrylonitrile	ND		ug/kg	4.5	1.3	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09 Date Collected: 08/12/24 13:00

Client ID: SB09_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.1	0.19	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.2	0.36	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.2	0.31	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.2	0.22	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.2	0.38	1
1,4-Dioxane	ND		ug/kg	90	39.	1
p-Diethylbenzene	ND		ug/kg	2.2	0.20	1
p-Ethyltoluene	ND		ug/kg	2.2	0.43	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.2	0.21	1
Ethyl ether	ND		ug/kg	2.2	0.38	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.6	1.6	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	110		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10
Client ID: SB10_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 14:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260D
Analytical Date: 08/15/24 16:25
Analyst: MKS
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Methylene chloride	ND		ug/kg	6.3	2.9	1
1,1-Dichloroethane	ND		ug/kg	1.2	0.18	1
Chloroform	ND		ug/kg	1.9	0.18	1
Carbon tetrachloride	ND		ug/kg	1.2	0.29	1
1,2-Dichloropropane	ND		ug/kg	1.2	0.16	1
Dibromochloromethane	ND		ug/kg	1.2	0.18	1
1,1,2-Trichloroethane	ND		ug/kg	1.2	0.34	1
Tetrachloroethene	ND		ug/kg	0.63	0.25	1
Chlorobenzene	ND		ug/kg	0.63	0.16	1
Trichlorofluoromethane	ND		ug/kg	5.0	0.87	1
1,2-Dichloroethane	ND		ug/kg	1.2	0.32	1
1,1,1-Trichloroethane	ND		ug/kg	0.63	0.21	1
Bromodichloromethane	ND		ug/kg	0.63	0.14	1
trans-1,3-Dichloropropene	ND		ug/kg	1.2	0.34	1
cis-1,3-Dichloropropene	ND		ug/kg	0.63	0.20	1
1,3-Dichloropropene, Total	ND		ug/kg	0.63	0.20	1
1,1-Dichloropropene	ND		ug/kg	0.63	0.20	1
Bromoform	ND		ug/kg	5.0	0.31	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.63	0.21	1
Benzene	ND		ug/kg	0.63	0.21	1
Toluene	ND		ug/kg	1.2	0.68	1
Ethylbenzene	ND		ug/kg	1.2	0.18	1
Chloromethane	ND		ug/kg	5.0	1.2	1
Bromomethane	ND		ug/kg	2.5	0.73	1
Vinyl chloride	ND		ug/kg	1.2	0.42	1
Chloroethane	ND		ug/kg	2.5	0.57	1
1,1-Dichloroethene	ND		ug/kg	1.2	0.30	1
trans-1,2-Dichloroethene	ND		ug/kg	1.9	0.17	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10 Date Collected: 08/12/24 14:00

Client ID: SB10_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
Trichloroethene	ND		ug/kg	0.63	0.17	1
1,2-Dichlorobenzene	ND		ug/kg	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/kg	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/kg	2.5	0.22	1
Methyl tert butyl ether	ND		ug/kg	2.5	0.25	1
p/m-Xylene	ND		ug/kg	2.5	0.70	1
o-Xylene	ND		ug/kg	1.2	0.37	1
Xylenes, Total	ND		ug/kg	1.2	0.37	1
cis-1,2-Dichloroethene	ND		ug/kg	1.2	0.22	1
1,2-Dichloroethene, Total	ND		ug/kg	1.2	0.17	1
Dibromomethane	ND		ug/kg	2.5	0.30	1
Styrene	ND		ug/kg	1.2	0.25	1
Dichlorodifluoromethane	ND		ug/kg	12	1.2	1
Acetone	ND		ug/kg	12	6.0	1
Carbon disulfide	ND		ug/kg	12	5.7	1
2-Butanone	ND		ug/kg	12	2.8	1
Vinyl acetate	ND		ug/kg	12	2.7	1
4-Methyl-2-pentanone	ND		ug/kg	12	1.6	1
1,2,3-Trichloropropane	ND		ug/kg	2.5	0.16	1
2-Hexanone	ND		ug/kg	12	1.5	1
Bromochloromethane	ND		ug/kg	2.5	0.26	1
2,2-Dichloropropane	ND		ug/kg	2.5	0.25	1
1,2-Dibromoethane	ND		ug/kg	1.2	0.35	1
1,3-Dichloropropane	ND		ug/kg	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.63	0.17	1
Bromobenzene	ND		ug/kg	2.5	0.18	1
n-Butylbenzene	ND		ug/kg	1.2	0.21	1
sec-Butylbenzene	ND		ug/kg	1.2	0.18	1
tert-Butylbenzene	ND		ug/kg	2.5	0.15	1
o-Chlorotoluene	ND		ug/kg	2.5	0.24	1
p-Chlorotoluene	ND		ug/kg	2.5	0.14	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.8	1.2	1
Hexachlorobutadiene	ND		ug/kg	5.0	0.21	1
Isopropylbenzene	ND		ug/kg	1.2	0.14	1
p-Isopropyltoluene	ND		ug/kg	1.2	0.14	1
Naphthalene	ND		ug/kg	5.0	0.82	1
Acrylonitrile	ND		ug/kg	5.0	1.4	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10 Date Collected: 08/12/24 14:00

Client ID: SB10_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by EPA 5035 Low - Westborough Lab						
n-Propylbenzene	ND		ug/kg	1.2	0.22	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.5	0.40	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.5	0.34	1
1,3,5-Trimethylbenzene	ND		ug/kg	2.5	0.24	1
1,2,4-Trimethylbenzene	ND		ug/kg	2.5	0.42	1
1,4-Dioxane	ND		ug/kg	100	44.	1
p-Diethylbenzene	ND		ug/kg	2.5	0.22	1
p-Ethyltoluene	ND		ug/kg	2.5	0.48	1
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.5	0.24	1
Ethyl ether	ND		ug/kg	2.5	0.43	1
trans-1,4-Dichloro-2-butene	ND		ug/kg	6.3	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	115		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	110		70-130

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/15/24 09:47
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02-10 Batch: WG1959811-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	0.70	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/15/24 09:47
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02-10 Batch: WG1959811-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/15/24 09:47
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 02-10 Batch: WG1959811-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	100		70-130

Project Name: 615 BROADWAY
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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/16/24 09:38
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1960245-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
1,3-Dichloropropene, Total	ND		ug/kg	0.50	0.16
1,1-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	0.74	J	ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14

Project Name: 615 BROADWAY
Project Number: 170803001
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Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/16/24 09:38
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1960245-5					
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
Xylenes, Total	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
1,2-Dichloroethene, Total	ND		ug/kg	1.0	0.14
Dibromomethane	ND		ug/kg	2.0	0.24
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
Vinyl acetate	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
1,2,3-Trichloropropane	ND		ug/kg	2.0	0.13
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
2,2-Dichloropropane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
1,3-Dichloropropane	ND		ug/kg	2.0	0.17
1,1,1,2-Tetrachloroethane	ND		ug/kg	0.50	0.13
Bromobenzene	ND		ug/kg	2.0	0.14
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
tert-Butylbenzene	ND		ug/kg	2.0	0.12
o-Chlorotoluene	ND		ug/kg	2.0	0.19

Project Name: 615 BROADWAY
Project Number: 170803001
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Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 08/16/24 09:38
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 Low - Westborough Lab for sample(s): 01 Batch: WG1960245-5					
p-Chlorotoluene	ND		ug/kg	2.0	0.11
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Hexachlorobutadiene	ND		ug/kg	4.0	0.17
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
Naphthalene	ND		ug/kg	4.0	0.65
Acrylonitrile	ND		ug/kg	4.0	1.2
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
1,4-Dioxane	ND		ug/kg	80	35.
p-Diethylbenzene	ND		ug/kg	2.0	0.18
p-Ethyltoluene	ND		ug/kg	2.0	0.38
1,2,4,5-Tetramethylbenzene	ND		ug/kg	2.0	0.19
Ethyl ether	ND		ug/kg	2.0	0.34
trans-1,4-Dichloro-2-butene	ND		ug/kg	5.0	1.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02-10 Batch: WG1959811-3 WG1959811-4								
Methylene chloride	103		98		70-130	5		30
1,1-Dichloroethane	108		106		70-130	2		30
Chloroform	99		99		70-130	0		30
Carbon tetrachloride	112		108		70-130	4		30
1,2-Dichloropropane	99		96		70-130	3		30
Dibromochloromethane	105		100		70-130	5		30
1,1,2-Trichloroethane	95		90		70-130	5		30
Tetrachloroethene	97		88		70-130	10		30
Chlorobenzene	100		96		70-130	4		30
Trichlorofluoromethane	124		108		70-139	14		30
1,2-Dichloroethane	106		103		70-130	3		30
1,1,1-Trichloroethane	114		110		70-130	4		30
Bromodichloromethane	102		98		70-130	4		30
trans-1,3-Dichloropropene	91		87		70-130	4		30
cis-1,3-Dichloropropene	93		90		70-130	3		30
1,1-Dichloropropene	118		115		70-130	3		30
Bromoform	86		80		70-130	7		30
1,1,2,2-Tetrachloroethane	96		93		70-130	3		30
Benzene	105		101		70-130	4		30
Toluene	89		84		70-130	6		30
Ethylbenzene	95		89		70-130	7		30
Chloromethane	**142**	Q	130		52-130	9		30
Bromomethane	116		110		57-147	5		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02-10 Batch: WG1959811-3 WG1959811-4								
Vinyl chloride	**132**	Q	119		67-130	10		30
Chloroethane	126		114		50-151	10		30
1,1-Dichloroethene	111		99		65-135	11		30
trans-1,2-Dichloroethene	115		105		70-130	9		30
Trichloroethene	88		85		70-130	3		30
1,2-Dichlorobenzene	96		90		70-130	6		30
1,3-Dichlorobenzene	98		94		70-130	4		30
1,4-Dichlorobenzene	97		92		70-130	5		30
Methyl tert butyl ether	97		95		66-130	2		30
p/m-Xylene	95		90		70-130	5		30
o-Xylene	87		82		70-130	6		30
cis-1,2-Dichloroethene	103		99		70-130	4		30
Dibromomethane	103		104		70-130	1		30
Styrene	85		81		70-130	5		30
Dichlorodifluoromethane	**158**	Q	**149**	Q	30-146	6		30
Acetone	102		101		54-140	1		30
Carbon disulfide	109		96		59-130	13		30
2-Butanone	83		81		70-130	2		30
Vinyl acetate	106		93		70-130	13		30
4-Methyl-2-pentanone	84		77		70-130	9		30
1,2,3-Trichloropropane	91		84		68-130	8		30
2-Hexanone	79		84		70-130	6		30
Bromochloromethane	107		104		70-130	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02-10 Batch: WG1959811-3 WG1959811-4								
2,2-Dichloropropane	104		100		70-130	4		30
1,2-Dibromoethane	94		91		70-130	3		30
1,3-Dichloropropane	100		95		69-130	5		30
1,1,1,2-Tetrachloroethane	82		78		70-130	5		30
Bromobenzene	96		92		70-130	4		30
n-Butylbenzene	90		83		70-130	8		30
sec-Butylbenzene	82		78		70-130	5		30
tert-Butylbenzene	91		86		70-130	6		30
o-Chlorotoluene	91		88		70-130	3		30
p-Chlorotoluene	92		89		70-130	3		30
1,2-Dibromo-3-chloropropane	85		84		68-130	1		30
Hexachlorobutadiene	96		92		67-130	4		30
Isopropylbenzene	93		87		70-130	7		30
p-Isopropyltoluene	85		80		70-130	6		30
Naphthalene	97		94		70-130	3		30
Acrylonitrile	106		106		70-130	0		30
n-Propylbenzene	92		89		70-130	3		30
1,2,3-Trichlorobenzene	103		97		70-130	6		30
1,2,4-Trichlorobenzene	105		98		70-130	7		30
1,3,5-Trimethylbenzene	93		89		70-130	4		30
1,2,4-Trimethylbenzene	92		87		70-130	6		30
1,4-Dioxane	72		76		65-136	5		30
p-Diethylbenzene	94		90		70-130	4		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 02-10 Batch: WG1959811-3 WG1959811-4								
p-Ethyltoluene	95		89		70-130	7		30
1,2,4,5-Tetramethylbenzene	92		87		70-130	6		30
Ethyl ether	108		96		67-130	12		30
trans-1,4-Dichloro-2-butene	101		95		70-130	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		102		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	100		94		70-130
Dibromofluoromethane	97		95		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1960245-3 WG1960245-4								
Methylene chloride	101		95		70-130	6		30
1,1-Dichloroethane	114		112		70-130	2		30
Chloroform	103		96		70-130	7		30
Carbon tetrachloride	115		114		70-130	1		30
1,2-Dichloropropane	102		98		70-130	4		30
Dibromochloromethane	100		96		70-130	4		30
1,1,2-Trichloroethane	92		89		70-130	3		30
Tetrachloroethene	97		92		70-130	5		30
Chlorobenzene	100		98		70-130	2		30
Trichlorofluoromethane	134		132		70-139	2		30
1,2-Dichloroethane	108		104		70-130	4		30
1,1,1-Trichloroethane	118		115		70-130	3		30
Bromodichloromethane	101		93		70-130	8		30
trans-1,3-Dichloropropene	90		88		70-130	2		30
cis-1,3-Dichloropropene	93		90		70-130	3		30
1,1-Dichloropropene	124		119		70-130	4		30
Bromoform	80		80		70-130	0		30
1,1,2,2-Tetrachloroethane	89		90		70-130	1		30
Benzene	107		104		70-130	3		30
Toluene	89		88		70-130	1		30
Ethylbenzene	94		91		70-130	3		30
Chloromethane	**146**	Q	**133**	Q	52-130	9		30
Bromomethane	130		123		57-147	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1960245-3 WG1960245-4								
Vinyl chloride	**146**	Q	**134**	Q	67-130	9		30
Chloroethane	135		126		50-151	7		30
1,1-Dichloroethene	121		120		65-135	1		30
trans-1,2-Dichloroethene	119		109		70-130	9		30
Trichloroethene	93		90		70-130	3		30
1,2-Dichlorobenzene	92		89		70-130	3		30
1,3-Dichlorobenzene	93		92		70-130	1		30
1,4-Dichlorobenzene	91		91		70-130	0		30
Methyl tert butyl ether	99		97		66-130	2		30
p/m-Xylene	93		92		70-130	1		30
o-Xylene	85		84		70-130	1		30
cis-1,2-Dichloroethene	102		103		70-130	1		30
Dibromomethane	103		100		70-130	3		30
Styrene	83		83		70-130	0		30
Dichlorodifluoromethane	**168**	Q	**154**	Q	30-146	9		30
Acetone	107		93		54-140	14		30
Carbon disulfide	114		112		59-130	2		30
2-Butanone	88		83		70-130	6		30
Vinyl acetate	101		94		70-130	7		30
4-Methyl-2-pentanone	80		81		70-130	1		30
1,2,3-Trichloropropane	85		87		68-130	2		30
2-Hexanone	85		78		70-130	9		30
Bromochloromethane	106		100		70-130	6		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1960245-3 WG1960245-4								
2,2-Dichloropropane	113		106		70-130	6		30
1,2-Dibromoethane	90		90		70-130	0		30
1,3-Dichloropropane	96		94		69-130	2		30
1,1,1,2-Tetrachloroethane	80		80		70-130	0		30
Bromobenzene	92		94		70-130	2		30
n-Butylbenzene	89		88		70-130	1		30
sec-Butylbenzene	81		81		70-130	0		30
tert-Butylbenzene	89		90		70-130	1		30
o-Chlorotoluene	89		92		70-130	3		30
p-Chlorotoluene	92		92		70-130	0		30
1,2-Dibromo-3-chloropropane	78		81		68-130	4		30
Hexachlorobutadiene	96		95		67-130	1		30
Isopropylbenzene	93		91		70-130	2		30
p-Isopropyltoluene	82		81		70-130	1		30
Naphthalene	91		91		70-130	0		30
Acrylonitrile	99		107		70-130	8		30
n-Propylbenzene	91		91		70-130	0		30
1,2,3-Trichlorobenzene	100		95		70-130	5		30
1,2,4-Trichlorobenzene	101		101		70-130	0		30
1,3,5-Trimethylbenzene	90		90		70-130	0		30
1,2,4-Trimethylbenzene	89		89		70-130	0		30
1,4-Dioxane	83		92		65-136	10		30
p-Diethylbenzene	93		90		70-130	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 Low - Westborough Lab Associated sample(s): 01 Batch: WG1960245-3 WG1960245-4								
p-Ethyltoluene	92		94		70-130	2		30
1,2,4,5-Tetramethylbenzene	90		88		70-130	2		30
Ethyl ether	105		106		67-130	1		30
trans-1,4-Dichloro-2-butene	92		97		70-130	5		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		108		70-130
Toluene-d8	99		102		70-130
4-Bromofluorobenzene	97		96		70-130
Dibromofluoromethane	99		101		70-130

SEMIVOLATILES

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01
Client ID: SB07_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 09:17
Analyst: SZ
Percent Solids: 92%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	28	J	ug/kg	140	19.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	20.	1
Hexachlorobenzene	ND		ug/kg	110	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
1,2-Dichlorobenzene	ND		ug/kg	180	32.	1
1,3-Dichlorobenzene	ND		ug/kg	180	31.	1
1,4-Dichlorobenzene	ND		ug/kg	180	31.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	48.	1
2,4-Dinitrotoluene	ND		ug/kg	180	36.	1
2,6-Dinitrotoluene	ND		ug/kg	180	31.	1
Fluoranthene	2600		ug/kg	110	21.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	27.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	31.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	510	160	1
Hexachloroethane	ND		ug/kg	140	29.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	43	J	ug/kg	180	22.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	28.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	62.	1
Butyl benzyl phthalate	ND		ug/kg	180	45.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	61.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01 Date Collected: 08/12/24 11:00

Client ID: SB07_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	17.	1
Dimethyl phthalate	ND		ug/kg	180	38.	1
Benzo(a)anthracene	1100		ug/kg	110	20.	1
Benzo(a)pyrene	1100		ug/kg	140	44.	1
Benzo(b)fluoranthene	1500		ug/kg	110	30.	1
Benzo(k)fluoranthene	510		ug/kg	110	29.	1
Chrysene	1200		ug/kg	110	19.	1
Acenaphthylene	220		ug/kg	140	28.	1
Anthracene	250		ug/kg	110	35.	1
Benzo(ghi)perylene	790		ug/kg	140	21.	1
Fluorene	52	J	ug/kg	180	17.	1
Phenanthrene	1100		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	180		ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	770		ug/kg	140	25.	1
Pyrene	2200		ug/kg	110	18.	1
Biphenyl	ND		ug/kg	410	23.	1
4-Chloroaniline	ND		ug/kg	180	33.	1
2-Nitroaniline	ND		ug/kg	180	35.	1
3-Nitroaniline	ND		ug/kg	180	34.	1
4-Nitroaniline	ND		ug/kg	180	74.	1
Dibenzofuran	31	J	ug/kg	180	17.	1
2-Methylnaphthalene	26	J	ug/kg	220	22.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	19.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
p-Chloro-m-cresol	ND		ug/kg	180	27.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	29.	1
2,4-Dimethylphenol	ND		ug/kg	180	59.	1
2-Nitrophenol	ND		ug/kg	390	68.	1
4-Nitrophenol	ND		ug/kg	250	73.	1
2,4-Dinitrophenol	ND		ug/kg	860	84.	1
4,6-Dinitro-o-cresol	ND		ug/kg	470	86.	1
Pentachlorophenol	ND		ug/kg	140	40.	1
Phenol	ND		ug/kg	180	27.	1
2-Methylphenol	ND		ug/kg	180	28.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	28.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01 Date Collected: 08/12/24 11:00

Client ID: SB07_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	34.	1
Benzoic Acid	ND		ug/kg	580	180	1
Benzyl Alcohol	ND		ug/kg	180	55.	1
Carbazole	170	J	ug/kg	180	17.	1
1,4-Dioxane	ND		ug/kg	27	8.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	86		25-120
Phenol-d6	89		10-120
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	81		30-120
2,4,6-Tribromophenol	96		10-136
4-Terphenyl-d14	83		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02 D
Client ID: SB04_0.5-1.5
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 09:40
Analyst: SZ
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	670	87.	5
1,2,4-Trichlorobenzene	ND		ug/kg	840	96.	5
Hexachlorobenzene	ND		ug/kg	500	94.	5
Bis(2-chloroethyl)ether	ND		ug/kg	760	110	5
2-Chloronaphthalene	ND		ug/kg	840	83.	5
1,2-Dichlorobenzene	ND		ug/kg	840	150	5
1,3-Dichlorobenzene	ND		ug/kg	840	140	5
1,4-Dichlorobenzene	ND		ug/kg	840	150	5
3,3'-Dichlorobenzidine	ND		ug/kg	840	220	5
2,4-Dinitrotoluene	ND		ug/kg	840	170	5
2,6-Dinitrotoluene	ND		ug/kg	840	140	5
Fluoranthene	230	J	ug/kg	500	97.	5
4-Chlorophenyl phenyl ether	ND		ug/kg	840	90.	5
4-Bromophenyl phenyl ether	ND		ug/kg	840	130	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1000	140	5
Bis(2-chloroethoxy)methane	ND		ug/kg	910	84.	5
Hexachlorobutadiene	ND		ug/kg	840	120	5
Hexachlorocyclopentadiene	ND		ug/kg	2400	760	5
Hexachloroethane	ND		ug/kg	670	140	5
Isophorone	ND		ug/kg	760	110	5
Naphthalene	ND		ug/kg	840	100	5
Nitrobenzene	ND		ug/kg	760	120	5
NDPA/DPA	ND		ug/kg	670	96.	5
n-Nitrosodi-n-propylamine	ND		ug/kg	840	130	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	840	290	5
Butyl benzyl phthalate	ND		ug/kg	840	210	5
Di-n-butylphthalate	ND		ug/kg	840	160	5
Di-n-octylphthalate	ND		ug/kg	840	290	5

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02 D Date Collected: 08/12/24 12:00

Client ID: SB04_0.5-1.5 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	840	78.	5
Dimethyl phthalate	ND		ug/kg	840	180	5
Benzo(a)anthracene	130	J	ug/kg	500	95.	5
Benzo(a)pyrene	ND		ug/kg	670	200	5
Benzo(b)fluoranthene	170	J	ug/kg	500	140	5
Benzo(k)fluoranthene	ND		ug/kg	500	130	5
Chrysene	140	J	ug/kg	500	88.	5
Acenaphthylene	ND		ug/kg	670	130	5
Anthracene	ND		ug/kg	500	160	5
Benzo(ghi)perylene	130	J	ug/kg	670	99.	5
Fluorene	ND		ug/kg	840	82.	5
Phenanthrene	120	J	ug/kg	500	100	5
Dibenzo(a,h)anthracene	ND		ug/kg	500	97.	5
Indeno(1,2,3-cd)pyrene	ND		ug/kg	670	120	5
Pyrene	230	J	ug/kg	500	84.	5
Biphenyl	ND		ug/kg	1900	110	5
4-Chloroaniline	ND		ug/kg	840	150	5
2-Nitroaniline	ND		ug/kg	840	160	5
3-Nitroaniline	ND		ug/kg	840	160	5
4-Nitroaniline	ND		ug/kg	840	350	5
Dibenzofuran	ND		ug/kg	840	80.	5
2-Methylnaphthalene	ND		ug/kg	1000	100	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	840	88.	5
Acetophenone	ND		ug/kg	840	100	5
2,4,6-Trichlorophenol	ND		ug/kg	500	160	5
p-Chloro-m-cresol	ND		ug/kg	840	120	5
2-Chlorophenol	ND		ug/kg	840	99.	5
2,4-Dichlorophenol	ND		ug/kg	760	140	5
2,4-Dimethylphenol	ND		ug/kg	840	280	5
2-Nitrophenol	ND		ug/kg	1800	320	5
4-Nitrophenol	ND		ug/kg	1200	340	5
2,4-Dinitrophenol	ND		ug/kg	4000	390	5
4,6-Dinitro-o-cresol	ND		ug/kg	2200	400	5
Pentachlorophenol	ND		ug/kg	670	180	5
Phenol	ND		ug/kg	840	130	5
2-Methylphenol	ND		ug/kg	840	130	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1200	130	5

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02 D Date Collected: 08/12/24 12:00

Client ID: SB04_0.5-1.5 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	840	160	5
Benzoic Acid	ND		ug/kg	2700	850	5
Benzyl Alcohol	ND		ug/kg	840	260	5
Carbazole	ND		ug/kg	840	82.	5
1,4-Dioxane	ND		ug/kg	130	39.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		25-120
Phenol-d6	49		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	66		30-120
2,4,6-Tribromophenol	63		10-136
4-Terphenyl-d14	68		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03
Client ID: SB01_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 10:02
Analyst: SZ
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	19.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	150	23.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
1,2-Dichlorobenzene	ND		ug/kg	170	30.	1
1,3-Dichlorobenzene	ND		ug/kg	170	29.	1
1,4-Dichlorobenzene	ND		ug/kg	170	30.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	45.	1
2,4-Dinitrotoluene	ND		ug/kg	170	34.	1
2,6-Dinitrotoluene	ND		ug/kg	170	29.	1
Fluoranthene	59	J	ug/kg	100	19.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	200	29.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	180	17.	1
Hexachlorobutadiene	ND		ug/kg	170	25.	1
Hexachlorocyclopentadiene	ND		ug/kg	480	150	1
Hexachloroethane	ND		ug/kg	140	27.	1
Isophorone	ND		ug/kg	150	22.	1
Naphthalene	ND		ug/kg	170	21.	1
Nitrobenzene	ND		ug/kg	150	25.	1
NDPA/DPA	ND		ug/kg	140	19.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	26.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	59.	1
Butyl benzyl phthalate	ND		ug/kg	170	43.	1
Di-n-butylphthalate	ND		ug/kg	170	32.	1
Di-n-octylphthalate	ND		ug/kg	170	58.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03 Date Collected: 08/12/24 12:15

Client ID: SB01_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	36.	1
Benzo(a)anthracene	37	J	ug/kg	100	19.	1
Benzo(a)pyrene	ND		ug/kg	140	41.	1
Benzo(b)fluoranthene	53	J	ug/kg	100	28.	1
Benzo(k)fluoranthene	ND		ug/kg	100	27.	1
Chrysene	38	J	ug/kg	100	18.	1
Acenaphthylene	ND		ug/kg	140	26.	1
Anthracene	ND		ug/kg	100	33.	1
Benzo(ghi)perylene	43	J	ug/kg	140	20.	1
Fluorene	ND		ug/kg	170	16.	1
Phenanthrene	22	J	ug/kg	100	20.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	32	J	ug/kg	140	24.	1
Pyrene	58	J	ug/kg	100	17.	1
Biphenyl	ND		ug/kg	390	22.	1
4-Chloroaniline	ND		ug/kg	170	31.	1
2-Nitroaniline	ND		ug/kg	170	33.	1
3-Nitroaniline	ND		ug/kg	170	32.	1
4-Nitroaniline	ND		ug/kg	170	70.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	200	20.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	32.	1
p-Chloro-m-cresol	ND		ug/kg	170	25.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	150	27.	1
2,4-Dimethylphenol	ND		ug/kg	170	56.	1
2-Nitrophenol	ND		ug/kg	360	64.	1
4-Nitrophenol	ND		ug/kg	240	69.	1
2,4-Dinitrophenol	ND		ug/kg	810	79.	1
4,6-Dinitro-o-cresol	ND		ug/kg	440	81.	1
Pentachlorophenol	ND		ug/kg	140	37.	1
Phenol	ND		ug/kg	170	26.	1
2-Methylphenol	ND		ug/kg	170	26.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	240	26.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03 Date Collected: 08/12/24 12:15

Client ID: SB01_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	170	32.	1
Benzoic Acid	ND		ug/kg	550	170	1
Benzyl Alcohol	ND		ug/kg	170	52.	1
Carbazole	ND		ug/kg	170	16.	1
1,4-Dioxane	ND		ug/kg	25	7.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	96		25-120
Phenol-d6	100		10-120
Nitrobenzene-d5	95		23-120
2-Fluorobiphenyl	92		30-120
2,4,6-Tribromophenol	102		10-136
4-Terphenyl-d14	97		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04
Client ID: SB02_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 10:25
Analyst: SZ
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	20.	1
Hexachlorobenzene	ND		ug/kg	100	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
1,2-Dichlorobenzene	ND		ug/kg	170	31.	1
1,3-Dichlorobenzene	ND		ug/kg	170	30.	1
1,4-Dichlorobenzene	ND		ug/kg	170	30.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	46.	1
2,4-Dinitrotoluene	ND		ug/kg	170	35.	1
2,6-Dinitrotoluene	ND		ug/kg	170	30.	1
Fluoranthene	290		ug/kg	100	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	30.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	17.	1
Hexachlorobutadiene	ND		ug/kg	170	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	500	160	1
Hexachloroethane	ND		ug/kg	140	28.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	170	21.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	27.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	60.	1
Butyl benzyl phthalate	ND		ug/kg	170	44.	1
Di-n-butylphthalate	ND		ug/kg	170	33.	1
Di-n-octylphthalate	ND		ug/kg	170	59.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04 Date Collected: 08/12/24 12:30

Client ID: SB02_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	37.	1
Benzo(a)anthracene	130		ug/kg	100	20.	1
Benzo(a)pyrene	120	J	ug/kg	140	42.	1
Benzo(b)fluoranthene	150		ug/kg	100	29.	1
Benzo(k)fluoranthene	37	J	ug/kg	100	28.	1
Chrysene	130		ug/kg	100	18.	1
Acenaphthylene	ND		ug/kg	140	27.	1
Anthracene	53	J	ug/kg	100	34.	1
Benzo(ghi)perylene	81	J	ug/kg	140	20.	1
Fluorene	17	J	ug/kg	170	17.	1
Phenanthrene	240		ug/kg	100	21.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	72	J	ug/kg	140	24.	1
Pyrene	260		ug/kg	100	17.	1
Biphenyl	ND		ug/kg	400	23.	1
4-Chloroaniline	ND		ug/kg	170	32.	1
2-Nitroaniline	ND		ug/kg	170	34.	1
3-Nitroaniline	ND		ug/kg	170	33.	1
4-Nitroaniline	ND		ug/kg	170	72.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	33.	1
p-Chloro-m-cresol	ND		ug/kg	170	26.	1
2-Chlorophenol	ND		ug/kg	170	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	28.	1
2,4-Dimethylphenol	ND		ug/kg	170	58.	1
2-Nitrophenol	ND		ug/kg	380	66.	1
4-Nitrophenol	ND		ug/kg	240	71.	1
2,4-Dinitrophenol	ND		ug/kg	840	81.	1
4,6-Dinitro-o-cresol	ND		ug/kg	450	84.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	170	26.	1
2-Methylphenol	ND		ug/kg	170	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	27.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04 Date Collected: 08/12/24 12:30

Client ID: SB02_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	170	33.	1
Benzoic Acid	ND		ug/kg	560	180	1
Benzyl Alcohol	ND		ug/kg	170	53.	1
Carbazole	25	J	ug/kg	170	17.	1
1,4-Dioxane	ND		ug/kg	26	8.0	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		25-120
Phenol-d6	83		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	78		30-120
2,4,6-Tribromophenol	87		10-136
4-Terphenyl-d14	79		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05 D
Client ID: SB03_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 10:48
Analyst: SZ
Percent Solids: 95%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	690	89.	5
1,2,4-Trichlorobenzene	ND		ug/kg	860	99.	5
Hexachlorobenzene	ND		ug/kg	520	97.	5
Bis(2-chloroethyl)ether	ND		ug/kg	780	120	5
2-Chloronaphthalene	ND		ug/kg	860	86.	5
1,2-Dichlorobenzene	ND		ug/kg	860	150	5
1,3-Dichlorobenzene	ND		ug/kg	860	150	5
1,4-Dichlorobenzene	ND		ug/kg	860	150	5
3,3'-Dichlorobenzidine	ND		ug/kg	860	230	5
2,4-Dinitrotoluene	ND		ug/kg	860	170	5
2,6-Dinitrotoluene	ND		ug/kg	860	150	5
Fluoranthene	ND		ug/kg	520	99.	5
4-Chlorophenyl phenyl ether	ND		ug/kg	860	92.	5
4-Bromophenyl phenyl ether	ND		ug/kg	860	130	5
Bis(2-chloroisopropyl)ether	ND		ug/kg	1000	150	5
Bis(2-chloroethoxy)methane	ND		ug/kg	930	86.	5
Hexachlorobutadiene	ND		ug/kg	860	130	5
Hexachlorocyclopentadiene	ND		ug/kg	2500	780	5
Hexachloroethane	ND		ug/kg	690	140	5
Isophorone	ND		ug/kg	780	110	5
Naphthalene	ND		ug/kg	860	100	5
Nitrobenzene	ND		ug/kg	780	130	5
NDPA/DPA	ND		ug/kg	690	98.	5
n-Nitrosodi-n-propylamine	ND		ug/kg	860	130	5
Bis(2-ethylhexyl)phthalate	ND		ug/kg	860	300	5
Butyl benzyl phthalate	ND		ug/kg	860	220	5
Di-n-butylphthalate	ND		ug/kg	860	160	5
Di-n-octylphthalate	ND		ug/kg	860	290	5

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05 D Date Collected: 08/12/24 11:00

Client ID: SB03_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	860	80.	5
Dimethyl phthalate	ND		ug/kg	860	180	5
Benzo(a)anthracene	ND		ug/kg	520	97.	5
Benzo(a)pyrene	ND		ug/kg	690	210	5
Benzo(b)fluoranthene	ND		ug/kg	520	140	5
Benzo(k)fluoranthene	ND		ug/kg	520	140	5
Chrysene	ND		ug/kg	520	90.	5
Acenaphthylene	ND		ug/kg	690	130	5
Anthracene	ND		ug/kg	520	170	5
Benzo(ghi)perylene	ND		ug/kg	690	100	5
Fluorene	ND		ug/kg	860	84.	5
Phenanthrene	ND		ug/kg	520	100	5
Dibenzo(a,h)anthracene	ND		ug/kg	520	100	5
Indeno(1,2,3-cd)pyrene	ND		ug/kg	690	120	5
Pyrene	ND		ug/kg	520	86.	5
Biphenyl	ND		ug/kg	2000	110	5
4-Chloroaniline	ND		ug/kg	860	160	5
2-Nitroaniline	ND		ug/kg	860	170	5
3-Nitroaniline	ND		ug/kg	860	160	5
4-Nitroaniline	ND		ug/kg	860	360	5
Dibenzofuran	ND		ug/kg	860	82.	5
2-Methylnaphthalene	ND		ug/kg	1000	100	5
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	860	90.	5
Acetophenone	ND		ug/kg	860	110	5
2,4,6-Trichlorophenol	ND		ug/kg	520	160	5
p-Chloro-m-cresol	ND		ug/kg	860	130	5
2-Chlorophenol	ND		ug/kg	860	100	5
2,4-Dichlorophenol	ND		ug/kg	780	140	5
2,4-Dimethylphenol	ND		ug/kg	860	280	5
2-Nitrophenol	ND		ug/kg	1900	320	5
4-Nitrophenol	ND		ug/kg	1200	350	5
2,4-Dinitrophenol	ND		ug/kg	4100	400	5
4,6-Dinitro-o-cresol	ND		ug/kg	2200	410	5
Pentachlorophenol	ND		ug/kg	690	190	5
Phenol	ND		ug/kg	860	130	5
2-Methylphenol	ND		ug/kg	860	130	5
3-Methylphenol/4-Methylphenol	ND		ug/kg	1200	140	5

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05 D Date Collected: 08/12/24 11:00

Client ID: SB03_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	860	160	5
Benzoic Acid	ND		ug/kg	2800	870	5
Benzyl Alcohol	ND		ug/kg	860	260	5
Carbazole	ND		ug/kg	860	84.	5
1,4-Dioxane	ND		ug/kg	130	40.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	77		25-120
Phenol-d6	80		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	74		30-120
2,4,6-Tribromophenol	81		10-136
4-Terphenyl-d14	77		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06
Client ID: SB05_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 11:10
Analyst: SZ
Percent Solids: 96%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	170	20.	1
Hexachlorobenzene	ND		ug/kg	100	19.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	23.	1
2-Chloronaphthalene	ND		ug/kg	170	17.	1
1,2-Dichlorobenzene	ND		ug/kg	170	31.	1
1,3-Dichlorobenzene	ND		ug/kg	170	30.	1
1,4-Dichlorobenzene	ND		ug/kg	170	30.	1
3,3'-Dichlorobenzidine	ND		ug/kg	170	46.	1
2,4-Dinitrotoluene	ND		ug/kg	170	34.	1
2,6-Dinitrotoluene	ND		ug/kg	170	30.	1
Fluoranthene	91	J	ug/kg	100	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	170	18.	1
4-Bromophenyl phenyl ether	ND		ug/kg	170	26.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	30.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	17.	1
Hexachlorobutadiene	ND		ug/kg	170	25.	1
Hexachlorocyclopentadiene	ND		ug/kg	490	160	1
Hexachloroethane	ND		ug/kg	140	28.	1
Isophorone	ND		ug/kg	160	22.	1
Naphthalene	ND		ug/kg	170	21.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	170	27.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	170	60.	1
Butyl benzyl phthalate	ND		ug/kg	170	44.	1
Di-n-butylphthalate	ND		ug/kg	170	33.	1
Di-n-octylphthalate	ND		ug/kg	170	59.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06 Date Collected: 08/12/24 11:15

Client ID: SB05_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	170	16.	1
Dimethyl phthalate	ND		ug/kg	170	36.	1
Benzo(a)anthracene	50	J	ug/kg	100	19.	1
Benzo(a)pyrene	48	J	ug/kg	140	42.	1
Benzo(b)fluoranthene	66	J	ug/kg	100	29.	1
Benzo(k)fluoranthene	ND		ug/kg	100	28.	1
Chrysene	45	J	ug/kg	100	18.	1
Acenaphthylene	ND		ug/kg	140	27.	1
Anthracene	ND		ug/kg	100	34.	1
Benzo(ghi)perylene	36	J	ug/kg	140	20.	1
Fluorene	ND		ug/kg	170	17.	1
Phenanthrene	39	J	ug/kg	100	21.	1
Dibenzo(a,h)anthracene	ND		ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	35	J	ug/kg	140	24.	1
Pyrene	84	J	ug/kg	100	17.	1
Biphenyl	ND		ug/kg	390	22.	1
4-Chloroaniline	ND		ug/kg	170	31.	1
2-Nitroaniline	ND		ug/kg	170	33.	1
3-Nitroaniline	ND		ug/kg	170	32.	1
4-Nitroaniline	ND		ug/kg	170	72.	1
Dibenzofuran	ND		ug/kg	170	16.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	170	18.	1
Acetophenone	ND		ug/kg	170	21.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	33.	1
p-Chloro-m-cresol	ND		ug/kg	170	26.	1
2-Chlorophenol	ND		ug/kg	170	20.	1
2,4-Dichlorophenol	ND		ug/kg	160	28.	1
2,4-Dimethylphenol	ND		ug/kg	170	57.	1
2-Nitrophenol	ND		ug/kg	370	65.	1
4-Nitrophenol	ND		ug/kg	240	70.	1
2,4-Dinitrophenol	ND		ug/kg	830	80.	1
4,6-Dinitro-o-cresol	ND		ug/kg	450	83.	1
Pentachlorophenol	ND		ug/kg	140	38.	1
Phenol	ND		ug/kg	170	26.	1
2-Methylphenol	ND		ug/kg	170	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	27.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06 Date Collected: 08/12/24 11:15

Client ID: SB05_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	170	33.	1
Benzoic Acid	ND		ug/kg	560	170	1
Benzyl Alcohol	ND		ug/kg	170	53.	1
Carbazole	ND		ug/kg	170	17.	1
1,4-Dioxane	ND		ug/kg	26	7.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	86		25-120
Phenol-d6	87		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	86		30-120
2,4,6-Tribromophenol	100		10-136
4-Terphenyl-d14	90		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07
Client ID: SB06_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 11:33
Analyst: SZ
Percent Solids: 93%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	19	J	ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	20.	1
Hexachlorobenzene	ND		ug/kg	110	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
1,2-Dichlorobenzene	ND		ug/kg	180	32.	1
1,3-Dichlorobenzene	ND		ug/kg	180	30.	1
1,4-Dichlorobenzene	ND		ug/kg	180	31.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	47.	1
2,4-Dinitrotoluene	ND		ug/kg	180	35.	1
2,6-Dinitrotoluene	ND		ug/kg	180	30.	1
Fluoranthene	660		ug/kg	110	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	27.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	30.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	510	160	1
Hexachloroethane	ND		ug/kg	140	29.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	180	22.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	27.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	61.	1
Butyl benzyl phthalate	ND		ug/kg	180	45.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	60.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07 Date Collected: 08/12/24 11:30

Client ID: SB06_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	16.	1
Dimethyl phthalate	ND		ug/kg	180	37.	1
Benzo(a)anthracene	320		ug/kg	110	20.	1
Benzo(a)pyrene	300		ug/kg	140	43.	1
Benzo(b)fluoranthene	410		ug/kg	110	30.	1
Benzo(k)fluoranthene	110		ug/kg	110	28.	1
Chrysene	320		ug/kg	110	18.	1
Acenaphthylene	36	J	ug/kg	140	27.	1
Anthracene	78	J	ug/kg	110	34.	1
Benzo(ghi)perylene	220		ug/kg	140	21.	1
Fluorene	19	J	ug/kg	180	17.	1
Phenanthrene	400		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	49	J	ug/kg	110	20.	1
Indeno(1,2,3-cd)pyrene	200		ug/kg	140	25.	1
Pyrene	650		ug/kg	110	18.	1
Biphenyl	ND		ug/kg	400	23.	1
4-Chloroaniline	ND		ug/kg	180	32.	1
2-Nitroaniline	ND		ug/kg	180	34.	1
3-Nitroaniline	ND		ug/kg	180	33.	1
4-Nitroaniline	ND		ug/kg	180	73.	1
Dibenzofuran	ND		ug/kg	180	17.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	18.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
p-Chloro-m-cresol	ND		ug/kg	180	26.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	28.	1
2,4-Dimethylphenol	ND		ug/kg	180	58.	1
2-Nitrophenol	ND		ug/kg	380	66.	1
4-Nitrophenol	ND		ug/kg	250	72.	1
2,4-Dinitrophenol	ND		ug/kg	850	82.	1
4,6-Dinitro-o-cresol	ND		ug/kg	460	85.	1
Pentachlorophenol	ND		ug/kg	140	39.	1
Phenol	ND		ug/kg	180	27.	1
2-Methylphenol	ND		ug/kg	180	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	28.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07 Date Collected: 08/12/24 11:30

Client ID: SB06_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	34.	1
Benzoic Acid	ND		ug/kg	570	180	1
Benzyl Alcohol	ND		ug/kg	180	54.	1
Carbazole	37	J	ug/kg	180	17.	1
1,4-Dioxane	ND		ug/kg	26	8.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	81		25-120
Phenol-d6	82		10-120
Nitrobenzene-d5	83		23-120
2-Fluorobiphenyl	81		30-120
2,4,6-Tribromophenol	90		10-136
4-Terphenyl-d14	86		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08
Client ID: SB08_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:45
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 11:55
Analyst: SZ
Percent Solids: 94%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	18.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	20.	1
Hexachlorobenzene	ND		ug/kg	100	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
1,2-Dichlorobenzene	ND		ug/kg	180	32.	1
1,3-Dichlorobenzene	ND		ug/kg	180	30.	1
1,4-Dichlorobenzene	ND		ug/kg	180	31.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	47.	1
2,4-Dinitrotoluene	ND		ug/kg	180	35.	1
2,6-Dinitrotoluene	ND		ug/kg	180	30.	1
Fluoranthene	170		ug/kg	100	20.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	27.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	210	30.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	190	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	500	160	1
Hexachloroethane	ND		ug/kg	140	28.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	180	22.	1
Nitrobenzene	ND		ug/kg	160	26.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	27.	1
Bis(2-ethylhexyl)phthalate	170	J	ug/kg	180	61.	1
Butyl benzyl phthalate	ND		ug/kg	180	44.	1
Di-n-butylphthalate	ND		ug/kg	180	33.	1
Di-n-octylphthalate	ND		ug/kg	180	60.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08 Date Collected: 08/12/24 11:45

Client ID: SB08_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	16.	1
Dimethyl phthalate	ND		ug/kg	180	37.	1
Benzo(a)anthracene	120		ug/kg	100	20.	1
Benzo(a)pyrene	250		ug/kg	140	43.	1
Benzo(b)fluoranthene	300		ug/kg	100	30.	1
Benzo(k)fluoranthene	76	J	ug/kg	100	28.	1
Chrysene	120		ug/kg	100	18.	1
Acenaphthylene	ND		ug/kg	140	27.	1
Anthracene	ND		ug/kg	100	34.	1
Benzo(ghi)perylene	260		ug/kg	140	21.	1
Fluorene	ND		ug/kg	180	17.	1
Phenanthrene	73	J	ug/kg	100	21.	1
Dibenzo(a,h)anthracene	51	J	ug/kg	100	20.	1
Indeno(1,2,3-cd)pyrene	230		ug/kg	140	25.	1
Pyrene	180		ug/kg	100	18.	1
Biphenyl	ND		ug/kg	400	23.	1
4-Chloroaniline	ND		ug/kg	180	32.	1
2-Nitroaniline	ND		ug/kg	180	34.	1
3-Nitroaniline	ND		ug/kg	180	33.	1
4-Nitroaniline	ND		ug/kg	180	73.	1
Dibenzofuran	ND		ug/kg	180	17.	1
2-Methylnaphthalene	ND		ug/kg	210	21.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	18.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	100	33.	1
p-Chloro-m-cresol	ND		ug/kg	180	26.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	28.	1
2,4-Dimethylphenol	ND		ug/kg	180	58.	1
2-Nitrophenol	ND		ug/kg	380	66.	1
4-Nitrophenol	ND		ug/kg	250	72.	1
2,4-Dinitrophenol	ND		ug/kg	850	82.	1
4,6-Dinitro-o-cresol	ND		ug/kg	460	85.	1
Pentachlorophenol	ND		ug/kg	140	39.	1
Phenol	ND		ug/kg	180	27.	1
2-Methylphenol	ND		ug/kg	180	27.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	250	28.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08 Date Collected: 08/12/24 11:45

Client ID: SB08_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	34.	1
Benzoic Acid	ND		ug/kg	570	180	1
Benzyl Alcohol	ND		ug/kg	180	54.	1
Carbazole	ND		ug/kg	180	17.	1
1,4-Dioxane	ND		ug/kg	26	8.1	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	92		25-120
Phenol-d6	95		10-120
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	90		30-120
2,4,6-Tribromophenol	102		10-136
4-Terphenyl-d14	90		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09
Client ID: SB09_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 13:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 12:18
Analyst: SZ
Percent Solids: 91%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	27	J	ug/kg	140	19.	1
1,2,4-Trichlorobenzene	ND		ug/kg	180	21.	1
Hexachlorobenzene	ND		ug/kg	110	20.	1
Bis(2-chloroethyl)ether	ND		ug/kg	160	24.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
1,2-Dichlorobenzene	ND		ug/kg	180	32.	1
1,3-Dichlorobenzene	ND		ug/kg	180	31.	1
1,4-Dichlorobenzene	ND		ug/kg	180	32.	1
3,3'-Dichlorobenzidine	ND		ug/kg	180	48.	1
2,4-Dinitrotoluene	ND		ug/kg	180	36.	1
2,6-Dinitrotoluene	ND		ug/kg	180	31.	1
Fluoranthene	790		ug/kg	110	21.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	180	19.	1
4-Bromophenyl phenyl ether	ND		ug/kg	180	28.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	220	31.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	200	18.	1
Hexachlorobutadiene	ND		ug/kg	180	26.	1
Hexachlorocyclopentadiene	ND		ug/kg	520	160	1
Hexachloroethane	ND		ug/kg	140	29.	1
Isophorone	ND		ug/kg	160	23.	1
Naphthalene	ND		ug/kg	180	22.	1
Nitrobenzene	ND		ug/kg	160	27.	1
NDPA/DPA	ND		ug/kg	140	20.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	180	28.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	180	62.	1
Butyl benzyl phthalate	ND		ug/kg	180	46.	1
Di-n-butylphthalate	ND		ug/kg	180	34.	1
Di-n-octylphthalate	ND		ug/kg	180	61.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09 Date Collected: 08/12/24 13:00

Client ID: SB09_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	180	17.	1
Dimethyl phthalate	ND		ug/kg	180	38.	1
Benzo(a)anthracene	400		ug/kg	110	20.	1
Benzo(a)pyrene	380		ug/kg	140	44.	1
Benzo(b)fluoranthene	510		ug/kg	110	30.	1
Benzo(k)fluoranthene	150		ug/kg	110	29.	1
Chrysene	370		ug/kg	110	19.	1
Acenaphthylene	50	J	ug/kg	140	28.	1
Anthracene	96	J	ug/kg	110	35.	1
Benzo(ghi)perylene	280		ug/kg	140	21.	1
Fluorene	26	J	ug/kg	180	18.	1
Phenanthrene	450		ug/kg	110	22.	1
Dibenzo(a,h)anthracene	61	J	ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	260		ug/kg	140	25.	1
Pyrene	690		ug/kg	110	18.	1
Biphenyl	ND		ug/kg	410	23.	1
4-Chloroaniline	ND		ug/kg	180	33.	1
2-Nitroaniline	ND		ug/kg	180	35.	1
3-Nitroaniline	ND		ug/kg	180	34.	1
4-Nitroaniline	ND		ug/kg	180	75.	1
Dibenzofuran	ND		ug/kg	180	17.	1
2-Methylnaphthalene	ND		ug/kg	220	22.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	180	19.	1
Acetophenone	ND		ug/kg	180	22.	1
2,4,6-Trichlorophenol	ND		ug/kg	110	34.	1
p-Chloro-m-cresol	ND		ug/kg	180	27.	1
2-Chlorophenol	ND		ug/kg	180	21.	1
2,4-Dichlorophenol	ND		ug/kg	160	29.	1
2,4-Dimethylphenol	ND		ug/kg	180	60.	1
2-Nitrophenol	ND		ug/kg	390	68.	1
4-Nitrophenol	ND		ug/kg	250	74.	1
2,4-Dinitrophenol	ND		ug/kg	870	84.	1
4,6-Dinitro-o-cresol	ND		ug/kg	470	87.	1
Pentachlorophenol	ND		ug/kg	140	40.	1
Phenol	ND		ug/kg	180	27.	1
2-Methylphenol	ND		ug/kg	180	28.	1
3-Methylphenol/4-Methylphenol	ND		ug/kg	260	28.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09 Date Collected: 08/12/24 13:00

Client ID: SB09_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	180	35.	1
Benzoic Acid	ND		ug/kg	580	180	1
Benzyl Alcohol	ND		ug/kg	180	55.	1
Carbazole	44	J	ug/kg	180	18.	1
1,4-Dioxane	ND		ug/kg	27	8.3	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	79		25-120
Phenol-d6	81		10-120
Nitrobenzene-d5	84		23-120
2-Fluorobiphenyl	80		30-120
2,4,6-Tribromophenol	89		10-136
4-Terphenyl-d14	81		18-120

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10
Client ID: SB10_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 14:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 08/17/24 12:40
Analyst: SZ
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	36	J	ug/kg	150	20.	1
1,2,4-Trichlorobenzene	ND		ug/kg	190	22.	1
Hexachlorobenzene	ND		ug/kg	120	22.	1
Bis(2-chloroethyl)ether	ND		ug/kg	170	26.	1
2-Chloronaphthalene	ND		ug/kg	190	19.	1
1,2-Dichlorobenzene	ND		ug/kg	190	35.	1
1,3-Dichlorobenzene	ND		ug/kg	190	33.	1
1,4-Dichlorobenzene	ND		ug/kg	190	34.	1
3,3'-Dichlorobenzidine	ND		ug/kg	190	51.	1
2,4-Dinitrotoluene	ND		ug/kg	190	38.	1
2,6-Dinitrotoluene	ND		ug/kg	190	33.	1
Fluoranthene	2800		ug/kg	120	22.	1
4-Chlorophenyl phenyl ether	ND		ug/kg	190	21.	1
4-Bromophenyl phenyl ether	ND		ug/kg	190	29.	1
Bis(2-chloroisopropyl)ether	ND		ug/kg	230	33.	1
Bis(2-chloroethoxy)methane	ND		ug/kg	210	19.	1
Hexachlorobutadiene	ND		ug/kg	190	28.	1
Hexachlorocyclopentadiene	ND		ug/kg	550	170	1
Hexachloroethane	ND		ug/kg	150	31.	1
Isophorone	ND		ug/kg	170	25.	1
Naphthalene	190		ug/kg	190	23.	1
Nitrobenzene	ND		ug/kg	170	28.	1
NDPA/DPA	ND		ug/kg	150	22.	1
n-Nitrosodi-n-propylamine	ND		ug/kg	190	30.	1
Bis(2-ethylhexyl)phthalate	ND		ug/kg	190	67.	1
Butyl benzyl phthalate	ND		ug/kg	190	48.	1
Di-n-butylphthalate	ND		ug/kg	190	36.	1
Di-n-octylphthalate	ND		ug/kg	190	66.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10 Date Collected: 08/12/24 14:00

Client ID: SB10_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Diethyl phthalate	ND		ug/kg	190	18.	1
Dimethyl phthalate	ND		ug/kg	190	40.	1
Benzo(a)anthracene	2700		ug/kg	120	22.	1
Benzo(a)pyrene	3900		ug/kg	150	47.	1
Benzo(b)fluoranthene	4500		ug/kg	120	32.	1
Benzo(k)fluoranthene	980		ug/kg	120	31.	1
Chrysene	2600		ug/kg	120	20.	1
Acenaphthylene	670		ug/kg	150	30.	1
Anthracene	400		ug/kg	120	38.	1
Benzo(ghi)perylene	2900		ug/kg	150	23.	1
Fluorene	87	J	ug/kg	190	19.	1
Phenanthrene	930		ug/kg	120	23.	1
Dibenzo(a,h)anthracene	660		ug/kg	120	22.	1
Indeno(1,2,3-cd)pyrene	2600		ug/kg	150	27.	1
Pyrene	3400		ug/kg	120	19.	1
Biphenyl	ND		ug/kg	440	25.	1
4-Chloroaniline	ND		ug/kg	190	35.	1
2-Nitroaniline	ND		ug/kg	190	37.	1
3-Nitroaniline	ND		ug/kg	190	36.	1
4-Nitroaniline	ND		ug/kg	190	80.	1
Dibenzofuran	52	J	ug/kg	190	18.	1
2-Methylnaphthalene	77	J	ug/kg	230	23.	1
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	190	20.	1
Acetophenone	ND		ug/kg	190	24.	1
2,4,6-Trichlorophenol	ND		ug/kg	120	36.	1
p-Chloro-m-cresol	ND		ug/kg	190	29.	1
2-Chlorophenol	ND		ug/kg	190	23.	1
2,4-Dichlorophenol	ND		ug/kg	170	31.	1
2,4-Dimethylphenol	ND		ug/kg	190	64.	1
2-Nitrophenol	ND		ug/kg	420	72.	1
4-Nitrophenol	ND		ug/kg	270	79.	1
2,4-Dinitrophenol	ND		ug/kg	920	90.	1
4,6-Dinitro-o-cresol	ND		ug/kg	500	92.	1
Pentachlorophenol	ND		ug/kg	150	42.	1
Phenol	ND		ug/kg	190	29.	1
2-Methylphenol	ND		ug/kg	190	30.	1
3-Methylphenol/4-Methylphenol	41	J	ug/kg	280	30.	1

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10 Date Collected: 08/12/24 14:00

Client ID: SB10_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
2,4,5-Trichlorophenol	ND		ug/kg	190	37.	1
Benzoic Acid	ND		ug/kg	620	200	1
Benzyl Alcohol	ND		ug/kg	190	59.	1
Carbazole	120	J	ug/kg	190	19.	1
1,4-Dioxane	ND		ug/kg	29	8.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	67		25-120
Phenol-d6	67		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	73		30-120
2,4,6-Tribromophenol	82		10-136
4-Terphenyl-d14	71		18-120

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/17/24 08:09
Analyst: SZ

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-10 Batch: WG1960256-1					
Acenaphthene	ND		ug/kg	130	17.
1,2,4-Trichlorobenzene	ND		ug/kg	160	18.
Hexachlorobenzene	ND		ug/kg	97	18.
Bis(2-chloroethyl)ether	ND		ug/kg	140	22.
2-Chloronaphthalene	ND		ug/kg	160	16.
1,2-Dichlorobenzene	ND		ug/kg	160	29.
1,3-Dichlorobenzene	ND		ug/kg	160	28.
1,4-Dichlorobenzene	ND		ug/kg	160	28.
3,3'-Dichlorobenzidine	ND		ug/kg	160	43.
2,4-Dinitrotoluene	ND		ug/kg	160	32.
2,6-Dinitrotoluene	ND		ug/kg	160	28.
Fluoranthene	ND		ug/kg	97	18.
4-Chlorophenyl phenyl ether	ND		ug/kg	160	17.
4-Bromophenyl phenyl ether	ND		ug/kg	160	25.
Bis(2-chloroisopropyl)ether	ND		ug/kg	190	28.
Bis(2-chloroethoxy)methane	ND		ug/kg	170	16.
Hexachlorobutadiene	ND		ug/kg	160	24.
Hexachlorocyclopentadiene	ND		ug/kg	460	150
Hexachloroethane	ND		ug/kg	130	26.
Isophorone	ND		ug/kg	140	21.
Naphthalene	ND		ug/kg	160	20.
Nitrobenzene	ND		ug/kg	140	24.
NDPA/DPA	ND		ug/kg	130	18.
n-Nitrosodi-n-propylamine	ND		ug/kg	160	25.
Bis(2-ethylhexyl)phthalate	ND		ug/kg	160	56.
Butyl benzyl phthalate	ND		ug/kg	160	41.
Di-n-butylphthalate	ND		ug/kg	160	31.
Di-n-octylphthalate	ND		ug/kg	160	55.
Diethyl phthalate	ND		ug/kg	160	15.

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/17/24 08:09
Analyst: SZ

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-10 Batch: WG1960256-1					
Dimethyl phthalate	ND		ug/kg	160	34.
Benzo(a)anthracene	ND		ug/kg	97	18.
Benzo(a)pyrene	ND		ug/kg	130	39.
Benzo(b)fluoranthene	ND		ug/kg	97	27.
Benzo(k)fluoranthene	ND		ug/kg	97	26.
Chrysene	ND		ug/kg	97	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	97	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	97	20.
Dibenzo(a,h)anthracene	ND		ug/kg	97	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	22.
Pyrene	ND		ug/kg	97	16.
Biphenyl	ND		ug/kg	370	21.
4-Chloroaniline	ND		ug/kg	160	29.
2-Nitroaniline	ND		ug/kg	160	31.
3-Nitroaniline	ND		ug/kg	160	30.
4-Nitroaniline	ND		ug/kg	160	67.
Dibenzofuran	ND		ug/kg	160	15.
2-Methylnaphthalene	ND		ug/kg	190	20.
1,2,4,5-Tetrachlorobenzene	ND		ug/kg	160	17.
Acetophenone	ND		ug/kg	160	20.
2,4,6-Trichlorophenol	ND		ug/kg	97	31.
p-Chloro-m-cresol	ND		ug/kg	160	24.
2-Chlorophenol	ND		ug/kg	160	19.
2,4-Dichlorophenol	ND		ug/kg	140	26.
2,4-Dimethylphenol	ND		ug/kg	160	53.
2-Nitrophenol	ND		ug/kg	350	61.

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 08/17/24 08:09
Analyst: SZ

Extraction Method: EPA 3546
Extraction Date: 08/16/24 11:54

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-10 Batch: WG1960256-1					
4-Nitrophenol	ND		ug/kg	230	66.
2,4-Dinitrophenol	ND		ug/kg	780	75.
4,6-Dinitro-o-cresol	ND		ug/kg	420	78.
Pentachlorophenol	ND		ug/kg	130	36.
Phenol	ND		ug/kg	160	24.
2-Methylphenol	ND		ug/kg	160	25.
3-Methylphenol/4-Methylphenol	ND		ug/kg	230	25.
2,4,5-Trichlorophenol	ND		ug/kg	160	31.
Benzoic Acid	ND		ug/kg	520	160
Benzyl Alcohol	ND		ug/kg	160	50.
Carbazole	ND		ug/kg	160	16.
1,4-Dioxane	ND		ug/kg	24	7.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	94		25-120
Phenol-d6	91		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	84		30-120
2,4,6-Tribromophenol	95		10-136
4-Terphenyl-d14	96		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-10 Batch: WG1960256-2 WG1960256-3								
Acenaphthene	81		79		31-137	3		50
1,2,4-Trichlorobenzene	71		71		38-107	0		50
Hexachlorobenzene	80		79		40-140	1		50
Bis(2-chloroethyl)ether	73		74		40-140	1		50
2-Chloronaphthalene	79		78		40-140	1		50
1,2-Dichlorobenzene	70		68		40-140	3		50
1,3-Dichlorobenzene	69		67		40-140	3		50
1,4-Dichlorobenzene	69		69		28-104	0		50
3,3'-Dichlorobenzidine	74		75		40-140	1		50
2,4-Dinitrotoluene	98		98		40-132	0		50
2,6-Dinitrotoluene	91		92		40-140	1		50
Fluoranthene	85		87		40-140	2		50
4-Chlorophenyl phenyl ether	77		77		40-140	0		50
4-Bromophenyl phenyl ether	80		79		40-140	1		50
Bis(2-chloroisopropyl)ether	75		74		40-140	1		50
Bis(2-chloroethoxy)methane	79		80		40-117	1		50
Hexachlorobutadiene	71		69		40-140	3		50
Hexachlorocyclopentadiene	63		62		40-140	2		50
Hexachloroethane	76		74		40-140	3		50
Isophorone	80		80		40-140	0		50
Naphthalene	76		73		40-140	4		50
Nitrobenzene	77		79		40-140	3		50
NDPA/DPA	81		82		36-157	1		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-10 Batch: WG1960256-2 WG1960256-3								
n-Nitrosodi-n-propylamine	78		78		32-121	0		50
Bis(2-ethylhexyl)phthalate	87		87		40-140	0		50
Butyl benzyl phthalate	95		98		40-140	3		50
Di-n-butylphthalate	89		92		40-140	3		50
Di-n-octylphthalate	90		90		40-140	0		50
Diethyl phthalate	83		82		40-140	1		50
Dimethyl phthalate	80		81		40-140	1		50
Benzo(a)anthracene	78		78		40-140	0		50
Benzo(a)pyrene	82		83		40-140	1		50
Benzo(b)fluoranthene	81		82		40-140	1		50
Benzo(k)fluoranthene	77		78		40-140	1		50
Chrysene	75		76		40-140	1		50
Acenaphthylene	80		79		40-140	1		50
Anthracene	85		86		40-140	1		50
Benzo(ghi)perylene	86		85		40-140	1		50
Fluorene	81		80		40-140	1		50
Phenanthrene	85		85		40-140	0		50
Dibenzo(a,h)anthracene	87		86		40-140	1		50
Indeno(1,2,3-cd)pyrene	86		86		40-140	0		50
Pyrene	86		88		35-142	2		50
Biphenyl	79		78		37-127	1		50
4-Chloroaniline	76		76		40-140	0		50
2-Nitroaniline	95		98		47-134	3		50

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-10 Batch: WG1960256-2 WG1960256-3								
3-Nitroaniline	85		84		26-129	1		50
4-Nitroaniline	87		87		41-125	0		50
Dibenzofuran	80		79		40-140	1		50
2-Methylnaphthalene	79		78		40-140	1		50
1,2,4,5-Tetrachlorobenzene	74		76		40-117	3		50
Acetophenone	76		78		14-144	3		50
2,4,6-Trichlorophenol	80		82		30-130	2		50
p-Chloro-m-cresol	86		87		26-103	1		50
2-Chlorophenol	78		77		25-102	1		50
2,4-Dichlorophenol	79		81		30-130	3		50
2,4-Dimethylphenol	68		69		30-130	1		50
2-Nitrophenol	87		87		30-130	0		50
4-Nitrophenol	104		105		11-114	1		50
2,4-Dinitrophenol	80		80		4-130	0		50
4,6-Dinitro-o-cresol	98		100		10-130	2		50
Pentachlorophenol	73		73		17-109	0		50
Phenol	81		80		26-90	1		50
2-Methylphenol	81		81		30-130.	0		50
3-Methylphenol/4-Methylphenol	89		90		30-130	1		50
2,4,5-Trichlorophenol	83		84		30-130	1		50
Benzoic Acid	36		27		10-110	29		50
Benzyl Alcohol	83		81		40-140	2		50
Carbazole	86		87		54-128	1		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-10 Batch: WG1960256-2 WG1960256-3								
1,4-Dioxane	62		58		40-140	7		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	80		79		25-120
Phenol-d6	83		82		10-120
Nitrobenzene-d5	79		77		23-120
2-Fluorobiphenyl	76		76		30-120
2,4,6-Tribromophenol	87		86		10-136
4-Terphenyl-d14	85		84		18-120

PCBS

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01
Client ID: SB07_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 08/17/24 09:14
Analyst: MEO
Percent Solids: 92%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 13:24
Cleanup Method: EPA 3665A
Cleanup Date: 08/16/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	50.3	4.47	1	A
Aroclor 1221	ND		ug/kg	50.3	5.04	1	A
Aroclor 1232	ND		ug/kg	50.3	10.7	1	A
Aroclor 1242	ND		ug/kg	50.3	6.78	1	A
Aroclor 1248	ND		ug/kg	50.3	7.54	1	A
Aroclor 1254	ND		ug/kg	50.3	5.50	1	A
Aroclor 1260	ND		ug/kg	50.3	9.30	1	B
Aroclor 1262	ND		ug/kg	50.3	6.39	1	A
Aroclor 1268	ND		ug/kg	50.3	5.21	1	B
PCBs, Total	ND		ug/kg	50.3	4.47	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		30-150	A
Decachlorobiphenyl	62		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	69		30-150	B

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02
Client ID: SB04_0.5-1.5
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 08/17/24 09:22
Analyst: MEO
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 13:24
Cleanup Method: EPA 3665A
Cleanup Date: 08/16/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	49.6	4.41	1	A
Aroclor 1221	ND		ug/kg	49.6	4.97	1	A
Aroclor 1232	ND		ug/kg	49.6	10.5	1	A
Aroclor 1242	ND		ug/kg	49.6	6.69	1	A
Aroclor 1248	ND		ug/kg	49.6	7.44	1	A
Aroclor 1254	ND		ug/kg	49.6	5.43	1	A
Aroclor 1260	ND		ug/kg	49.6	9.17	1	A
Aroclor 1262	ND		ug/kg	49.6	6.30	1	A
Aroclor 1268	ND		ug/kg	49.6	5.14	1	A
PCBs, Total	ND		ug/kg	49.6	4.41	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	A
Decachlorobiphenyl	55		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	56		30-150	B

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10
Client ID: SB10_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 14:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 08/17/24 09:30
Analyst: MEO
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 13:24
Cleanup Method: EPA 3665A
Cleanup Date: 08/16/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	56.8	5.04	1	A
Aroclor 1221	ND		ug/kg	56.8	5.69	1	A
Aroclor 1232	ND		ug/kg	56.8	12.0	1	A
Aroclor 1242	ND		ug/kg	56.8	7.66	1	A
Aroclor 1248	ND		ug/kg	56.8	8.52	1	A
Aroclor 1254	ND		ug/kg	56.8	6.21	1	A
Aroclor 1260	ND		ug/kg	56.8	10.5	1	B
Aroclor 1262	ND		ug/kg	56.8	7.21	1	A
Aroclor 1268	ND		ug/kg	56.8	5.88	1	B
PCBs, Total	ND		ug/kg	56.8	5.04	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	70		30-150	B

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 08/17/24 08:50
Analyst: MEO

Extraction Method: EPA 3546
Extraction Date: 08/16/24 13:25
Cleanup Method: EPA 3665A
Cleanup Date: 08/16/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02,10 Batch: WG1960295-1						
Aroclor 1016	ND		ug/kg	47.1	4.18	A
Aroclor 1221	ND		ug/kg	47.1	4.72	A
Aroclor 1232	ND		ug/kg	47.1	9.98	A
Aroclor 1242	ND		ug/kg	47.1	6.35	A
Aroclor 1248	ND		ug/kg	47.1	7.06	A
Aroclor 1254	ND		ug/kg	47.1	5.15	A
Aroclor 1260	ND		ug/kg	47.1	8.70	A
Aroclor 1262	ND		ug/kg	47.1	5.98	A
Aroclor 1268	ND		ug/kg	47.1	4.88	A
PCBs, Total	ND		ug/kg	47.1	4.18	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	88		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02,10 Batch: WG1960295-2 WG1960295-3									
Aroclor 1016	90		75		40-140	18		50	A
Aroclor 1260	87		72		40-140	19		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		71		30-150	A
Decachlorobiphenyl	87		73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		74		30-150	B
Decachlorobiphenyl	89		75		30-150	B

PESTICIDES

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01
Client ID: SB07_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 08/17/24 16:16
Analyst: MMG
Percent Solids: 92%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 15:17
Cleanup Method: EPA 3620B
Cleanup Date: 08/17/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.72	0.337	1	A
Lindane	ND		ug/kg	0.718	0.321	1	A
Alpha-BHC	ND		ug/kg	0.718	0.204	1	A
Beta-BHC	ND		ug/kg	1.72	0.653	1	A
Heptachlor	ND		ug/kg	0.861	0.386	1	A
Aldrin	ND		ug/kg	1.72	0.607	1	A
Heptachlor epoxide	ND		ug/kg	3.23	0.969	1	A
Endrin	ND		ug/kg	0.718	0.294	1	A
Endrin aldehyde	ND		ug/kg	2.15	0.754	1	A
Endrin ketone	ND		ug/kg	1.72	0.444	1	A
Dieldrin	ND		ug/kg	1.08	0.538	1	A
4,4'-DDE	1.04	J	ug/kg	1.72	0.398	1	B
4,4'-DDD	ND		ug/kg	1.72	0.614	1	A
4,4'-DDT	ND	IP	ug/kg	1.72	1.38	1	B
Endosulfan I	ND		ug/kg	1.72	0.407	1	A
Endosulfan II	ND		ug/kg	1.72	0.576	1	A
Endosulfan sulfate	ND		ug/kg	0.718	0.342	1	A
Methoxychlor	ND		ug/kg	3.23	1.00	1	A
Toxaphene	ND		ug/kg	32.3	9.04	1	A
cis-Chlordane	ND		ug/kg	2.15	0.600	1	A
trans-Chlordane	ND		ug/kg	2.15	0.568	1	A
Chlordane	ND		ug/kg	14.4	5.71	1	A

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01 Date Collected: 08/12/24 11:00

Client ID: SB07_1-2 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	106		30-150	B

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02
Client ID: SB04_0.5-1.5
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 08/17/24 16:27
Analyst: MMG
Percent Solids: 97%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 15:17
Cleanup Method: EPA 3620B
Cleanup Date: 08/17/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.59	0.312	1	A
Lindane	ND		ug/kg	0.664	0.297	1	A
Alpha-BHC	ND		ug/kg	0.664	0.188	1	A
Beta-BHC	ND		ug/kg	1.59	0.604	1	A
Heptachlor	ND		ug/kg	0.796	0.357	1	A
Aldrin	ND		ug/kg	1.59	0.561	1	A
Heptachlor epoxide	ND		ug/kg	2.99	0.896	1	A
Endrin	ND		ug/kg	0.664	0.272	1	A
Endrin aldehyde	ND		ug/kg	1.99	0.697	1	A
Endrin ketone	ND		ug/kg	1.59	0.410	1	A
Dieldrin	ND		ug/kg	0.996	0.498	1	A
4,4'-DDE	ND		ug/kg	1.59	0.368	1	A
4,4'-DDD	ND		ug/kg	1.59	0.568	1	A
4,4'-DDT	ND		ug/kg	1.59	1.28	1	A
Endosulfan I	ND		ug/kg	1.59	0.376	1	A
Endosulfan II	ND		ug/kg	1.59	0.532	1	A
Endosulfan sulfate	ND		ug/kg	0.664	0.316	1	A
Methoxychlor	ND		ug/kg	2.99	0.929	1	A
Toxaphene	ND		ug/kg	29.9	8.36	1	A
cis-Chlordane	ND		ug/kg	1.99	0.555	1	A
trans-Chlordane	ND		ug/kg	1.99	0.526	1	A
Chlordane	ND		ug/kg	13.3	5.28	1	A

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02 Date Collected: 08/12/24 12:00

Client ID: SB04_0.5-1.5 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	48		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	78		30-150	B

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10
Client ID: SB10_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 14:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 08/17/24 16:38
Analyst: MMG
Percent Solids: 85%

Extraction Method: EPA 3546
Extraction Date: 08/16/24 15:17
Cleanup Method: EPA 3620B
Cleanup Date: 08/17/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.81	0.354	1	A
Lindane	ND		ug/kg	0.753	0.337	1	A
Alpha-BHC	ND		ug/kg	0.753	0.214	1	A
Beta-BHC	ND		ug/kg	1.81	0.685	1	A
Heptachlor	ND		ug/kg	0.904	0.405	1	A
Aldrin	ND		ug/kg	1.81	0.636	1	A
Heptachlor epoxide	ND		ug/kg	3.39	1.02	1	A
Endrin	ND		ug/kg	0.753	0.309	1	A
Endrin aldehyde	ND		ug/kg	2.26	0.791	1	A
Endrin ketone	ND		ug/kg	1.81	0.465	1	A
Dieldrin	ND		ug/kg	1.13	0.565	1	A
4,4'-DDE	ND		ug/kg	1.81	0.418	1	A
4,4'-DDD	ND		ug/kg	1.81	0.645	1	A
4,4'-DDT	ND		ug/kg	1.81	1.45	1	A
Endosulfan I	ND		ug/kg	1.81	0.427	1	A
Endosulfan II	ND		ug/kg	1.81	0.604	1	A
Endosulfan sulfate	ND		ug/kg	0.753	0.358	1	A
Methoxychlor	ND		ug/kg	3.39	1.05	1	A
Toxaphene	ND		ug/kg	33.9	9.49	1	A
cis-Chlordane	ND		ug/kg	2.26	0.630	1	A
trans-Chlordane	ND		ug/kg	2.26	0.596	1	A
Chlordane	ND		ug/kg	15.1	5.99	1	A

Project Name: 615 BROADWAY **Lab Number:** L2445541

Project Number: 170803001 **Report Date:** 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10 Date Collected: 08/12/24 14:00

Client ID: SB10_0-1 Date Received: 08/12/24

Sample Location: KINGSTON, NEW YORK Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	53		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	77		30-150	B

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 08/17/24 15:42
Analyst: MMG

Extraction Method: EPA 3546
Extraction Date: 08/16/24 15:17
Cleanup Method: EPA 3620B
Cleanup Date: 08/17/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-02,10 Batch: WG1960334-1						
Delta-BHC	ND		ug/kg	1.57	0.308	A
Lindane	ND		ug/kg	0.655	0.293	A
Alpha-BHC	ND		ug/kg	0.655	0.186	A
Beta-BHC	ND		ug/kg	1.57	0.596	A
Heptachlor	ND		ug/kg	0.786	0.352	A
Aldrin	ND		ug/kg	1.57	0.554	A
Heptachlor epoxide	ND		ug/kg	2.95	0.885	A
Endrin	ND		ug/kg	0.655	0.269	A
Endrin aldehyde	ND		ug/kg	1.96	0.688	A
Endrin ketone	ND		ug/kg	1.57	0.405	A
Dieldrin	ND		ug/kg	0.983	0.491	A
4,4'-DDE	ND		ug/kg	1.57	0.364	A
4,4'-DDD	ND		ug/kg	1.57	0.561	A
4,4'-DDT	ND		ug/kg	1.57	1.26	A
Endosulfan I	ND		ug/kg	1.57	0.372	A
Endosulfan II	ND		ug/kg	1.57	0.526	A
Endosulfan sulfate	ND		ug/kg	0.655	0.312	A
Methoxychlor	ND		ug/kg	2.95	0.917	A
Toxaphene	ND		ug/kg	29.5	8.26	A
cis-Chlordane	ND		ug/kg	1.96	0.548	A
trans-Chlordane	ND		ug/kg	1.96	0.519	A
Chlordane	ND		ug/kg	13.1	5.21	A

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 08/17/24 15:42
Analyst: MMG

Extraction Method: EPA 3546
Extraction Date: 08/16/24 15:17
Cleanup Method: EPA 3620B
Cleanup Date: 08/17/24
Cleanup Method: EPA 3660B
Cleanup Date: 08/17/24

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-02,10 Batch: WG1960334-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	116		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY

Project Number: 170803001

Lab Number: L2445541

Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-02,10 Batch: WG1960334-2 WG1960334-3									
Delta-BHC	80		91		30-150	13		30	A
Lindane	77		89		30-150	14		30	A
Alpha-BHC	76		90		30-150	17		30	A
Beta-BHC	79		90		30-150	13		30	A
Heptachlor	77		90		30-150	16		30	A
Aldrin	77		89		30-150	14		30	A
Heptachlor epoxide	57		67		30-150	16		30	A
Endrin	83		94		30-150	12		30	A
Endrin aldehyde	73		84		30-150	14		30	A
Endrin ketone	88		100		30-150	13		30	A
Dieldrin	88		101		30-150	14		30	A
4,4'-DDE	78		89		30-150	13		30	A
4,4'-DDD	86		99		30-150	14		30	A
4,4'-DDT	80		93		30-150	15		30	A
Endosulfan I	80		91		30-150	13		30	A
Endosulfan II	83		96		30-150	15		30	A
Endosulfan sulfate	78		90		30-150	14		30	A
Methoxychlor	99		109		30-150	10		30	A
cis-Chlordane	75		86		30-150	14		30	A
trans-Chlordane	87		100		30-150	14		30	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-02,10 Batch: WG1960334-2 WG1960334-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		73		30-150	A
Decachlorobiphenyl	70		66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		83		30-150	B
Decachlorobiphenyl	117		120		30-150	B

METALS

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01
Client ID: SB07_1-2
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 92%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6720		mg/kg	8.34	2.25	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.17	0.317	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Arsenic, Total	7.88		mg/kg	0.834	0.173	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Barium, Total	206		mg/kg	0.834	0.145	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.407	J	mg/kg	0.417	0.028	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.676	J	mg/kg	0.834	0.082	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Calcium, Total	2810		mg/kg	8.34	2.92	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Chromium, Total	11.4		mg/kg	0.834	0.080	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Cobalt, Total	5.83		mg/kg	1.67	0.138	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Copper, Total	32.6		mg/kg	0.834	0.215	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Iron, Total	23500		mg/kg	4.17	0.753	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Lead, Total	1040		mg/kg	4.17	0.223	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Magnesium, Total	1760		mg/kg	8.34	1.28	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Manganese, Total	611		mg/kg	0.834	0.132	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Mercury, Total	1.33		mg/kg	0.075	0.049	1	08/14/24 00:13	08/16/24 22:39	EPA 7471B	1,7471B	JWN
Nickel, Total	15.4		mg/kg	2.08	0.202	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Potassium, Total	397		mg/kg	208	12.0	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.67	0.215	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Silver, Total	0.317	J	mg/kg	0.417	0.236	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Sodium, Total	36.8	J	mg/kg	167	2.63	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.67	0.263	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Vanadium, Total	15.0		mg/kg	0.834	0.169	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
Zinc, Total	245		mg/kg	4.17	0.244	2	08/13/24 23:16	08/16/24 17:13	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	11.4		mg/kg	0.872	0.174	1		08/16/24 17:13	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02
Client ID: SB04_0.5-1.5
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 12:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4890		mg/kg	8.07	2.18	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Antimony, Total	0.386	J	mg/kg	4.04	0.307	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Arsenic, Total	7.73		mg/kg	0.807	0.168	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Barium, Total	80.4		mg/kg	0.807	0.140	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.309	J	mg/kg	0.404	0.027	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.159	J	mg/kg	0.807	0.079	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Calcium, Total	30000		mg/kg	8.07	2.82	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Chromium, Total	8.73		mg/kg	0.807	0.078	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Cobalt, Total	5.14		mg/kg	1.61	0.134	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Copper, Total	46.3		mg/kg	0.807	0.208	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Iron, Total	13200		mg/kg	4.04	0.729	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Lead, Total	217		mg/kg	4.04	0.216	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Magnesium, Total	2440		mg/kg	8.07	1.24	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Manganese, Total	245		mg/kg	0.807	0.128	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Mercury, Total	0.312		mg/kg	0.069	0.045	1	08/14/24 00:13	08/16/24 22:42	EPA 7471B	1,7471B	JWN
Nickel, Total	11.7		mg/kg	2.02	0.195	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Potassium, Total	349		mg/kg	202	11.6	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.61	0.208	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.404	0.228	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Sodium, Total	117	J	mg/kg	161	2.54	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.61	0.254	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Vanadium, Total	14.2		mg/kg	0.807	0.164	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
Zinc, Total	104		mg/kg	4.04	0.236	2	08/13/24 23:16	08/16/24 17:17	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	8.73		mg/kg	0.827	0.165	1		08/16/24 17:17	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03
Client ID: SB01_1-2
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 12:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 97%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	5910		mg/kg	7.98	2.15	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	3.99	0.303	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Arsenic, Total	6.49		mg/kg	0.798	0.166	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Barium, Total	35.0		mg/kg	0.798	0.139	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.317	J	mg/kg	0.399	0.026	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.312	J	mg/kg	0.798	0.078	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Calcium, Total	21400		mg/kg	7.98	2.79	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Chromium, Total	8.82		mg/kg	0.798	0.077	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Cobalt, Total	7.65		mg/kg	1.60	0.132	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Copper, Total	15.7		mg/kg	0.798	0.206	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Iron, Total	15900		mg/kg	3.99	0.721	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Lead, Total	13.9		mg/kg	3.99	0.214	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Magnesium, Total	2420		mg/kg	7.98	1.23	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Manganese, Total	410		mg/kg	0.798	0.127	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Mercury, Total	ND		mg/kg	0.072	0.047	1	08/14/24 00:13	08/16/24 22:46	EPA 7471B	1,7471B	JWN
Nickel, Total	25.2		mg/kg	2.00	0.193	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Potassium, Total	270		mg/kg	200	11.5	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.60	0.206	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.399	0.226	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Sodium, Total	86.2	J	mg/kg	160	2.51	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Thallium, Total	0.476	J	mg/kg	1.60	0.251	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Vanadium, Total	10.7		mg/kg	0.798	0.162	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
Zinc, Total	58.2		mg/kg	3.99	0.234	2	08/13/24 23:16	08/16/24 17:21	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	8.82		mg/kg	0.823	0.165	1		08/16/24 17:21	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04
Client ID: SB02_1-2
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 12:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	5730		mg/kg	8.32	2.24	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.16	0.316	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Arsenic, Total	3.94		mg/kg	0.832	0.173	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Barium, Total	48.8		mg/kg	0.832	0.145	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.278	J	mg/kg	0.416	0.027	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.082	J	mg/kg	0.832	0.082	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Calcium, Total	2160		mg/kg	8.32	2.91	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Chromium, Total	6.93		mg/kg	0.832	0.080	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Cobalt, Total	4.60		mg/kg	1.66	0.138	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Copper, Total	11.6		mg/kg	0.832	0.214	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Iron, Total	12200		mg/kg	4.16	0.751	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Lead, Total	35.7		mg/kg	4.16	0.223	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Magnesium, Total	1860		mg/kg	8.32	1.28	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Manganese, Total	448		mg/kg	0.832	0.132	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Mercury, Total	0.103		mg/kg	0.070	0.046	1	08/14/24 00:13	08/16/24 22:56	EPA 7471B	1,7471B	JWN
Nickel, Total	11.2		mg/kg	2.08	0.201	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Potassium, Total	304		mg/kg	208	12.0	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.66	0.214	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.416	0.235	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Sodium, Total	22.3	J	mg/kg	166	2.62	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.66	0.262	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Vanadium, Total	7.96		mg/kg	0.832	0.169	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
Zinc, Total	49.9		mg/kg	4.16	0.244	2	08/13/24 23:16	08/16/24 17:25	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	6.93		mg/kg	0.858	0.172	1		08/16/24 17:25	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05
Client ID: SB03_0-1
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 95%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6440		mg/kg	7.98	2.15	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	3.99	0.303	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Arsenic, Total	6.89		mg/kg	0.798	0.166	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Barium, Total	34.1		mg/kg	0.798	0.139	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.355	J	mg/kg	0.399	0.026	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.269	J	mg/kg	0.798	0.078	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Calcium, Total	16500		mg/kg	7.98	2.79	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Chromium, Total	10.1		mg/kg	0.798	0.077	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Cobalt, Total	7.88		mg/kg	1.60	0.132	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Copper, Total	15.9		mg/kg	0.798	0.206	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Iron, Total	17600		mg/kg	3.99	0.720	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Lead, Total	13.0		mg/kg	3.99	0.214	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Magnesium, Total	2670		mg/kg	7.98	1.23	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Manganese, Total	380		mg/kg	0.798	0.127	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Mercury, Total	ND		mg/kg	0.070	0.046	1	08/14/24 00:13	08/16/24 22:59	EPA 7471B	1,7471B	JWN
Nickel, Total	23.2		mg/kg	1.99	0.193	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Potassium, Total	297		mg/kg	199	11.5	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Selenium, Total	1.79		mg/kg	1.60	0.206	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.399	0.226	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Sodium, Total	29.2	J	mg/kg	160	2.51	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Thallium, Total	0.406	J	mg/kg	1.60	0.251	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Vanadium, Total	11.6		mg/kg	0.798	0.162	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
Zinc, Total	56.0		mg/kg	3.99	0.234	2	08/13/24 23:16	08/16/24 17:28	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	10.1		mg/kg	0.839	0.168	1		08/16/24 17:28	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06
Client ID: SB05_0-1
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 11:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 96%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	4910		mg/kg	8.01	2.16	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.00	0.304	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Arsenic, Total	2.92		mg/kg	0.801	0.166	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Barium, Total	43.3		mg/kg	0.801	0.139	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.242	J	mg/kg	0.400	0.026	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Cadmium, Total	ND		mg/kg	0.801	0.079	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Calcium, Total	1380		mg/kg	8.01	2.80	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Chromium, Total	5.88		mg/kg	0.801	0.077	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Cobalt, Total	3.42		mg/kg	1.60	0.133	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Copper, Total	8.53		mg/kg	0.801	0.206	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Iron, Total	9680		mg/kg	4.00	0.723	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Lead, Total	60.7		mg/kg	4.00	0.214	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Magnesium, Total	1250		mg/kg	8.01	1.23	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Manganese, Total	335		mg/kg	0.801	0.127	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Mercury, Total	0.260		mg/kg	0.071	0.046	1	08/14/24 00:13	08/16/24 23:02	EPA 7471B	1,7471B	JWN
Nickel, Total	8.24		mg/kg	2.00	0.194	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Potassium, Total	316		mg/kg	200	11.5	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Selenium, Total	0.347	J	mg/kg	1.60	0.206	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.400	0.227	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Sodium, Total	73.2	J	mg/kg	160	2.52	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.60	0.252	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Vanadium, Total	7.38		mg/kg	0.801	0.162	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
Zinc, Total	46.2		mg/kg	4.00	0.235	2	08/13/24 23:16	08/16/24 17:32	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	5.88		mg/kg	0.836	0.167	1		08/16/24 17:32	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07
Client ID: SB06_0-1
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 11:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 93%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	7060		mg/kg	8.31	2.24	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.16	0.316	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Arsenic, Total	5.43		mg/kg	0.831	0.173	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Barium, Total	67.8		mg/kg	0.831	0.145	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.361	J	mg/kg	0.416	0.027	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.196	J	mg/kg	0.831	0.081	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Calcium, Total	998		mg/kg	8.31	2.91	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Chromium, Total	9.11		mg/kg	0.831	0.080	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Cobalt, Total	5.68		mg/kg	1.66	0.138	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Copper, Total	16.5		mg/kg	0.831	0.214	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Iron, Total	14600		mg/kg	4.16	0.750	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Lead, Total	117		mg/kg	4.16	0.223	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Magnesium, Total	2000		mg/kg	8.31	1.28	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Manganese, Total	472		mg/kg	0.831	0.132	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Mercury, Total	0.090		mg/kg	0.068	0.044	1	08/14/24 00:13	08/16/24 23:05	EPA 7471B	1,7471B	JWN
Nickel, Total	13.7		mg/kg	2.08	0.201	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Potassium, Total	275		mg/kg	208	12.0	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.66	0.214	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.416	0.235	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Sodium, Total	47.3	J	mg/kg	166	2.62	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.66	0.262	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Vanadium, Total	10.8		mg/kg	0.831	0.169	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
Zinc, Total	105		mg/kg	4.16	0.244	2	08/13/24 23:16	08/16/24 17:48	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	9.11		mg/kg	0.861	0.172	1		08/16/24 17:48	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08
Client ID: SB08_1-2
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 11:45
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 94%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6050		mg/kg	8.45	2.28	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.22	0.321	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Arsenic, Total	5.18		mg/kg	0.845	0.176	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Barium, Total	141		mg/kg	0.845	0.147	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.295	J	mg/kg	0.422	0.028	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.263	J	mg/kg	0.845	0.083	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Calcium, Total	5490		mg/kg	8.45	2.96	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Chromium, Total	9.13		mg/kg	0.845	0.081	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Cobalt, Total	5.89		mg/kg	1.69	0.140	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Copper, Total	15.2		mg/kg	0.845	0.218	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Iron, Total	14200		mg/kg	4.22	0.763	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Lead, Total	234		mg/kg	4.22	0.226	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Magnesium, Total	2150		mg/kg	8.45	1.30	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Manganese, Total	349		mg/kg	0.845	0.134	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Mercury, Total	0.109		mg/kg	0.074	0.048	1	08/14/24 00:13	08/16/24 23:09	EPA 7471B	1,7471B	JWN
Nickel, Total	16.4		mg/kg	2.11	0.204	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Potassium, Total	254		mg/kg	211	12.2	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Selenium, Total	0.227	J	mg/kg	1.69	0.218	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.422	0.239	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Sodium, Total	28.1	J	mg/kg	169	2.66	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.69	0.266	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Vanadium, Total	9.62		mg/kg	0.845	0.171	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
Zinc, Total	132		mg/kg	4.22	0.248	2	08/13/24 23:16	08/16/24 17:52	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	9.13		mg/kg	0.850	0.170	1		08/16/24 17:52	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09
Client ID: SB09_1-2
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 13:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6770		mg/kg	8.49	2.29	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Antimony, Total	1.08	J	mg/kg	4.25	0.323	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Arsenic, Total	11.8		mg/kg	0.849	0.177	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Barium, Total	83.4		mg/kg	0.849	0.148	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.362	J	mg/kg	0.425	0.028	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.225	J	mg/kg	0.849	0.083	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Calcium, Total	3220		mg/kg	8.49	2.97	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Chromium, Total	11.8		mg/kg	0.849	0.082	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Cobalt, Total	6.68		mg/kg	1.70	0.141	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Copper, Total	25.4		mg/kg	0.849	0.219	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Iron, Total	24600		mg/kg	4.25	0.767	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Lead, Total	681		mg/kg	4.25	0.228	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Magnesium, Total	2020		mg/kg	8.49	1.31	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Manganese, Total	511		mg/kg	0.849	0.135	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Mercury, Total	0.430		mg/kg	0.069	0.045	1	08/14/24 00:13	08/16/24 23:12	EPA 7471B	1,7471B	JWN
Nickel, Total	16.0		mg/kg	2.12	0.206	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Potassium, Total	269		mg/kg	212	12.2	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.70	0.219	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.425	0.240	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Sodium, Total	33.9	J	mg/kg	170	2.68	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.70	0.268	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Vanadium, Total	11.3		mg/kg	0.849	0.172	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
Zinc, Total	96.3		mg/kg	4.25	0.249	2	08/13/24 23:16	08/16/24 17:56	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	11.8		mg/kg	0.884	0.177	1		08/16/24 17:56	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10
Client ID: SB10_0-1
Sample Location: KINGSTON, NEW YORK
Date Collected: 08/12/24 14:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	6630		mg/kg	9.11	2.46	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Antimony, Total	ND		mg/kg	4.55	0.346	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Arsenic, Total	7.05		mg/kg	0.911	0.189	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Barium, Total	128		mg/kg	0.911	0.158	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Beryllium, Total	0.432	J	mg/kg	0.455	0.030	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.904	J	mg/kg	0.911	0.089	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Calcium, Total	7100		mg/kg	9.11	3.19	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Chromium, Total	10.5		mg/kg	0.911	0.087	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Cobalt, Total	5.75		mg/kg	1.82	0.151	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Copper, Total	27.5		mg/kg	0.911	0.235	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Iron, Total	13600		mg/kg	4.55	0.822	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Lead, Total	373		mg/kg	4.55	0.244	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Magnesium, Total	1940		mg/kg	9.11	1.40	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Manganese, Total	656		mg/kg	0.911	0.145	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Mercury, Total	0.719		mg/kg	0.076	0.050	1	08/14/24 00:13	08/16/24 23:15	EPA 7471B	1,7471B	JWN
Nickel, Total	14.1		mg/kg	2.28	0.220	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Potassium, Total	385		mg/kg	228	13.1	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Selenium, Total	ND		mg/kg	1.82	0.235	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.455	0.258	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Sodium, Total	247		mg/kg	182	2.87	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Thallium, Total	ND		mg/kg	1.82	0.287	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Vanadium, Total	14.8		mg/kg	0.911	0.185	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
Zinc, Total	314		mg/kg	4.55	0.267	2	08/13/24 23:16	08/16/24 18:00	EPA 3050B	1,6010D	JMF
General Chemistry - Mansfield Lab											
Chromium, Trivalent	10.5		mg/kg	0.942	0.188	1		08/16/24 18:00	NA	107,-	

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-10 Batch: WG1958912-1										
Aluminum, Total	ND		mg/kg	4.00	1.08	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Antimony, Total	ND		mg/kg	2.00	0.152	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Arsenic, Total	ND		mg/kg	0.400	0.083	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Barium, Total	ND		mg/kg	0.400	0.070	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Beryllium, Total	ND		mg/kg	0.200	0.013	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Cadmium, Total	ND		mg/kg	0.400	0.039	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Calcium, Total	ND		mg/kg	4.00	1.40	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Chromium, Total	ND		mg/kg	0.400	0.038	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Cobalt, Total	ND		mg/kg	0.800	0.066	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Copper, Total	ND		mg/kg	0.400	0.103	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Iron, Total	1.06	J	mg/kg	2.00	0.361	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Lead, Total	ND		mg/kg	2.00	0.107	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Magnesium, Total	ND		mg/kg	4.00	0.616	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Manganese, Total	ND		mg/kg	0.400	0.064	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Nickel, Total	ND		mg/kg	1.00	0.097	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Potassium, Total	ND		mg/kg	100	5.76	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Selenium, Total	ND		mg/kg	0.800	0.103	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Silver, Total	ND		mg/kg	0.200	0.113	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Sodium, Total	1.31	J	mg/kg	80.0	1.26	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Thallium, Total	ND		mg/kg	0.800	0.126	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Vanadium, Total	ND		mg/kg	0.400	0.081	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF
Zinc, Total	ND		mg/kg	2.00	0.117	1	08/13/24 23:16	08/16/24 16:09	1,6010D	JMF

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-10 Batch: WG1958913-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	08/14/24 00:13	08/16/24 21:53	1,7471B	JWN

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-10 Batch: WG1958912-2								
Aluminum, Total	101		-		80-120	-		
Antimony, Total	106		-		80-120	-		
Arsenic, Total	101		-		80-120	-		
Barium, Total	102		-		80-120	-		
Beryllium, Total	104		-		80-120	-		
Cadmium, Total	104		-		80-120	-		
Calcium, Total	104		-		80-120	-		
Chromium, Total	102		-		80-120	-		
Cobalt, Total	103		-		80-120	-		
Copper, Total	102		-		80-120	-		
Iron, Total	104		-		80-120	-		
Lead, Total	102		-		80-120	-		
Magnesium, Total	103		-		80-120	-		
Manganese, Total	103		-		80-120	-		
Nickel, Total	104		-		80-120	-		
Potassium, Total	105		-		80-120	-		
Selenium, Total	102		-		80-120	-		
Silver, Total	103		-		80-120	-		
Sodium, Total	106		-		80-120	-		
Thallium, Total	101		-		80-120	-		
Vanadium, Total	102		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-10 Batch: WG1958912-2					
Zinc, Total	106	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01-10 Batch: WG1958913-2					
Mercury, Total	95	-	80-120	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1958912-3 QC Sample: L2445514-01 Client ID: MS Sample												
Aluminum, Total	11600	178	13100	**841**	Q	-	-		75-125	-		20
Antimony, Total	14.0	44.6	33.4	**44**	Q	-	-		75-125	-		20
Arsenic, Total	7.87	10.7	20.9	122		-	-		75-125	-		20
Barium, Total	137	178	292	87		-	-		75-125	-		20
Beryllium, Total	0.886	4.46	5.28	98		-	-		75-125	-		20
Cadmium, Total	0.591J	4.73	5.01	106		-	-		75-125	-		20
Calcium, Total	3240	892	4120	99		-	-		75-125	-		20
Chromium, Total	27.1	17.8	46.3	108		-	-		75-125	-		20
Cobalt, Total	13.8	44.6	55.0	92		-	-		75-125	-		20
Copper, Total	37.9	22.3	60.1	100		-	-		75-125	-		20
Iron, Total	26500	89.2	27000	**561**	Q	-	-		75-125	-		20
Lead, Total	168	47.3	169	**2**	Q	-	-		75-125	-		20
Magnesium, Total	5040	892	6520	**166**	Q	-	-		75-125	-		20
Manganese, Total	729	44.6	845	**260**	Q	-	-		75-125	-		20
Nickel, Total	22.4	44.6	65.4	96		-	-		75-125	-		20
Potassium, Total	640	892	1590	106		-	-		75-125	-		20
Selenium, Total	ND	10.7	8.32	78		-	-		75-125	-		20
Silver, Total	ND	4.46	4.54	102		-	-		75-125	-		20
Sodium, Total	248	892	1140	100		-	-		75-125	-		20
Thallium, Total	0.531J	10.7	10.1	94		-	-		75-125	-		20
Vanadium, Total	30.9	44.6	78.0	106		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1958912-3 QC Sample: L2445514-01 Client ID: MS Sample										
Zinc, Total	163	44.6	223	**134**	Q	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1958913-3 QC Sample: L2445514-01 Client ID: MS Sample										
Mercury, Total	0.915	1.58	2.35	91		-	-	80-120	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1958912-4 QC Sample: L2445514-01 Client ID: DUP Sample						
Antimony, Total	14.0	ND	mg/kg	NC		20
Arsenic, Total	7.87	8.11	mg/kg	3		20
Beryllium, Total	0.886	0.762	mg/kg	15		20
Cadmium, Total	0.591J	0.551J	mg/kg	NC		20
Chromium, Total	27.1	26.2	mg/kg	3		20
Copper, Total	37.9	36.8	mg/kg	3		20
Lead, Total	168	141	mg/kg	17		20
Nickel, Total	22.4	19.6	mg/kg	13		20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Thallium, Total	0.531J	0.394J	mg/kg	NC		20
Zinc, Total	163	123	mg/kg	**28**	Q	20
Total Metals - Mansfield Lab Associated sample(s): 01-10 QC Batch ID: WG1958913-4 QC Sample: L2445514-01 Client ID: DUP Sample						
Mercury, Total	0.915	0.552	mg/kg	**49**	Q	20

INORGANICS
&
MISCELLANEOUS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-01
Client ID: SB07_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.7		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.22	1	08/14/24 11:40	08/15/24 12:59	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.872	0.174	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-02
Client ID: SB04_0.5-1.5
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	96.7		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.21	1	08/14/24 11:40	08/15/24 13:02	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.827	0.165	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-03
Client ID: SB01_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	97.2		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	0.96	0.20	1	08/14/24 11:40	08/15/24 13:03	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.823	0.165	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-04
Client ID: SB02_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	93.2		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.21	1	08/14/24 11:40	08/15/24 13:14	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.858	0.172	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-05
Client ID: SB03_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.3		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.22	1	08/14/24 11:40	08/15/24 13:05	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.839	0.168	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-06
Client ID: SB05_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:15
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	95.7		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.22	1	08/14/24 11:40	08/15/24 13:08	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.836	0.167	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-07
Client ID: SB06_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:30
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	92.9		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.21	1	08/14/24 11:40	08/15/24 13:09	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.861	0.172	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-08
Client ID: SB08_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 11:45
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	94.1		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.22	1	08/14/24 11:40	08/15/24 13:10	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.850	0.170	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-09
Client ID: SB09_1-2
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 13:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	90.5		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.0	0.22	1	08/14/24 19:30	08/15/24 13:41	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.884	0.177	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

SAMPLE RESULTS

Lab ID: L2445541-10
Client ID: SB10_0-1
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 14:00
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.9		%	0.100	NA	1	-	08/13/24 12:43	121,2540G	ROI
Cyanide, Total	ND		mg/kg	1.2	0.25	1	08/14/24 19:30	08/15/24 13:42	1,9010C/9012B	JER
Chromium, Hexavalent	ND		mg/kg	0.942	0.188	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445541
Report Date: 08/19/24

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-10 Batch: WG1959138-1										
Chromium, Hexavalent	ND		mg/kg	0.800	0.160	1	08/14/24 13:12	08/15/24 14:46	1,7196A	RDS
General Chemistry - Westborough Lab for sample(s): 01-08 Batch: WG1959165-1										
Cyanide, Total	ND		mg/kg	0.86	0.18	1	08/14/24 11:40	08/15/24 12:37	1,9010C/9012B	JER
General Chemistry - Westborough Lab for sample(s): 09-10 Batch: WG1959413-1										
Cyanide, Total	ND		mg/kg	0.84	0.18	1	08/14/24 19:30	08/15/24 13:37	1,9010C/9012B	JER

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 Batch: WG1959138-2								
Chromium, Hexavalent	82		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-08 Batch: WG1959165-2 WG1959165-3								
Cyanide, Total	**78**	Q	93		80-120	22		35
General Chemistry - Westborough Lab Associated sample(s): 09-10 Batch: WG1959413-2 WG1959413-3								
Cyanide, Total	88		88		80-120	0		35

Matrix Spike Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1959138-4 QC Sample: L2445541-04 Client ID: SB02_1-2												
Chromium, Hexavalent	ND	1430	1330	93		-	-		75-125	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1959165-4 WG1959165-5 QC Sample: L2445515-01 Client ID: MS Sample												
Cyanide, Total	ND	10	6.3	**60**	Q	12	110		75-125	**59**	Q	35
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1959165-6 WG1959165-7 QC Sample: L2445541-01 Client ID: SB07_1-2												
Cyanide, Total	ND	10	10	100		11	110		75-125	10		35
General Chemistry - Westborough Lab Associated sample(s): 09-10 QC Batch ID: WG1959413-4 WG1959413-5 QC Sample: L2445544-01 Client ID: MS Sample												
Cyanide, Total	ND	9.7	10	100		10	100		75-125	0		35
General Chemistry - Westborough Lab Associated sample(s): 09-10 QC Batch ID: WG1959413-6 WG1959413-7 QC Sample: L2445742-04 Client ID: MS Sample												
Cyanide, Total	ND	17	19	110		20	110		75-125	0		35

Lab Duplicate Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1958692-1 QC Sample: L2445541-01 Client ID: SB07_1-2						
Solids, Total	91.7	92.5	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1959138-6 QC Sample: L2445541-04 Client ID: SB02_1-2						
Chromium, Hexavalent	ND	ND	mg/kg	NC		20

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445541-01A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-01B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-01C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-01D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-01E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),AL-TI(180),TL-TI(180),PB-TI(180),CU-TI(180),SB-TI(180),SE-TI(180),ZN-TI(180),CO-TI(180),V-TI(180),FE-TI(180),MN-TI(180),HG-T(28),MG-TI(180),K-TI(180),NA-TI(180),CA-TI(180),CD-TI(180)
L2445541-01F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-01G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-01H	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-01I	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-02A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-02B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-02C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-02D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-02E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),TL-TI(180),NI-TI(180),AL-TI(180),CR-TI(180),SB-TI(180),ZN-TI(180),PB-TI(180),CU-TI(180),SE-TI(180),V-TI(180),CO-TI(180),FE-TI(180),HG-T(28),MN-TI(180),MG-TI(180),NA-TI(180),CA-TI(180),CD-TI(180),K-TI(180)
L2445541-02F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-02G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)

*Values in parentheses indicate holding time in days

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445541-02H	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-02I	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-03A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-03B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-03C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-03D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-03E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),NI-TI(180),CU-TI(180),SB-TI(180),SE-TI(180),PB-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),FE-TI(180),MG-TI(180),MN-TI(180),HG-T(28),NA-TI(180),CA-TI(180),CD-TI(180),K-TI(180)
L2445541-03F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),HEXCR-7196(30)
L2445541-03G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),HEXCR-7196(30)
L2445541-04A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-04B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-04C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-04D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-04E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),NI-TI(180),AL-TI(180),CR-TI(180),TL-TI(180),CU-TI(180),SE-TI(180),ZN-TI(180),PB-TI(180),SB-TI(180),V-TI(180),CO-TI(180),MN-TI(180),MG-TI(180),FE-TI(180),HG-T(28),CA-TI(180),K-TI(180),CD-TI(180),NA-TI(180)
L2445541-04F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),HEXCR-7196(30)
L2445541-04G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),HEXCR-7196(30)
L2445541-05A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-05B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-05C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-05D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)

*Values in parentheses indicate holding time in days

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445541-05E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),TL-TI(180),NI-TI(180),CR-TI(180),AL-TI(180),PB-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),SB-TI(180),CO-TI(180),V-TI(180),HG-T(28),FE-TI(180),MG-TI(180),MN-TI(180),K-TI(180),NA-TI(180),CA-TI(180),CD-TI(180)
L2445541-05F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-05G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-06A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-06B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-06C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-06D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-06E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),TL-TI(180),NI-TI(180),AL-TI(180),PB-TI(180),SB-TI(180),SE-TI(180),CU-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),HG-T(28),MN-TI(180),FE-TI(180),MG-TI(180),CD-TI(180),CA-TI(180),NA-TI(180),K-TI(180)
L2445541-06F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-06G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-07A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-07B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-07C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-07D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-07E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),AL-TI(180),NI-TI(180),TL-TI(180),SE-TI(180),ZN-TI(180),CU-TI(180),SB-TI(180),PB-TI(180),CO-TI(180),V-TI(180),HG-T(28),MN-TI(180),FE-TI(180),MG-TI(180),CD-TI(180),K-TI(180),NA-TI(180),CA-TI(180)
L2445541-07F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-07G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-08A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-08B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)

*Values in parentheses indicate holding time in days

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445541-08C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-08D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-08E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),TL-TI(180),CR-TI(180),NI-TI(180),AL-TI(180),SE-TI(180),ZN-TI(180),SB-TI(180),PB-TI(180),CU-TI(180),CO-TI(180),V-TI(180),FE-TI(180),HG-T(28),MG-TI(180),MN-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2445541-08F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-08G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-09A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-09B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-09C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-09D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-09E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),TL-TI(180),NI-TI(180),AL-TI(180),SB-TI(180),SE-TI(180),PB-TI(180),ZN-TI(180),CU-TI(180),V-TI(180),CO-TI(180),HG-T(28),MG-TI(180),FE-TI(180),MN-TI(180),CD-TI(180),K-TI(180),CA-TI(180),NA-TI(180)
L2445541-09F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-09G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		TCN-9010(14),NYTCL-8270(14),HEXCR-7196(30)
L2445541-10A	Vial MeOH preserved	A	NA		3.7	Y	Absent		NYTCL-8260HLW(14)
L2445541-10B	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-10C	Vial water preserved	A	NA		3.7	Y	Absent	13-AUG-24 11:27	NYTCL-8260HLW(14)
L2445541-10D	Plastic 2oz unpreserved for TS	A	NA		3.7	Y	Absent		TS(7)
L2445541-10E	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.7	Y	Absent		BE-TI(180),AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),NI-TI(180),TL-TI(180),AL-TI(180),SE-TI(180),CU-TI(180),PB-TI(180),SB-TI(180),ZN-TI(180),V-TI(180),CO-TI(180),MG-TI(180),MN-TI(180),FE-TI(180),HG-T(28),K-TI(180),CA-TI(180),CD-TI(180),NA-TI(180)
L2445541-10F	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-10G	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)

*Values in parentheses indicate holding time in days

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445541
Report Date: 08/19/24

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2445541-10H	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)
L2445541-10I	Glass 120ml/4oz unpreserved	A	NA		3.7	Y	Absent		NYTCL-8270(14),TCN-9010(14),NYTCL-8081(14),NYTCL-8082(365),HEXCR-7196(30)

*Values in parentheses indicate holding time in days

Project Name:	615 BROADWAY	**Lab Number:**	L2445541
Project Number:	170803001	**Report Date:**	08/19/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	615 BROADWAY	**Lab Number:**	L2445541
Project Number:	170803001	**Report Date:**	08/19/24

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	615 BROADWAY	**Lab Number:**	L2445541
Project Number:	170803001	**Report Date:**	08/19/24

Data Qualifiers

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	615 BROADWAY	**Lab Number:**	L2445541
Project Number:	170803001	**Report Date:**	08/19/24

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

L2445541 19AUG24
LANGAN – NYC

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab 8/13/24

Client Information
Client: LANGAN DPC
Address: 360 West 31st St 8th Floor, New York, NY 10001
Phone: 212-479-5400
Fax:
Email: lesmail@langan.com

Project Information
Project Name: 615 Broadway
Project Location: Kingston, New York
Project # 170803.001
(Use Project name as Project #) ☐
Project Manager: Lances Esmail
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☒ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☒ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☐ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:
Please cc: datamanagement@langan.com and lhaley@langan.com

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Part 375/TCL VOCs	TAL Metals including Cr6+ & Cr3+	Total CN	PCBs & Pesticides	Total Bottle	Sample Specific Comments
45541-01	SB07_1-2	8/12/24	11:00	Soil	AA	X	X	X	X		
-02	SB04_0.5-1.5		12:00		AA	X	X	X	X		
-03	SB01_1-2		12:15		AA	X	X	X			
-04	SB02_1-2		12:30		AA	X	X	X			
-05	SB03_0-1		11:50		AA	X	X	X			
-06	SB05_0-1		11:15		AA	X	X	X			
-07	SB06_0-1		11:30		AA	X	X	X			
-08	SB08_1-2		11:45		AA	X	X	X			
-09	SB09_1-2		13:00		AA	X	X	X			
-10	SB10_0-1	↓	14:00	↓	AA	X	X	X	X		

Container Type
Preservative

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
Andrew Ashton	8/12/24 1725		8/13/24 1:25
	8/12/24 1900		8/13/24 1:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2445582
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Lamees Esmail
Phone:	(212) 479-5717
Project Name:	615 BROADWAY
Project Number:	170803001
Report Date:	08/16/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (9110), MN (025-999-495), NJ (MA015), NY (11627), NC (685), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708A1), USFWS (Permit #A24920).

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2445582-01	SV01_081224	SOIL_VAPOR	KINGSTON, NEW YORK	08/12/24 12:28	08/12/24
L2445582-02	SV02_081224	SOIL_VAPOR	KINGSTON, NEW YORK	08/12/24 12:29	08/12/24
L2445582-03	SV03_081224	SOIL_VAPOR	KINGSTON, NEW YORK	08/12/24 12:46	08/12/24
L2445582-04	UNUSED CAN #2340	SOIL_VAPOR	KINGSTON, NEW YORK		08/12/24
L2445582-05	UNUSED CAN #145	SOIL_VAPOR	KINGSTON, NEW YORK		08/12/24

Project Name:	615 BROADWAY	**Lab Number:**	L2445582
Project Number:	170803001	**Report Date:**	08/16/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 615 BROADWAY **Lab Number:** L2445582
Project Number: 170803001 **Report Date:** 08/16/24

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on August 9, 2024. The canister certification data is provided as an addendum.

L2445582-02: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2445582-02D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 08/16/24

AIR

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-01
Client ID: SV01_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:28
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/15/24 00:20
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.695	0.200	--	3.44	0.989	--		1
Chloromethane	0.202	0.200	--	0.417	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.251	0.200	--	0.555	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	279	5.00	--	526	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	109	1.00	--	259	2.38	--		1
Trichlorofluoromethane	0.419	0.200	--	2.35	1.12	--		1
Isopropanol	1.80	0.500	--	4.42	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	69.1	0.500	--	209	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.682	0.200	--	2.12	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	3.48	0.500	--	10.3	1.47	--		1
cis-1,2-Dichloroethene	0.311	0.200	--	1.23	0.793	--		1

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-01
Client ID: SV01_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:28
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	2.21	0.500	--	6.52	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	1.94	0.200	--	6.84	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	1.32	0.200	--	4.22	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	1.86	0.200	--	6.40	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	3.01	0.200	--	16.2	1.07	--		1
2,2,4-Trimethylpentane	2.75	0.200	--	12.8	0.934	--		1
Heptane	4.16	0.200	--	17.0	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	16.2	0.200	--	61.0	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	33.6	0.200	--	228	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	5.56	0.200	--	24.2	0.869	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-01
Client ID: SV01_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:28
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	19.8	0.400	--	86.0	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.289	0.200	--	1.23	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	10.1	0.200	--	43.9	0.869	--		1
4-Ethyltoluene	1.50	0.200	--	7.37	0.983	--		1
1,3,5-Trimethylbenzene	2.28	0.200	--	11.2	0.983	--		1
1,2,4-Trimethylbenzene	8.43	0.200	--	41.4	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	0.609	0.200	--	3.19	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	83		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	88		60-140

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-02
Client ID: SV02_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:29
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/15/24 01:00
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	0.969	0.200	--	4.79	0.989	--		1
Chloromethane	1.23	0.200	--	2.54	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	47.9	5.00	--	90.3	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	126	1.00	--	299	2.38	--		1
Trichlorofluoromethane	0.578	0.200	--	3.25	1.12	--		1
Isopropanol	1.84	0.500	--	4.52	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	126	0.500	--	382	1.52	--	E	1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.727	0.200	--	2.26	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	4.12	0.500	--	12.2	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-02
Client ID: SV02_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:29
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.244	0.200	--	1.19	0.977	--		1
Tetrahydrofuran	3.65	0.500	--	10.8	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	2.90	0.200	--	10.2	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	1.53	0.200	--	4.89	0.639	--		1
Carbon tetrachloride	0.283	0.200	--	1.78	1.26	--		1
Cyclohexane	2.89	0.200	--	9.95	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	3.91	0.200	--	21.0	1.07	--		1
2,2,4-Trimethylpentane	4.15	0.200	--	19.4	0.934	--		1
Heptane	5.54	0.200	--	22.7	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	20.9	0.200	--	78.8	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	1.02	0.200	--	6.92	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	7.04	0.200	--	30.6	0.869	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-02
Client ID: SV02_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:29
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	24.6	0.400	--	107	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.351	0.200	--	1.49	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	12.4	0.200	--	53.9	0.869	--		1
4-Ethyltoluene	1.37	0.200	--	6.74	0.983	--		1
1,3,5-Trimethylbenzene	2.52	0.200	--	12.4	0.983	--		1
1,2,4-Trimethylbenzene	9.21	0.200	--	45.3	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	0.623	0.200	--	3.27	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	84		60-140
Bromochloromethane	88		60-140
chlorobenzene-d5	90		60-140

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-02 D
Client ID: SV02_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:29
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/15/24 17:48
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	114	2.50	--	346	7.58	--		5

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-Difluorobenzene	98		60-140
Bromochloromethane	102		60-140
chlorobenzene-d5	111		60-140

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-03
Client ID: SV03_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:46
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method: 48,TO-15
Analytical Date: 08/15/24 01:41
Analyst: JMB

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Dichlorodifluoromethane	1.66	0.200	--	8.21	0.989	--		1
Chloromethane	0.275	0.200	--	0.568	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	0.544	0.200	--	1.20	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	27.8	5.00	--	52.4	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	114	1.00	--	271	2.38	--		1
Trichlorofluoromethane	0.337	0.200	--	1.89	1.12	--		1
Isopropanol	1.75	0.500	--	4.30	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	77.8	0.500	--	236	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	1.36	0.200	--	4.24	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	6.43	0.500	--	19.0	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-03
Client ID: SV03_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:46
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	0.212	0.200	--	1.04	0.977	--		1
Tetrahydrofuran	2.55	0.500	--	7.52	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	2.63	0.200	--	9.27	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	1.81	0.200	--	5.78	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	2.45	0.200	--	8.43	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	32.7	0.200	--	176	1.07	--		1
2,2,4-Trimethylpentane	3.45	0.200	--	16.1	0.934	--		1
Heptane	5.16	0.200	--	21.1	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	0.582	0.500	--	2.39	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	19.7	0.200	--	74.2	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	1.06	0.200	--	7.19	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	7.05	0.200	--	30.6	0.869	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

SAMPLE RESULTS

Lab ID: L2445582-03
Client ID: SV03_081224
Sample Location: KINGSTON, NEW YORK

Date Collected: 08/12/24 12:46
Date Received: 08/12/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
p/m-Xylene	24.6	0.400	--	107	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	0.347	0.200	--	1.48	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	12.3	0.200	--	53.4	0.869	--		1
4-Ethyltoluene	1.33	0.200	--	6.54	0.983	--		1
1,3,5-Trimethylbenzene	2.42	0.200	--	11.9	0.983	--		1
1,2,4-Trimethylbenzene	8.85	0.200	--	43.5	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	0.654	0.200	--	3.43	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	89		60-140
chlorobenzene-d5	95		60-140

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/14/24 15:33

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1959321-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/14/24 15:33

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1959321-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/14/24 15:33

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 01-03 Batch: WG1959321-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/15/24 15:00

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 02 Batch: WG1959874-4								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/15/24 15:00

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 02 Batch: WG1959874-4								
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1

Project Name: 615 BROADWAY
Project Number: 170803001
Lab Number: L2445582
Report Date: 08/16/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 48,TO-15
Analytical Date: 08/15/24 15:00

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab for sample(s): 02 Batch: WG1959874-4								
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1959321-3								
Dichlorodifluoromethane	95		-		70-130	-		
Chloromethane	72		-		70-130	-		
Freon-114	92		-		70-130	-		
Vinyl chloride	86		-		70-130	-		
1,3-Butadiene	83		-		70-130	-		
Bromomethane	92		-		70-130	-		
Chloroethane	106		-		70-130	-		
Ethanol	93		-		40-160	-		
Vinyl bromide	85		-		70-130	-		
Acetone	93		-		40-160	-		
Trichlorofluoromethane	108		-		70-130	-		
Isopropanol	89		-		40-160	-		
1,1-Dichloroethene	99		-		70-130	-		
Tertiary butyl Alcohol	104		-		70-130	-		
Methylene chloride	93		-		70-130	-		
3-Chloropropene	94		-		70-130	-		
Carbon disulfide	78		-		70-130	-		
Freon-113	95		-		70-130	-		
trans-1,2-Dichloroethene	89		-		70-130	-		
1,1-Dichloroethane	93		-		70-130	-		
Methyl tert butyl ether	94		-		70-130	-		
2-Butanone	85		-		70-130	-		
cis-1,2-Dichloroethene	94		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1959321-3								
Ethyl Acetate	92		-		70-130	-		
Chloroform	95		-		70-130	-		
Tetrahydrofuran	85		-		70-130	-		
1,2-Dichloroethane	105		-		70-130	-		
n-Hexane	84		-		70-130	-		
1,1,1-Trichloroethane	102		-		70-130	-		
Benzene	80		-		70-130	-		
Carbon tetrachloride	106		-		70-130	-		
Cyclohexane	84		-		70-130	-		
1,2-Dichloropropane	86		-		70-130	-		
Bromodichloromethane	94		-		70-130	-		
1,4-Dioxane	88		-		70-130	-		
Trichloroethene	86		-		70-130	-		
2,2,4-Trimethylpentane	84		-		70-130	-		
Heptane	85		-		70-130	-		
cis-1,3-Dichloropropene	92		-		70-130	-		
4-Methyl-2-pentanone	90		-		70-130	-		
trans-1,3-Dichloropropene	101		-		70-130	-		
1,1,2-Trichloroethane	87		-		70-130	-		
Toluene	81		-		70-130	-		
2-Hexanone	83		-		70-130	-		
Dibromochloromethane	95		-		70-130	-		
1,2-Dibromoethane	86		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-03 Batch: WG1959321-3								
Tetrachloroethene	78		-		70-130	-		
Chlorobenzene	80		-		70-130	-		
Ethylbenzene	84		-		70-130	-		
p/m-Xylene	87		-		70-130	-		
Bromoform	95		-		70-130	-		
Styrene	84		-		70-130	-		
1,1,2,2-Tetrachloroethane	81		-		70-130	-		
o-Xylene	89		-		70-130	-		
4-Ethyltoluene	85		-		70-130	-		
1,3,5-Trimethylbenzene	92		-		70-130	-		
1,2,4-Trimethylbenzene	88		-		70-130	-		
Benzyl chloride	119		-		70-130	-		
1,3-Dichlorobenzene	97		-		70-130	-		
1,4-Dichlorobenzene	98		-		70-130	-		
1,2-Dichlorobenzene	90		-		70-130	-		
1,2,4-Trichlorobenzene	94		-		70-130	-		
Naphthalene	81		-		70-130	-		
Hexachlorobutadiene	88		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 615 BROADWAY

Project Number: 170803001

Lab Number: L2445582

Report Date: 08/16/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02 Batch: WG1959874-3								
Dichlorodifluoromethane	**68**	Q	-		70-130	-		
Chloromethane	86		-		70-130	-		
Freon-114	92		-		70-130	-		
Vinyl chloride	74		-		70-130	-		
1,3-Butadiene	87		-		70-130	-		
Bromomethane	74		-		70-130	-		
Chloroethane	**67**	Q	-		70-130	-		
Ethanol	66		-		40-160	-		
Vinyl bromide	**65**	Q	-		70-130	-		
Acetone	48		-		40-160	-		
Trichlorofluoromethane	**53**	Q	-		70-130	-		
Isopropanol	48		-		40-160	-		
1,1-Dichloroethene	82		-		70-130	-		
Tertiary butyl Alcohol	95		-		70-130	-		
Methylene chloride	111		-		70-130	-		
3-Chloropropene	85		-		70-130	-		
Carbon disulfide	104		-		70-130	-		
Freon-113	104		-		70-130	-		
trans-1,2-Dichloroethene	84		-		70-130	-		
1,1-Dichloroethane	89		-		70-130	-		
Methyl tert butyl ether	97		-		70-130	-		
2-Butanone	77		-		70-130	-		
cis-1,2-Dichloroethene	87		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02 Batch: WG1959874-3								
Ethyl Acetate	96		-		70-130	-		
Chloroform	92		-		70-130	-		
Tetrahydrofuran	77		-		70-130	-		
1,2-Dichloroethane	**65**	Q	-		70-130	-		
n-Hexane	101		-		70-130	-		
1,1,1-Trichloroethane	86		-		70-130	-		
Benzene	109		-		70-130	-		
Carbon tetrachloride	88		-		70-130	-		
Cyclohexane	102		-		70-130	-		
1,2-Dichloropropane	96		-		70-130	-		
Bromodichloromethane	96		-		70-130	-		
1,4-Dioxane	103		-		70-130	-		
Trichloroethene	109		-		70-130	-		
2,2,4-Trimethylpentane	101		-		70-130	-		
Heptane	88		-		70-130	-		
cis-1,3-Dichloropropene	114		-		70-130	-		
4-Methyl-2-pentanone	86		-		70-130	-		
trans-1,3-Dichloropropene	110		-		70-130	-		
1,1,2-Trichloroethane	110		-		70-130	-		
Toluene	107		-		70-130	-		
2-Hexanone	98		-		70-130	-		
Dibromochloromethane	120		-		70-130	-		
1,2-Dibromoethane	125		-		70-130	-		

Lab Control Sample Analysis
Batch Quality Control

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 02 Batch: WG1959874-3								
Tetrachloroethene	120		-		70-130	-		
Chlorobenzene	124		-		70-130	-		
Ethylbenzene	112		-		70-130	-		
p/m-Xylene	112		-		70-130	-		
Bromoform	120		-		70-130	-		
Styrene	126		-		70-130	-		
1,1,2,2-Tetrachloroethane	123		-		70-130	-		
o-Xylene	111		-		70-130	-		
4-Ethyltoluene	118		-		70-130	-		
1,3,5-Trimethylbenzene	124		-		70-130	-		
1,2,4-Trimethylbenzene	120		-		70-130	-		
Benzyl chloride	126		-		70-130	-		
1,3-Dichlorobenzene	**132**	Q	-		70-130	-		
1,4-Dichlorobenzene	124		-		70-130	-		
1,2-Dichlorobenzene	126		-		70-130	-		
1,2,4-Trichlorobenzene	126		-		70-130	-		
Naphthalene	119		-		70-130	-		
Hexachlorobutadiene	117		-		70-130	-		

Project Name: 615 BROADWAY

Project Number: 170803001

Lab Number: L2445582

Report Date: 08/16/24

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2445582-01	SV01_081224	01167	Flow 3	08/09/24	479985		-	-	-	Pass	18.0	18.0	0
L2445582-01	SV01_081224	4417	2.7L Can	08/09/24	479985	L2443874-01	Pass	-29.6	-6.5	-	-	-	-
L2445582-02	SV02_081224	02091	Flow 3	08/09/24	479985		-	-	-	Pass	18.0	18.0	0
L2445582-02	SV02_081224	195	2.7L Can	08/09/24	479985	L2443448-02	Pass	-29.6	-7.5	-	-	-	-
L2445582-03	SV03_081224	02106	Flow 3	08/09/24	479985		-	-	-	Pass	18.0	18.3	2
L2445582-03	SV03_081224	327	2.7L Can	08/09/24	479985	L2443448-02	Pass	-29.5	-4.5	-	-	-	-
L2445582-04	UNUSED CAN #2340	01391	Flow 3	08/09/24	479985		-	-	-	Pass	18.1	18.2	1
L2445582-04	UNUSED CAN #2340	2340	2.7L Can	08/09/24	479985	L2443874-01	Pass	-29.6	-29.4	-	-	-	-
L2445582-05	UNUSED CAN #145	0753	Flow 2	08/09/24	479985		-	-	-	Pass	18.0	16.4	9
L2445582-05	UNUSED CAN #145	145	2.7L Can	08/09/24	479985	L2443874-01	Pass	-29.6	-29.4	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 08/03/24 21:25
Analyst: JFI

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	0.200	0.200	--	0.623	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	102		60-140
Bromochloromethane	103		60-140
chlorobenzene-d5	84		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 08/03/24 21:25
Analyst: JFI

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443448
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443448-02
Client ID: CAN 3001 SHELF 3
Sample Location:

Date Collected: 07/31/24 12:00
Date Received: 08/01/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	86		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 08/05/24 22:46
Analyst: JFI

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	104		60-140
Bromochloromethane	104		60-140
chlorobenzene-d5	86		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 08/05/24 22:46
Analyst: JFI

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2443874
Report Date: 08/16/24

Air Canister Certification Results

Lab ID: L2443874-01
Client ID: CAN 4418 SHELF 2
Sample Location:

Date Collected: 08/03/24 11:00
Date Received: 08/05/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	81		60-140

Project Name: 615 BROADWAY
Project Number: 170803001

Lab Number: L2445582
Report Date: 08/16/24

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2445582-01A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		TO15-LL(30)
L2445582-02A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		TO15-LL(30)
L2445582-03A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		TO15-LL(30)
L2445582-04A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		CLEAN-FEE()
L2445582-05A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	615 BROADWAY	**Lab Number:**	L2445582
Project Number:	170803001	**Report Date:**	08/16/24

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	615 BROADWAY	**Lab Number:**	L2445582
Project Number:	170803001	**Report Date:**	08/16/24

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	615 BROADWAY	**Lab Number:**	L2445582
Project Number:	170803001	**Report Date:**	08/16/24

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Nonpotable Water: EPA RSK-175 Dissolved Gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:08162415:24

AIR ANALYSIS

PAGE 1 OF 1

CHAIN OF CUSTODY

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 8/13/24

ALPHA Job #: L2445582

Client Information

Client: LANGAN DPC
Address: 360 West 31st St.
New York, NY 10001
Phone: 212-479-5400
Fax:
Email: lesmail@langan.com
☐ These samples have been previously analyzed by Alpha

Project Information

Project Name: 615 Broadway
Project Location: Kingston, New York
Project #: 170803001
Project Manager: Lamees Esmail
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due: Time:

Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☐ EMAIL (standard pdf report)
☐ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments: Please cc: datamanagement@langan.com and lhaley@langan.com

Project-Specific Target Compound List: ☐

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size (L)	ID Can	ID - Flow Controller	TO-15	TO-15 SIM	APH Subset Non-petroleum HCs ☐	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
45592-01	SV01_081224	8/12/24	10:38	12:28	-30.25	-6.77	SV	AA	2.7	441	01167	X					
02	SV02_081224	↓	10:40	12:29	-29.78	-6.89	SV	AA	2.7	195	02091	X					
03	SV03_081224	↓	10:42	12:46	-29.99	-4.53	SV	AA	2.7	327	02186	X					

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:
Andrew Ashley	8/12/24 1729		8/12/24 1730
	8/12/24 1940		8/13 0130
	8/13 0800		8/13/24 0535

APPENDIX B
Health and Safety Plan

HEALTH AND SAFETY PLAN

FOR

615 BROADWAY
Kingston, New York
BCP Site No. C356066

Prepared for

615 Broadway LLC
11 Garden Street, Suite 101
Poughkeepsie, New York 12601

Prepared by:

Langan Engineering, Environmental, Surveying
Landscape Architecture and Geology
368 Ninth Avenue, 8th Floor
New York, New York 10001

LANGAN

August 2024
Langan Project No. 170803001

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Attachment H Tailgate Safety Meeting Log

***** Items to be posted prominently on-site or made readily available to personnel.

1.0 INTRODUCTION

1.1 General

This HEALTH AND SAFETY PLAN (HASP) was developed to address disturbance of known and reasonably anticipated subsurface contaminants and comply with Occupational Safety and Health Administration (OSHA) Standard 29 Code of Federal Regulation (CFR) 1910.120(b)(4), Hazardous Waste Operations and Emergency Response during anticipated site work for the property located at 615 Broadway in the city of Kingston, New York ("the Site"). The Site is identified on the Ulster County Tax Map Section 56.109 as Tax Block 3, Lot 16.

This HASP provides the minimum requirements for implementing site operations during future remedial measures. All contractors performing work on this site must implement their own HASP that, at a minimum, adheres to this HASP. The contractor is responsible for their own health and safety and that of their subcontractors. Langan personnel will implement this HASP while onsite.

The content of this HASP may change or undergo revision based upon additional information made available to health and safety personnel, monitoring results, or changes in the work plan.

1.2 Site Location and Background

The Site is located at on a 0.77-acre commercial property located at 615 Broadway in the City of Kingston, New York. The Site contains no buildings and is developed as a paved parking lot. The Site is currently owned by the City of Kingston. Adjoining properties to the north and east are commercial, while those to the south and west are a mix of commercial and residential. A Site Location Map is provided as figure 1.

The earliest identified development of the Site was for residential uses, sometime prior to 1887. By 1950, the Site was developed with several produce warehouses and storage buildings for A.H. Guildersleeve & Sons along with several single-family residential buildings and an apartment building. By 1972, these buildings had been removed and the Site was developed with the Imperial Motel, later known as the Knights Inn. This motel was removed sometime between 2011 and 2013. Aerial photographs from 2013 show an approximately 2,000-square foot structure of unknown use. The Site is currently developed as a paved parking lot with no permanent structures.

..

1.3 Summary of Work Tasks

1.3.1 Geophysical Investigation - Underground Utility Clearance Policy

Prior to the commencement of intrusive field activities (i.e., soil borings);Langan will follow the Langan Underground Utility Clearance Policy including retaining a geophysical consultant to conduct a geophysical survey using ground penetrating radar (GPR) and electromagnetic detection equipment. The objective of the survey will be to identify any underground storage tank (UST) structures, drains, underground utilities, and other subsurface anomalies that may be encountered during the investigation. During this time Langan personnel will inspect the site and confirm investigation locations are both accessible and free of potential utility or other known or suspected subsurface structures.

1.3.2 "Soft-Dig" Clearance of Borehole Locations

If there is no geophysical survey for utility clearance or the results of the geophysical survey are inconclusive at specific locations subject to intrusive work, or otherwise in compliance with Langan's Underground Utility Clearance Policy, the drilling contractor may "soft-dig" each proposed drilling location or a separate contractor may be retained to "soft-dig" the locations to confirm they are free of utilities or other known or suspected subsurface structures. The dimensions of each location should extend to a depth of 5-feet and be about 1.5 times the anticipated diameter of the borehole when drilled. Langan personnel will confirm that the "soft dig" activities are completed to these specifications.

1.3.3 Day Lighting Excavation and Soil Screening

Langan may retain an excavation contractor to daylight buried unidentified structures. The purpose of the daylighting is to confirm if these structures are subsurface structures of concern (USTs, utilities sewer lines, storm water drains, electrical, gas or other utility line as well as other artifacts pertinent to the work plan). The excavation contractor will contact the appropriate utility mark-out authority and make available to their staff the verification number and effective dates.

The excavation contractor will employ "soft dig" methods in accordance with the Langan Underground Utility Clearance Policy when excavating. Langan may screen excavated soil for visual, olfactory, and instrumental indicators suggestive of a potential chemical or petroleum release. Instrument screening for the presence of volatile organic compounds (VOC) may be performed with a duly calibrated photoionization detector (PID). Contractors will notify Langan personnel if they identify indications suggestive of a potential chemical or petroleum release. Contaminated material shall be handled, and property disposed in accordance with federal, state and city regulations, criteria, and guidelines.

1.3.4 Soil Investigation and Sampling

Langan will retain a drilling contractor to advance soil borings to a depth below grade surface (bgs) specified in the work plan. Borings will be installed at the approximate locations indicated in Langan's work plan but may be moved in the field based on utility clearance and accessibility. The drilling contractor will contact the appropriate utility mark-out authority and make available to their drilling staff the verification number and effective dates. Langan will record the verification number and effective dates from the drillers. Langan will also note the location of marked out utilities on the site plan and scan the data into the project folder.

Langan personnel will screen soil for visual, olfactory, and instrumental indicators suggestive of a potential petroleum release. Instrument screening for the presence of VOC may be performed with a duly field calibrated PID (or equivalent). Langan personnel will collect soil samples from the proposed soil boring locations following the sampling plan outlined in the work plan. The borings will be filled with clean soil cuttings, clean sand or bentonite grout and capped at grade to match the surrounding surface after samples are collected.

Soil samples will be submitted to a specific lab per the work plan or to a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory and analyzed in accordance with work plan specifications.

1.3.5 Groundwater Investigation and Sampling

Selected soil borings will be converted into groundwater monitoring wells and sampled to evaluate groundwater quality. Groundwater samples will be collected from one or more of the new and if available, pre-existing monitoring wells in accordance with the Langan Low Flow Groundwater Sampling SOP (SOP #12). Groundwater samples will be submitted to an approved laboratory and analyzed for constituents as specified in the work plan. Temporary monitoring wells will be plugged and abandoned during the investigation in the manner defined in Section 1.3.2 for soil boring. Permanent monitoring wells will be completed with a road box set in concrete. Permanent monitoring wells will be eventually backfilled and abandoned in accordance with State and Local regulations.

Groundwater samples will be submitted to a NYSDOH ELAP-certified laboratory and analyzed in accordance with work plan specifications.

1.3.6 Groundwater/Product Gauging

Langan may gauge one or more of the observation/monitoring wells to collect synoptic head data or determine the presence of product. When gauging, Langan may also survey head

space VOCs within the well using a duly calibrated PID. When collected, gauging data will be based on the northernmost point at top of casing (TOC) using an interface probe (IP) capable of determining the presence of free product in the monitoring well as light non-aqueous phase liquid (LNAPL) at the top of the water column. If gauging for dense non-aqueous phase liquid (DNAPL) at the base of the monitoring well, the IP may not be appropriate. The field engineer will coordinate with the project team to devise an alternative method to gauge the thickness of DNAPL at base of the well. Langan will decontaminate gauging equipment between wells as required by the work plan.

1.3.7 Product Bailing

Langan may remove free product from on-site monitoring wells as part of this HASP or subsequent SMP activities. Langan will may use a bailer, peristaltic pump or submersible as determined by the work plan. Langan will record the volume of product and groundwater recovered. Recovered product and groundwater will be drummed in accordance with procedures outlined in the work plan.

1.3.8 Sub Slab or Soil Vapor Point Installation and Sampling

Langan (or its contractor) will install one or more sub-slab or soil vapor points at selected locations. If installed, the sub-slab points will be set at or just below the bottom of the slab in accordance with the work plan. The sub-slab points may be installed using an electric hammer drill to advance small diameter borings through the concrete (or equivalent) slab as defined in the work plan. The borings will terminate in and sample from the gravel substrate below the slab. Conditions in the field may require adjustment of sampling locations.

Langan personnel (or contractor) may install VaporPin® vapor points (or equivalent) in accordance with the manufacturer's instructions. If no point is used, Langan (or contractor) will set a sampling tube defined as an open-ended Teflon™-lined polyethylene tubing (or equivalent tubing as approved by the project manager [PM]). The sampling tube will be set either within the base of the concrete slab or within the support gravel underlying the slab.

When using the VaporPin® or equivalent, the installation sleeve will provide the necessary annulus seal required for subsequent sampling. However, if a sampling tube as defined above is use, the annulus at the top of the concrete slab will be filled with bentonite or food grade clay to seal the slab. A sand pack is not required for sub-slab vapor sampling. Unless specified by the work plan, the sub slab points are temporary and will be pulled after the sampling event and the hole will be patched at grade with material similar to the surrounding surface.

Langan personnel will confirm that the soil vapor points (implants) are 2-inches in length

constructed of polyethylene material and are connected to the surface by Teflon™-line polyethylene material (equivalent materials for the point and tubing are acceptable as approved by the PM). The annulus around the implant will be filled with clean sand to 6-inches above the implant. A 1-foot bentonite slurry will be applied to the top of the sand up to seal the sampling points. The remaining soil vapor point annulus may be backfilled with clean cuttings are sand to grade. Unless specified by the work plan, the vapor points are temporary and will be pulled after the sampling event and the hole will be patched at grade with material similar to the surrounding surface.

Vapor samples will be collected in accordance with following guidance including Final Guidance for Evaluating Soil Vapor Intrusion published by the New York State Department of Health (NYSDOH) in October 2006, Langan's Sub-Slab Vapor Sampling SOP (SOP #14) and as specified in the work plan. In addition, ambient air and indoor air samples may be collected for use as a comparison sample. As part of the indoor air sampling program, Langan personnel may complete a building inventory inspection. The inspection may take place prior to the commencement of actual field sampling. Vapor samples may be submitted to a NYSDOH ELAP-certified laboratory and analyzed in accordance with work plan specifications.

1.3.9 Observation/Monitoring Well Plugging and Abandonment

At an unspecified future date, the observation/monitoring wells will be abandoned. Plugging and abandonment will be in accordance with federal and state requirements. Langan may retain a drilling contractor to complete the plugging and abandonment activities. The contractor will contact the appropriate utility mark-out authority and make available to their field staff the verification number and effective dates. Langan may observe the plugging and abandonment of one or more observation/monitoring wells to document that the plugging and abandonment activities were completed in accordance with the work plan and regulations.

1.3.10 QA/QC Sampling

Samples for quality assurance/quality control [QA/QC] may also be collected and submitted to an approved laboratory and analyzed in accordance with work plan specifications. Information regarding the QA/QC samples including required method of analysis may be included in the same COC as the soil samples unless otherwise instructed by the work plan.

1.3.11 Equipment Decontamination

Before the start of the day's sampling and after sampling each run, sampling equipment will be decontaminated by the decontamination process outlined Attachment B - Decontamination Procedures. Decontamination wastes and purge water will be temporarily stored on site pending

analytical results.

1.3.12 Management of Investigative-Derived Waste

The investigative-derived waste (IDW) generated during this investigation will be contained in DOT-approved 55-gallon drums. The drums will be temporarily stored on the site or as directed by the client representative. All drums will be filled between to two-thirds full to allow easy maneuvering during drum pickup and disposal. Drum labels are to be provided by Langan (Environmental Closet). All drums will be labeled as "IDW Pending Analysis" until sample data are reported from the laboratory. Drum labels will include date filled and locations where waste was generated along with the standard information required by the labels in accordance with the Langan SOP09, Drum Labeling.

Closed top drums are to be used to store liquids. Debris, including plastic sheeting, polyethylene tubing, personal protection equipment (PPE), decontamination debris, etc. will be segregated from and disposed in large heavy duty garbage bags and disposed of at the site. Excess unused glassware should be returned to the lab along with the last day of collection samples.

1.3.13 Drum Sampling

Langan personnel may collect drum samples, as required, prior to off-site drum disposal. Samples will be placed into laboratory-supplied batch-certified clean glassware and submitted to an approved laboratory and analyzed in accordance with work plan specifications, if required.

1.3.14 Surveying

Surveying activities may be completed by Langan. Surveying will be conducted by licensed surveyors.

2.0 IDENTIFICATION OF KEY PERSONNEL/HEALTH AND SAFETY PERSONNEL

The following briefly describes the health and safety (H&S) designations and general responsibilities that may be employed for this site. The titles have been established to accommodate the project needs and requirements and ensure the safe conduct of site activities. The H&S personnel requirements for a given work location are based on the proposed site activities.

2.1 Langan Project Manager

The Langan Environmental Project Manager (PM) is Lamees Esmail, her responsibilities include:

- Ensuring that this HASP is developed, current, and approved prior to on-site activities.
- Ensuring that the tasks in the project are performed in a manner consistent with Langan's comprehensive *Health and Safety Program for Hazardous Waste Operations* and this HASP.

2.2 Langan Corporate Health and Safety Manager

The Langan Corporate Health and Safety Manager is Tony Moffa. His responsibilities include:

- Updating the *Construction Health and Safety Program for Hazardous Waste Operations*.
- Assisting the site Health and Safety Officer (HSO) with the development of the HASP, updating HASP as dictated by changing conditions, job site inspection results, etc., and approving changes to this HASP.
- Assisting the HSO in the implementation of this HASP and conducting Jobsite Safety Inspections and assisting with communication of results and correction of shortcomings found.
- Maintaining records on personnel (medical evaluation results, training and certifications, accident investigation results, etc.).

2.3 Langan Site Health & Safety Officer

The Langan site HSO is William Bohrer. His responsibilities include:

- Participating in the development and implementation of this HASP.
- When on-site, assisting the Langan Field Team Leader in conducting Tailgate Safety Meetings and Jobsite Safety Inspections and correcting any shortcomings in a timely manner.
- Ensuring that proper PPE is available, worn by employees, and properly stored and maintained.
- Controlling entry into and exit from the site contaminated areas or zones.
- Monitoring employees for signs of stress, such as heat stress, fatigue, and cold exposure.
- Monitoring site hazards and conditions.
- Knowing (and ensuring that all site personnel also know) emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.
- Resolving conflicts that may arise concerning safety requirements and working conditions.
- Reporting all incidents, injuries, and near misses to the Langan Incident/Injury Hotline immediately and the client representative.

2.4 Langan Field Team Leader Responsibilities

The Langan Field Team Leader (FTL) is to be determined prior to the start of field activities. The Field Team Leader's responsibilities include:

- The management of the day-to-day site activities and implementation of this HASP in the field.
- Participating in and/or conducting Tailgate Safety Meetings and Jobsite Safety Inspections and correcting any shortcomings in a timely manner.
- When a Community Air Monitoring Operating Program (CAMP) is part of the scope, the FTL will set up and maintain community air monitoring activities and instruct the responsible contractor to implement organic vapor or dust mitigation when necessary.
- Overseeing the implementation of activities specified in the IRMWP.

2.5 Contractor Responsibilities

The contractor must develop and implement their own HASP for their employees, their subcontractors, and consultants. The contractor is responsible for their own health and safety and that of their subcontractors. Contractors operating on the site must designate their own FTL, HSO, and Health and Safety Manager (HSM). The contractor's HASP will be at least as stringent as this HASP. The contractor must be familiar with and abide by the requirements outlined in their own HASP. A contractor may elect to adopt Langan's HASP as its own provided that it has given written notification to Langan, but where Langan's HASP excludes provisions pertinent to the contractor's work (i.e., confined space entry); the contractor must provide written addendums to this HASP. Additionally, the contractor must:

- Ensure their employees are trained in the use of all appropriate PPE for the tasks involved.
- Notify Langan of any hazardous material brought onto the job site or site-related area, the hazards associated with the material, and must provide a material safety data sheet (MSDS) or safety data sheet (SDS) for the material.
- Have knowledge of, understand, and abide by all current federal, state, and local health and safety regulations pertaining to the work.
- Ensure their employees handling hazardous materials, if identified at the Site, have received current training in the appropriate levels of 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response* (HAZWOPER) if hazardous waste is identified at the Site.
- Ensure their employees handling hazardous materials, if identified at the Site, have been fit-tested within the year on the type of respirator they will wear; and
- Ensure all air monitoring is in place pertaining to the health and safety of their employees as required by OSHA 1910.120; and

- All contractors must adhere to all federal, state, and local regulatory requirements.

3.0 TASK/OPERATION SAFETY AND HEALTH RISK ANALYSES

A Task-Hazard Analysis (Table 1) was completed for general construction hazards that may be encountered at the Site. The potential contaminants that might be encountered during the field activities and the exposure limits are listed in Table 2 complete inventory of MSDS/SDS for chemical products used on site is included in Attachment E.

3.1 Specific Task Safety Analysis

3.1.1 Geophysical Survey

Langan personnel are not permitted to operate or otherwise handle the geophysical equipment including any downhole geophysical equipment subsequently used to survey boreholes. When boring locations are surveyed with surface geophysical equipment, the locations of the borings as well as utilities and other artifacts that may interfere with the subsurface investigation are to be marked with indelible paint, flags, or color tape (when marking indoor locations that the client has specifically requested not be marked with indelible paint). This information must also be added to the site map. When applying paint, proper PPE including at a minimum hand protection should be used.

3.1.2 "Soft Dig" Clearance of Borehole Locations

"Soft-Dig" clearance will be completed by the contractor. Langan personnel are not permitted to operate or otherwise handle the contractor's equipment. Langan will update the site map to include the locations of the cleared borehole locations as well as utilities and other artifacts that may interfere with the subsurface investigation.

3.1.3 Daylighting Test Pit

Excavation daylighting must abide by OSHA excavation standards (Part 1926.651) and conform to the Langan Underground Utility Clearance Policy. Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate excavation equipment. This task is to be completed by the excavation contractor.

3.1.4 Indoor Drilling and Excavation

The work scope may require indoor excavation where there may not be adequate ventilation sufficient to safely operate any rig or excavation equipment powered by an internal combustion engine. Where possible, all such work should be done by equipment powered by electricity. If such equipment is used and must be directly wired to the buildings electrical system or to an independent system, this work must be completed by a licensed electrician in accordance with all electrical codes applicable to the work.

Indoor work which is to be completed with equipment powered by an internal combustion engine must incorporate air monitoring of carbon monoxide (CO) using calibrated air monitoring equipment (MultiRAE or equivalent). In addition, the work plan should incorporate mitigation for venting engine exhaust fumes directly to the outdoors and for circulating fresh air into the work area.

The OSHA Time Weighted Average (TWA) Permissible Exposure Limit (PEL) for CO from 50 to 35 parts per million (ppm). Langan will monitor CO with a suitable monitoring device. If CO levels exceed 5 ppm, Langan will instruct contractors to begin mitigation measures. These measures are at a minimum:

- Increase air circulation using industrial size fans to bring additional fresh air into the building or vent exhaust to the outside.
- Modify the passive exhaust method being used to increase venting circulation by using wider diameter tubing or sealing tubing connections; or
- Modify the work schedule where the rig is turned off to allow time for CO levels to fall back to background.

All work must cease if CO levels reach 35 ppm. The Langan engineer is to report to the PM and H&S officer when an action level is reached.

3.1.5 Soil Investigation and Sampling

Sampling the soil requires the donning of chemical resistant gloves in addition to the standard PPE. Langan personnel are not to operate drilling or excavation equipment nor open sampling devices (acetate liners, sonic sample bags, etc.). These tasks are to be completed by the driller or excavation contractor.

3.1.6 Groundwater Investigation and Sampling

Sampling groundwater requires the donning of chemical resistant gloves in addition to the standard PPE and cut resistant gloves when cutting sampling-tubing to length. Langan personnel

are not to operate drilling equipment nor assemble or install monitoring well equipment. These tasks are to be completed by the driller contractor.

1.3.7 Groundwater/Product Gauging

Gauging product requires additional safety considerations including the presence of VOCs and protection of both field cloths and property. Langan will monitor air for VOCs using a duly calibrated PID. Langan will don protective clothing including Tyvek® over-cloths, as necessary. To protect property, Langan will work set a plastic barrier to protect floors or protect landscaping and use absorbent pads as necessary to collect pooled product. If sampling for PFAS from the same well, Langan will complete the product check first, if the well can be sampled without including product, Langan will remove the Tyvek® material from the well head vicinity.

3.1.8 Product Recovery Well Bailing

Langan may bail free product from monitoring wells. Free product bailing requires the donning of Tyvek™ suits, Tyvek™ boots and chemical resistant gloves in addition to the standard PPE and cut resistant gloves when cutting sampling-tubing to length. In addition, Langan will place plastic sheeting around the recovery well head to control spillage during product recovery. Langan will also keep on hand and readily available product absorbing pads to use as needed.

3.1.9 Electrical Pumps

Langan may use an electric pump to collect product from the recovery wells or to sample groundwater. Langan will inspect the electric pump and control box prior to use and specifically note the condition of the electrical connectors, pump, control box and the electrical cord. The electrical connection must be a grounded and connect to the power source using a functional three prong grounded plug. The power source must be a Ground Fault Circuit Interrupter (GFI or GFCI) receptacle.

3.1.10 Vapor Investigation and Sampling

Sampling vapor requires the donning of work gloves in addition to the standard PPE when assembling the Summa™ canister with the regulator and cut resistant gloves when cutting sampling- or silicone-tubing to length. Langan personnel are not to operate contractor equipment nor assemble or install the contractor vapor point sampling equipment unless instructed by the work plan. When not instructed by the work plan, these tasks are to be completed by the contractor.

3.1.11 Additional Vapor Screening

Langan personnel may prescreen vapor samples for volatile organic compounds (VOCs), methane, hydrogen sulfide and lower explosion limit (LEL) conditions using duly calibrated devices design to screen vapor for these parameters. Langan personnel may also perform atmospheric screening for LEL. Results of the screening may be used in determining which soil vapor samples will be submitted for analysis.

Work activities will immediately cease, and the work area is to be evacuated if the MultiRAE returns a reading of 10% of the LEL (an alarm will sound). Langan personnel will contact the Langan PM. Instrument action levels for monitored gases are provided in Table 4.

3.1.12 Plugging and Abandonment of Observation/Monitoring Wells

Langan personnel are not to operate equipment nor assist in the plugging and abandonment of the observation/monitoring wells. These tasks are to be completed by the contractor.

3.1.13 Drum Sampling

Drilling fluid, rinse water, grossly contaminated soil samples, and cuttings will be containerized in 55-gallon drums for disposal off-site. Each drum must be labeled in accordance with the Langan Drum Labeling Standard Operating Procedure (SOP09). Sampling drums requires the donning of work gloves when opening the drums and chemical resistant gloves when sampling in addition to standard PPE.

Langan personnel and contractors are not to move or open any orphaned (unlabeled) drum found on the site without approval of the project manager.

3.2 Radiation Hazards

No radiation hazards are known or expected at the site.

3.3 Physical Hazards

Physical hazards, which may be encountered during site operations for this project, are detailed in Table 1.

3.3.1 Explosion

No explosion hazards are expected for the scope of work at this site.

3.3.2 Heat Stress

The use of Level C protective equipment, or greater, may create heat stress. Monitoring of personnel wearing personal protective clothing should commence when the ambient temperature is 72°F or above. Table 6 presents the suggested frequency for such monitoring. Monitoring frequency should increase as ambient temperature increases or as slow recovery rates are observed. Refer to Table 7 to assist in assessing when the risk for heat-related illness is likely. To use this table, the ambient temperature and relative humidity must be obtained (a regional weather report should suffice). Heat stress monitoring should be performed by the HSO or the FTL, who must be able to recognize symptoms related to heat stress.

To monitor the workers, be familiar with the following heat-related disorders and their symptoms:

- **Heat Cramps:** Painful spasms of arm, leg, or abdominal muscles, during or after work
- **Heat Exhaustion:** Headache, nausea, dizziness; cool, clammy, moist skin; heavy sweating; weak, fast pulse; shallow respiration, normal temperature
- **Heat Stroke**: Headache, nausea, weakness, hot dry skin, fever, rapid strong pulse, rapid deep respirations, loss of consciousness, convulsions, coma. *This is a life-threatening condition***.**

Do not permit a worker to wear a semi-permeable or impermeable garment when they are showing signs or symptoms of heat-related illness.

To monitor the worker, measure:

- **Heart rate:** Count the radial pulse during a 30-second period as early as possible in the rest period. If the heart rate exceeds 100 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third and keep the rest period the same. If the heart rate still exceeds 100 beats per minute at the next rest period, shorten the following work cycle by one-third. A worker cannot return to work after a rest period until their heart rate is below 100 beats per minute.
- **Oral temperature:** Use a clinical thermometer (3 minutes under the tongue) or a similar device to measure the oral temperature at the end of the work period (before drinking). If oral temperature exceeds 99.6^{O}F (37.6^{O}C), shorten the next work cycle by one-third without changing the rest period. A worker cannot return to work after a rest period until their oral temperature is below 99.6^{O}F. If oral temperature still exceeds 99.6^{O}F (37.6^{O}C) at the beginning of the next rest period, shorten the following cycle by one-third. Do not permit a worker to wear a semi-permeable or impermeable garment when oral temperature exceeds 100.6^{O}F (38.1^{O}C).

Prevention of Heat Stress - Proper training and preventative measures will aid in averting loss of worker productivity and serious illness. Heat stress prevention is particularly important because once a person suffers from heat stroke or heat exhaustion, that person may be predisposed to additional heat-related illnesses. To avoid heat-stress the following steps should be taken:

- Adjust work schedules.
- Mandate work slowdowns as needed.
- Perform work during cooler hours of the day if possible or at night if adequate lighting can be provided.
- Provide shelter (air-conditioned, if possible) or shaded areas to protect personnel during rest periods.
- Maintain worker's body fluids at normal levels. This is necessary to ensure that the cardiovascular system functions adequately. Daily fluid intake must equal the amount of water lost in sweat, i.e., eight fluid ounces (0.23 liters) of water must be ingested for every eight ounces (0.23 kilograms [kg]) of weight lost. The normal thirst mechanism is not sensitive enough to ensure that enough water will be drunk to replace lost sweat. When heavy sweating occurs, encourage the worker to drink more. The following strategies may be useful:
    - Maintain water temperature 50° to 60°F (10° to 16.6^{o}C).
    - Provide small disposal cups that hold about four ounces (0.1 liters).
    - Have workers drink 16 ounces (0.5 liters) of fluid (preferably water or dilute drinks) before beginning work.
    - Urge workers to drink a cup or two every 15 to 20 minutes, or at each monitoring break. A total of 1 to 1.6 gallons (4 to 6 liters) of fluid per day are recommended, but more may be necessary to maintain body weight.
    - Train workers to recognize the symptoms of heat-related illness.

3.3.3 Cold-Related Illness

If work on this project begins in the winter months, thermal injury due to cold exposure can become a problem for field personnel. Systemic cold exposure is referred to as hypothermia. Local cold exposure is called frostbite.

- **Hypothermia -** Hypothermia is defined as a decrease in the patient core temperature below 96°F. The body temperature is normally maintained by a combination of central (brain and spinal cord) and peripheral (skin and muscle) activity. Interference with any of these mechanisms can result in hypothermia, even in the absence of what normally is considered a "cold" ambient temperature. Symptoms of hypothermia include shivering, apathy, listlessness, sleepiness, and unconsciousness.

- **Frostbite -** Frostbite is both a general and medical term given to areas of local cold injury. Unlike systemic hypothermia, frostbite rarely occurs unless the ambient temperatures are less than freezing and usually less than 20°F. Symptoms of frostbite are a sudden blanching or whitening of the skin; the skin has a waxy or white appearance and is firm to the touch; tissues are cold, pale, and solid.

Prevention of Cold-Related Illness - To prevent cold-related illness:

- Educate workers to recognize the symptoms of frostbite and hypothermia.
- Identify and limit known risk factors:
- Assure the availability of an enclosed, heated environment on or adjacent to the site.
- Assure the availability of dry changes of clothing.
- Assure the availability of warm drinks.
- Start (oral) temperature recording at the job site:
- At the FSO or Field Team Leader's discretion when suspicion is based on changes in a worker's performance or mental status.
- At a worker's request.
- As a screening measure, two times per shift, under unusually hazardous conditions (e.g., wind-chill less than 20°F, or wind-chill less than 30°F with precipitation).
- As a screening measure whenever anyone worker on the site develops hypothermia.

Any person developing moderate hypothermia (a core temperature of 92°F) cannot return to work for 48 hours.

3.3.4 Noise

Work during the proposed activities may be conducted at locations with high noise levels from the operation of equipment. Hearing protection will be used, as necessary.

3.3.5 Hand and Power Tools

The use of hand and power tools can present a variety of hazards, including physical harm from being struck by flying objects, being cut, or struck by the tool, fire, and electrocution. All hand and power tools should be inspected for health and safety hazards prior to use. If deemed unserviceable/un-operable, notify the supervisor and tag equipment out of service. Ground Fault Circuit Interrupters (GFCIs) are required for all power tools requiring direct electrical service.

3.3.6 Slips, Trips, and Fall Hazards

Care should be exercised when walking at the site, especially when carrying equipment. The presence of surface debris, uneven surfaces, pits, facility equipment, and soil piles contribute to

tripping hazards and fall hazards. To the extent possible, all hazards should be identified and marked on the site, with hazards communicated to all workers in the area.

3.3.7 Utilities (Electrocution and Fire Hazards)

3.3.7.1 Utility Clearance

The possibility of encountering underground utilities poses fire, explosion, and electrocution hazards. All excavation work will be preceded by a review of available utility drawings and by notification of the subsurface work to N.Y. One –Call--Center.

3.3.7.2 Lockout-Tagout

The potential adverse effects of electrical hazards include burns, arc flashes, and electrocution, which could result in serious injury including death. Therefore, there is a procedure that establishes the requirements for the lockout/tag out (LOTO) of energy isolating devices in accordance with the OSHA electrical lockout and tagging requirements as specified in 29CFR1910.147 and 29 CFR 1926.417. This procedure will be used to ensure that all machines and equipment are isolated from potentially hazardous energy. If possible, equipment that could cause injury due to unexpected energizing, start-up, or release of stored energy will be locked/tagged, before field personnel perform work activities.

The facility owner/operator/representative is to be the authorized person that will initiate and perform the LOTO in accordance with applicable rules and practices. Inerting of electrical power sources is to be completed by an authorized and licensed electrician. Langan personnel will follow LOTO protocols and practices including adding a separate lock/signature to the LOTO chain in accordance with said protocols and practices.

SPECIAL NOTE: Project personnel will assume that all electrical equipment at the surface, subsurface, and overhead locations are energized until equipment has been designated and confirmed as de-energized by a utility company representative. Langan will notify the designated utility representative prior to working adjacent to this equipment and will verify that the equipment is energized or de-energized in the vicinity of the work location. No project work shall be performed by Langan personnel or subcontractors near energized electrical lines or equipment.

The FTL shall accompany the designated facility owner/operator/representative or authorized/licensed electrician in surveying to locate and identify all energy-isolating devices. Langan will note which switches, valves or other isolating devices are used for inerting the equipment and how they are set assuring LOTO. The lockout/tagout procedure involves, but is not limited to, electricity, motors, steam, natural gas, compressed air, hydraulic systems, digesters, sewers, etc.

3.3.8 Adequate Lighting

Indoor or night activities must be done under adequate lighting conditions. The Langan field engineer must be able to clearly see the equipment, all controls and have sufficient lighting to detail color labels. Battery operated lights are sufficient provided they cast a wide enough field to provide the required lighting and there are back-up batteries and emergency flashlights available. Electrically powered lights are suitable provided the electrical source is equipped with a ground fault interrupt circuit (GFIC) and the extensions cords are visually inspected and not used if they show cracked or missing insulation. If a generator is supplying the electricity, it must be outdoors and properly vented.

3.3.9 Physical Hazard Considerations for Material Handling

There are moderate to severe risks associated with moving heavy objects at the Site. The following physical hazards should be considered when handling materials at the Site:

- Heavy objects will be lifted and moved by mechanical devices rather than manual effort whenever possible.
- The mechanical devices will be appropriate for the lifting of moving tasks and will be operated only by trained and authorized personnel.
- Objects that require special handling or rigging will only be moved under the guidance of a person who has been specifically trained to move such objects.
- Lifting devices will be inspected, certified, and labeled to confirm their weight capacities. Defective equipment will be taken out of service immediately and repaired or destroyed.
- The wheels of any trucks being loaded or unloaded will be choked to prevent movement. Outriggers will be fully extended on a flat, firm surface during operation.
- Personnel will not pass under a raised load, nor will a suspended load be left unattended.
- Personnel will not be carried on lifting equipment unless it is specifically designed to carry passengers.
- All reciprocating, rotating, or other moving parts will be guarded at all times.
- Accessible fire extinguishers, currently (monthly) inspected, will be available in all mechanical lifting devices.
- Verify all loads/materials are secure before transportation.

Material handling tasks that are unusual or require specific guidance will need a written addendum to this HASP. The addendum must identify the lifting protocols before the tasks are performed. Upon approval, the plan must be reviewed with all affected employees and documented. Any deviation from a written plan will require approval by the Langan HSM.

3.3.10 Hearing Conservation

Under the construction industry standard, the maximum permissible occupational noise exposure is 90 A-weighted decibels (dbA) (8-hour TWA), and noise levels in excess of 90 dbA must be reduced through feasible administrative and engineering controls (20 CFR 1926.52). Hearing protection is required when working within 15 feet of vacuum extraction equipment and drill rigs.

3.3.11 Open Water

Employees working over or near water, where the danger of drowning exists, must be provided with U.S. Coast Guard-approved life jackets or buoyant work vests. Prior to and after each use, the buoyant work vests or life preservers must be inspected for defects that would alter their strength or buoyancy. Defective units must not be used.

And should a worker fall into the water, OSHA requires (29 CFR 1926.106(c)) that ring buoys with at least 90 feet of the line must be provided and readily available for emergency rescue operations. The distance between ring buoys must not exceed 200 feet. Another remedial action required by OSHA (29 CFR 1926.106(d)) is the use of lifesaving skiffs.

OSHA requires that at least one lifesaving skiff must be immediately available at locations where employees are working over or adjacent to water and must include the following provisions.

- The skiff must be in the water or capable of being quickly launched by one person.
- At least one person must be present and specifically designated to respond to water emergencies and operate the skiff at all times when there are employees above water.
- When the operator is on break another operator must be designated to provide requisite coverage when there are employees above water.
- The designated operator must either have the skiff staffed at all times or have someone remain in the immediate area such that the operator can quickly reach the skiff and perform rescue services.
- The skiff operator may be assigned other tasks provided the tasks do not interfere with the operator's ability to quickly reach the skiff.
- A communication system, such as a walkie-talkie, must be used to inform the skiff operator of an emergency and to inform the skiff operator where the skiff is needed.
- The skiff must be equipped with both a motor and oars.

With regard to the number of skiffs required and the appropriate maximum response time, the following factors must be evaluated:

- The number of work locations where there is a danger of falling into water.
- The distance to each of those locations.

- Water temperature and currents.
- Other hazards such as, but not limited to, rapids, dams, and water intakes.

Other regulations that present H&S practices and PPE for work on or near water include: 29 CFR 1910, Subpart T (401 – 440)

3.4 Biological Hazards

3.4.1 Animals

There is a possibility of encountering wildlife including reptiles, rodents, and other small and medium-size mammals. Langan personnel are to avoid interacting with any wildlife.

3.4.2 Insects

Ticks and other biting or stinging insects may be encountered during site operations. Langan personnel should take necessary precautions including donning long sleeve shirts and insecticide to prevent bites and stings. After fieldwork, Langan personnel should perform a complete visual inspection of their clothing to insure they are not inadvertently harboring ticks. If they do observe a tick bite, they are to contact the HSM or HSO and report the event.

3.4.3 Plants

Poisonous plants may be encountered during site operations. Langan personnel should take necessary precautions including donning long sleeve shirts and applying preventative poison Ivy/Sumac lotion to prevent or limit the effects of exposure. If after fieldwork, Langan employees do observe a reaction to poisonous plant exposure, they are to contact the HSM or HSO and report the event.

3.4.4 Mold

This section is restricted to subsurface investigations where sampling soil, groundwater, soil or sub-slab vapor or ambient air in an indoor environment with slight to moderate mold impact. Mold exposure symptoms include nasal stuffiness, eye irritation, or wheezing.

The Langan field engineer is required to don a ½ face respirator with a minimum p-100 particulate filter and Tyvek™ type overclothing before entering mold impacted indoor work area. The Langan field engineer must be medically cleared and have been properly fitted for a respirator before donning one.

3.5 Additional Safety Analysis

3.5.1 Presence of Non-Aqueous Phase Liquids (NAPL)

Special care and PPE should be considered when NAPL is observed as NAPL is a typically flammable fluid and releases VOCs known to be toxic and/or carcinogenic. If NAPL is present in a monitoring well, vapors from the well casing may contaminate the work area breathing zone with concentrations of VOCs potentially exceeding health and safety action levels. In addition, all equipment used to monitor or sample NAPL (or ground water from wells containing NAPL) must be intrinsically safe. Equipment that directly contacts NAPL must also be resistant to organic solvents.

At a minimum, a PID should be used to monitor for VOCs when NAPL is observed. If NAPL is expected to be observed in an excavation or enclosed area, air monitoring must be started using calibrated air monitoring equipment designed to sound an audio alarm when atmospheric concentrations of VOC are within 10% of the LEL. In normal atmospheric oxygen concentrations, the LEL monitoring may be done with a Wheatstone bridge/catalytic bead type sensor (i.e., MultiRAE). However, in oxygen-depleted atmospheres (confined space), only an LEL designed to work in low-oxygen environments may be used. Best practices require that the LEL monitoring unit be equipped with a long sniffer tube to allow the LEL unit to remain outside the UST excavation.

When NAPL is present, Langan personnel are required to use disposable nitrile gloves at all times to prevent skin contact with contaminated materials. They should also consider having available a respirator and protective clothing (Tyvek® overalls), especially if NAPL is in abundance and there are high concentrations of VOCs.

All contaminated disposables including PPE and sampling equipment must be properly disposed of in labeled 55-gallon drums.

3.6 Job Safety Analysis

A Job Safety Analysis (JSA) is a process to identify existing and potential hazards associated with each job or task so these hazards can be eliminated, controlled, or minimized. A JSA will be performed at the beginning of each workday, and additionally whenever an employee begins a new task or moves to a new location. All JSAs must be developed and reviewed by all parties involved. A blank JSA form and documentation of completed JSAs are in Attachment G.

4.0 PERSONNEL TRAINING

4.1 Basic Training

Completion of an initial 40-hour HAZWOPER training program as detailed in OSHA's 29 CFR 1910.120(e) is required for all employees working on a site engaged in hazardous substance removal or other activities which expose or potentially expose workers to hazardous substances, health hazards, or safety hazards as defined by 29 CFR 1910.120(a). Annual 8-hour refresher training is also required to maintain competencies to ensure a safe work environment. In addition to these training requirements, all employees must complete the OSHA 10-hour Construction Safety and Health training and supervisory personnel must also receive eight additional hours of specialized management training. Training records are maintained by the HSM.

4.2 Initial Site-Specific Training

Training will be provided to specifically address the activities, procedures, monitoring, and equipment for site operations at the beginning of each field mobilization and the beginning of each discrete phase of work. The training will include the site and facility layout, hazards, and emergency services at the site, and will detail all the provisions contained within this HASP. For a HAZWOPER operation, training on the site must be for a minimum of 3 days. Specific issues that will be addressed include the hazards described in Section 3.0.

4.3 Tailgate Safety Briefings

Before starting work each day or as needed, the Langan HSO will conduct a brief tailgate safety meeting to assist site personnel in conducting their activities safely. Tailgate meetings will be documented in Attachment H. Briefings will include the following:

- Work plan for the day.
- Review of safety information relevant to planned tasks and environmental conditions.
- New activities/tasks being conducted.
- Results of Jobsite Safety Inspection Checklist.
- Changes in work practices.
- Safe work practices; and
- Discussion and remedies for noted or observed deficiencies.

5.0 MEDICAL SURVEILLANCE

All personnel who will be performing fieldwork involving potential exposure to toxic and hazardous substances (defined by 29 CFR 1910.120(a)) will be required to have passed an initial baseline medical examination, with follow-up medical exams thereafter, consistent with 29 CFR

1910.120(f). Medical evaluations will be performed by, or under the direction of, a physician board-certified in occupational medicine.

Additionally, personnel who may be required to perform work while wearing a respirator must receive medical clearance as required under CFR 1910.134(e), *Respiratory Protection*. Medical evaluations will be performed by, or under the direction of, a physician board-certified in occupational medicine. Results of medical evaluations are maintained by the HSM.

5.1 Mercury Monitoring

Langan includes medical monitoring for mercury during the initial baseline and annual physical.

5.2 Coronavirus

General Preventative Measures

Field personnel must follow general proper hygiene measures while in the field including:

- Avoid touching eyes, nose, and mouth.
- Cover coughs or sneezes with tissue and throw in the trash.
- Wash hands often with soap and water for 20 seconds after going to the bathroom, before eating, after blowing nose, coughing, or sneezing.
- Use hand sanitizer with at least 60% alcohol if soap and water are not available.
- Avoid physical contact with other people (e.g., no handshakes).
- Maintain a safe distance of at least six feet from other people (social distancing).
- Wear face coverings when around other workers to minimize the spread of COVID-19. (May be required in certain states or locations.)

Construction Trailers

Employees should avoid the use of shared construction trailers or where employees cannot maintain a safe distance (minimum 6 feet) from other workers. If trailer use is needed, areas such as desks, phones, chairs, and other common areas, should be cleaned and disinfected before and after use. Protocols should be developed to minimize trailer use to essential personnel, restrict use from any workers who are ill or showing symptoms of being ill, use face coverings and ensure a safe distance of six feet can be established between workers.

Communication

Include Coronavirus topics and prevention topics in daily tailgate meetings to ensure Coronavirus awareness is communicated daily. Discussions can focus on general topics including social

distancing, prevention measures for field personnel, signs and symptoms, and recent news on the Coronavirus. Site-specific topics should include minimizing face-to-face contact, disinfecting/sterilizing field equipment, use of PPE to reduce exposure, site security, use of face coverings, and other potential exposure issues/concerns.

Sick/Ill Workers

No Langan employee is permitted to be onsite when ill and/or showing potential symptoms of the Coronavirus. Symptoms of the Coronavirus may appear 2-14 days after exposure and can range from mild to severe. The most common symptoms include fever, fatigue, dry cough, shortness of breath chills, repeated shaking with chills, muscle pain, headache, sore throat, or new loss of taste or smell. If an employee or subcontractor is observed being ill or exhibiting symptoms of Coronavirus, employees must immediately utilize their Stop Work Authority and contact their project manager to address the situation. If an employee observes another worker onsite exhibiting symptoms of Coronavirus, immediately utilize Stop Work Authority, notify their project manager, and site construction manager or safety officer. Work should resume when the safety and health of Langan and subcontractors is adequately addressed.

6.0 PERSONAL PROTECTIVE EQUIPMENT

6.1 Levels of Protection

Langan will provide PPE to Langan employees to protect them from the specific hazards they are likely to encounter on-site. Directly hired contractors will provide their employees with equivalent PPE to protect them from the specific hazards likely to be encountered on-site. Selection of the appropriate PPE must take into consideration: (1) identification of the hazards or suspected hazards; (2) potential exposure routes; and (3) the performance of the PPE construction (materials and seams) in providing a barrier to these hazards.

Human exposure to contaminants found in the subsurface can occur through three primary routes:

- Inhalation of gases, vapors, dust, or mists is a common route of exposure. Chemicals can enter and irritate the airways and the lungs. They can become deposited in the airways or can be absorbed through the lungs into the bloodstream.
- Direct contact of contaminants with the skin or eyes is a common route of exposure. Some substances are absorbed through the skin and can enter the bloodstream. Broken, cut, or cracked skin will allow substances to enter the body more easily.
- Ingestion or swallowing of food, drink, or other substances is the third route of exposure. Chemicals that get in or on food, utensils, or hands can be ingested. Substances can be

absorbed into the blood.

Based on anticipated site conditions and the proposed work activities to be performed at the site, Level D protection will be used. The upgrading/downgrading of the level of protection will be based on continuous air monitoring results as described in Section 6.0 (when applicable). The decision to modify standard PPE will be made by the site HSO or FTL after conferring with the PM. The levels of protection are described below.

Level D Protection (as needed)

- Safety glasses with side shields or chemical splash goggles
- Safety boots/shoes
- Coveralls (Tyvek® or equivalent)
- Hard hat
- Long sleeve work shirt and work pants
- Nitrile gloves
- Hearing protection
- Reflective safety vest

Level D Protection (Modified, as needed)

- Safety glasses with side shields or chemical splash goggles
- Safety boots/shoes (toe-protected)
- Disposable chemical-resistant boot covers.
- Coveralls (poly-coated Tyvek or equivalent to be worn when contact with wet contaminated soil, groundwater, or non-aqueous phase liquids is anticipated)
- Hard hat
- Long sleeve work shirt and work pants
- Nitrile gloves
- Hearing protection (as needed)
- Personal floatation device (for work within 5 ft of the water)
- Reflective traffic vest

Level C Protection (as needed)

- Full or Half face, air-purifying respirator, with NIOSH approved High-Efficiency Particulate Air (HEPA) filter.
- Inner (latex) and outer (nitrile) chemical-resistant gloves
- Safety glasses with side shields or chemical splash goggles
- Chemical-resistant safety boots/shoes

- Hard hat
- Long sleeve work shirt and work pants
- Coveralls (Tyvek® or equivalent)
- Hearing protection (as needed)
- Reflective safety vest

The action levels used in determining the necessary levels of respiratory protection and upgrading to Level C are summarized in Table 4. The written Respiratory Protection Program is maintained by the HSM and is available if needed. The monitoring procedures and equipment are outlined in Section 6.0 (when applicable).

6.2 Respirator Fit-Test.

All Langan employees who may be exposed to hazardous substances at the work site must be in possession of a full or half face piece air-purifying respirator and have been successfully fit-tested within the past year. Fit-test records are maintained by the HSM.

6.3 Respirator Cartridge Change-Out Schedule

Respiratory protection is required to be worn when certain action levels (Table 2) are reached. A respirator cartridge change-out schedule has been developed to comply with 29 CFR 1910.134. The respirator cartridge change-out schedule for this project is as follows:

- Cartridges must be removed and disposed of at the end of each shift when cartridges become wet or the wearer experiences a breakthrough, whichever occurs first.
- If the humidity exceeds 85%, then cartridges must be removed and disposed of after 4 hours of use.

Respirators must not be stored at the end of the shift with contaminated cartridges left on. Cartridges must not be worn on the second day, no matter how short the time period was the previous day they were used.

7.0 AIR QUALITY MONITORING AND ACTIONS LEVELS

7.1 Monitoring During Site Operations

Atmospheric air monitoring results may be collected and used to provide data to determine when exclusion zones need to be established and when certain levels of personal protective equipment are required. For all instruments, there are Site-specific action-level criteria that are used in making field health and safety determinations. Other data, such as the visible presence of contamination or the steady state nature of air contaminant concentration, are also used in making field health and safety decisions. Therefore, the HSO may establish an exclusion zone

or require a person to wear a respirator even though atmospheric air contaminant concentrations are below established HASP action levels.

During site work involving disturbance of petroleum-impacted or fill material, real-time air monitoring may be conducted for methane and VOCs. A MultiRAE LEL/Oxygen (O2) meter and FID will be used to monitor the LEL of methane, and a PID and/or FID will be used to monitor concentrations of VOCs at personnel breathing-zone height. Air monitoring will be the responsibility of the HSO or designee. Air monitoring may be conducted during intrusive activities associated with the completion of excavation, debris removal, and soil grading. All manufacturers' instructions for instrumentation and calibration will be available onsite.

Subcontractors' air monitoring plans must be equal to or more stringent than the Langan plan.

An air monitoring calibration log is provided in Attachment D of this HASP.

7.1.1 Volatile Organic Compounds

Monitoring with a PID, such as a MiniRAE 2000 (10.6v) or equivalent may occur during intrusive work in the Areas of Concern (AOCs). Colorimetric Indicator Tubes for benzene may be used as a backup for the PID if measurements remain above background monitor every 2 hours. The HSO will monitor the employee's breathing zone at least every 30 minutes, or whenever there is any indication that concentrations may have changed (odors, visible gases, etc.) since the last measurement. If VOC levels are observed above 5 ppm for longer than 5 minutes or if the site PPE is upgraded to Level C, the HSO will begin monitoring the site perimeter at a location downwind of the AOC every 30 minutes in addition to the employee breathing zone. Instrument action levels for monitored gases are provided in Table 4.

7.1.2 Metals

Based upon the site historical fill, there is a potential for the soils to contain Polycyclic Aromatic Hydrocarbons (PAHs) and metals. During invasive procedures which have the potential for creating airborne dust, such as excavation of dry soils, a real-time airborne dust monitor such as a Mini-Ram may be used to monitor for air particulates. The HSO will monitor the employee's breathing zone at least every 30 minutes, or whenever there is any indication that concentrations may have changed (appearance of visible dust) since the last measurement. If dust levels are observed to be greater than 0.100 milligrams per cubic meter (mg/m^3) or visible dust is observed for longer than 15 minutes or if the site PPE is upgraded to Level C, the HSO will begin monitoring the site perimeter at a location downwind of the AOC every 30 minutes in addition to the employee breathing zone. Instrument action levels for dust monitoring are provided in Table 4.

7.1.3 Methane

During soil excavation or other intrusive activities, direct reading air monitoring may be performed in the excavation area to determine exposure to workers. Monitoring with an LEL/O2 meter and FID may occur during intrusive work in the AOCs. The HSO will monitor the employee's breathing zone at least hourly during intrusive activities. If LEL levels are observed above 20% the professional engineer (PE) or their designee will stop work and evacuate the area; warn others; and determine source of readings and take corrective actions. The Contractor will be responsible for mitigating explosive gas levels.

7.2 Monitoring Equipment Calibration and Maintenance

Instrument calibration must be documented and included in a dedicated safety and health logbook or on separate calibration pages of the field book. All instruments must be calibrated before and after each shift. Calibration checks may be used during the day to confirm instrument accuracy. Duplicate readings may be taken to confirm individual instrument responses.

All instruments must be operated in accordance with the manufacturers' specifications. Manufacturers' literature, including an operation manual for each piece of monitoring equipment, will be maintained on-site by the HSO for reference.

7.3 Determination of Background Levels

Background (BKD) levels for VOCs, dust, and methane will be established prior to intrusive activities within the AOC at an upwind location. A notation of BKD levels will be referenced in the daily monitoring log. BKD levels are a function of prevailing conditions. BKD levels will be taken in an appropriate upwind location as determined by the HSO.

Table 4 lists the instrument action levels.

8.0 COMMUNITY AIR MONITORING PROGRAM

Community air monitoring may be conducted in compliance with local standards. If conducted, Langan will implement the generic CAMP outlined below amended to comply with local conditions or standards:

Monitoring for dust and odors will be conducted during all ground intrusive activities by the FTL. Continuous monitoring of the perimeter of the work zones for odor, VOCs, and dust may be required for all ground intrusive activities such as soil excavation and handling activities. The work zone is defined as the general area in which machinery is operating in support of remediation activities. A portable PID will be used to monitor the work zone and for periodic monitoring for VOCs during activities such as soil and groundwater sampling and soil excavation.

The site perimeter will be monitored for fugitive dust emissions by visual observations as well as instrumentation measurements (if required). When required, particulate or dust will be monitored continuously with real-time field instrumentation that will meet, at a minimum, the local standards or, default to the performance standards below:

If VOC monitoring is required, the following actions will be taken based on VOC levels measured:

- If total VOC levels exceed 5 ppm above background for the 15-minute average at the perimeter, work activities will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work activities will resume with continued monitoring.
- If total VOC levels at the downwind perimeter of the hot zone persist at levels in excess of 5 ppm above background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps work activities will resume provided that the total organic vapor level is 200 feet downwind of the hot zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm above background for the 15-minute average.
- If the total VOC level is above 25 ppm at the perimeter of the hot zone, activities will be shut down.

If dust monitoring with field instrumentation is required, the following actions will be taken based on instrumentation measurements:

- If the downwind particulate level is 100 micrograms per cubic meter (µg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression must be employed. Work may continue with dust suppression techniques provided that downwind particulate matter less than 10 microns (PM10) levels do not exceed 150 µg/m^3 above the background level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM10 levels are greater than 150 µg/m^3 above the background level, work must be stopped, and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

8.1 Dust Suppression Techniques

Preventative measures for dust generation may include wetting site fill and soil, construction of

an engineered construction entrance with a gravel pad, a truck wash area, covering soils with tarps, and limiting vehicle speeds to five miles per hour.

Work practices to minimize odors and vapors include limiting the time that the excavations remain open, minimizing stockpiling of contaminated-source soil, and minimizing the handling of contaminated material. Offending odor and organic vapor controls may include the application of foam suppressants or tarps over the odor or VOC source areas. Foam suppressants may include biodegradable foams applied over the source material for short-term control of the odor and VOCs.

If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include direct load-out of soils to trucks for off-site disposal; use of chemical odorants in spray or misting systems; and use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-site conditions or proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

9.0 WORK ZONES AND DECONTAMINATION

9.1 Site Control

Work zones are intended to control the potential spread of contamination throughout the site and to assure that only authorized individuals are permitted into potentially hazardous areas.

Any person working in an area where the potential for exposure to site contaminants exists will only be allowed access after providing the HSO with proper training and medical documentation.

Exclusion Zone (EZ) - All activities which may involve exposure to site contaminants, hazardous materials, and/or conditions should be considered an EZ. Decontamination of field equipment will also be conducted in the Contaminant Reduction Zone (CRZ) which will be located on the perimeter of the EZ. The EZ and the CRZ will be delineated by cones, tapes, or other means. The HSO may establish more than one EZ where different levels of protection may be employed, or different hazards exist. The size of the EZ must be determined by the HSO allowing adequate space for the activity to be completed, field members, and emergency equipment.

9.2 Contamination Zone

9.2.1 Personnel Decontamination Station

Personal hygiene, coupled with diligent decontamination, will significantly reduce the potential for exposure.

9.2.2 Minimization of Contact with Contaminants

During the completion of all site activities, personnel should attempt to minimize the chance of contact with contaminated materials. This involves a conscientious effort to keep "clean" during site activities. All personnel should minimize kneeling, splash generation, and another physical contact with contamination as PPE is intended to minimize accidental contact. This may minimize the degree of decontamination required and the generation of waste materials from site operations.

Field procedures will be developed to control spray and runoff and to ensure that unprotected personnel working nearby are not affected.

9.2.3 Personnel Decontamination Sequence

Decontamination may be performed by removing all PPE used in EZ and placing it in drums/trash cans at the CRZ. Baby wipes should be available for wiping hands and face. Drums/trash cans will be labeled by the field crews in accordance with all local, state, and federal requirements. Management plans for contaminated PPE, and tools are provided below.

9.2.4 Emergency Decontamination

If circumstances dictate that contaminated clothing cannot be readily removed, then remove gross contamination and wrap injured personnel with clean garments/blankets to avoid contaminating other personnel or transporting equipment. If the injured person can be moved, he/she will be decontaminated by site personnel as described above before emergency responders handle the victim. If the person cannot be moved because of the extent of the injury (a back or neck injury), provisions must be made to ensure that emergency response personnel will be able to respond to the victim without being exposed to potentially hazardous atmospheric conditions. If the potential for inhalation hazards exists, such as with open excavation, this area will be covered with polyethylene sheeting to eliminate any potential inhalation hazards. All emergency personnel should be immediately informed of the injured person's condition, and potential contaminants, and provided with all pertinent data.

9.2.5 Hand-Held Equipment Decontamination

Hand-held equipment includes all monitoring instruments as stated earlier, samples, hand tools, and notebooks. The hand-held equipment is dropped at the first decontamination station to be decontaminated by one of the decontamination team members. These items must be decontaminated or discarded as waste prior to removal from the CRZ.

To aid in decontamination, monitoring instruments can be sealed in plastic bags or wrapped in polyethylene. This will also protect the instruments against contaminants. The instruments will be wiped clean using wipes or paper towels if contamination is visually evident. Sampling equipment, hand tools, etc. will be cleaned with non-phosphorous soap to remove any potentially contaminated soil and rinsed with deionized water. All decontamination fluids will be containerized and stored on-site pending waste characterization sampling and appropriate off-site disposal.

9.2.6 Heavy Equipment Decontamination

All heavy equipment and vehicles arriving at the work site will be free from contamination from offsite sources. Any vehicles arriving to work that are suspected of being impacted will not be permitted on the work site. Potentially contaminated heavy equipment will not be permitted to leave the EZ unless it has been thoroughly decontaminated and visually inspected by the HSO or his designee.

9.3 Support Zone

The support zone or cold zone will include the remaining areas of the job site. Break areas and support facilities (including equipment storage and maintenance areas) will be located in this zone. No equipment or personnel will be permitted to enter the cold zone from the hot zone without passing through the decontamination station in the warm zone (if necessitated). Eating, smoking, and drinking will be allowed only in this area.

9.4 Communications

The following communications equipment will be utilized as appropriate.

- Telephones - A cellular telephone will be located with the HSO for communication with the HSM and emergency support services/facilities.

- Hand Signals - Hand signals must be used by field teams, along with the buddy system. The entire field team must know them before operations commence and their use covered during site-specific training. Typical hand signals are the following:

Hand Signal	Meaning
Hand gripping throat	Out of air, cannot breathe
Grip your partner's wrists or place both hands around the waist	Leave immediately without debate
Hands on top of head	Need assistance
Thumbs up	OK; I am all right; I understand
Thumbs down	No; negative
Simulated "stick" break with fists	Take a break; stop work

9.5 The Buddy System

When working in teams of two or more, workers will use the "buddy system" for all work activities to ensure that rapid assistance can be provided in the event of an emergency. This requires work groups to be organized such that workers can remain close together and maintain visual contact with one another. Workers using the "buddy system" have the following responsibilities:

- Provide his/her partner with assistance.
- Observe his/her partner for signs of chemical or heat exposure.
- Periodically check the integrity of his/her partner's PPE.
- Notify the HSO or other site personnel if emergency service is needed.

10.0 NEAREST MEDICAL ASSISTANCE

The address and telephone number of the nearest hospital:

Westchester Medical Center Health Alliance
396 Broadway
Kingston, New York
845-331-3131

A map with directions to the hospital is shown in Figure 2. This information will either be posted prominently at the site or will be available to all personnel all of the time. Further, all field personnel, including the HSO & FTL, will know the directions to the hospital.

11.0 STANDING ORDERS/SAFE WORK PRACTICES

The standing orders, which consist of a description of safe work practices that must always be followed while on-site by Langan employees and contractors, are shown in Attachment A. The

site HSO and FTL each have the responsibility for enforcing these practices. The standing orders will be posted prominently at the site or are made available to all personnel at all times. Those who do not abide by these safe work practices will be removed from the site.

12.0 SITE SECURITY

No unauthorized personnel must be permitted access to the work areas.

13.0 UNDERGROUND UTILITIES

As provided in Langan's Underground Utility Clearance Guidelines, the following safe work practices should be followed by Langan personnel and the contractor before and during subsurface work in accordance with federal, state, and local regulations:

- Obtain available utility drawings from the property owner/client or operator.
- Provide utility drawings to the project team.
- In the field, mark the proposed area of subsurface disturbance (when possible).
- Ensure that the utility clearance system has been notified.
- Ensure that utilities are marked before beginning subsurface work.
- Discuss subsurface work locations with the owner/client and contractors.
- Obtain approval from the owner/client and operators for proposed subsurface work locations.
- Use safe digging procedures when applicable.
- Stay at least 10 feet from all equipment performing subsurface work.

14.0 SITE SAFETY INSPECTION

The Langan HSO or alternate will check the work area daily, at the beginning and end of each work shift, or more frequently to ensure safe work conditions. The HSO or alternate must complete the Jobsite Safety Inspection Checklist, found in Attachment F. Any deficiencies must be shared with the FTL, HSM, and PM and will be discussed at the daily tailgate meeting.

15.0 HAND AND POWER TOOLS

All hand- and electric-power tools and similar equipment must be maintained in a safe operating condition. All electric-power tools must be inspected before initial use. Damaged tools must be removed immediately from service or repaired. Tools must be used only for the purpose for which they were designed. All users must be properly trained in their safe operation.

16.0 EMERGENCY RESPONSE

16.1 General

This section establishes procedures and provides information for use during a project emergency. Emergencies happen unexpectedly and quickly, and require an immediate response; therefore, contingency planning and advanced training of staff is essential. Specific elements of emergency support procedures that are addressed in the following subsections include communications, local emergency support units, and preparation for medical emergencies, first aid for injuries incurred on site, record keeping, and emergency site evacuation procedures. In case of emergency, in addition to 911, call *WorkCare - Incident Intervention®* at 1-888-479-7787 to report their injuries. For all other communications, contact the Langan Incident Hotline at **973-560-4699** as soon as possible.

Should outside assistance be needed for accidents, fire, or release of hazardous substances, the emergency numbers will be available and posted at the site (Table 5) where a readily accessible telephone is made available for emergency use.

Also, in the event of an incident where a team member becomes exposed or suffers from an acute symptom from contact with site materials and has to be taken to a hospital, a short medical data sheet (Attachment C) for that individual will be made available to the attending physician. The medical data sheet will include the following:

- Name, address, home phone
- Age, height, weight
- Name of person to be notified in case of an accident.
- Allergies
- Particular sensitivities
- Does he/she wear contact lenses?
- Short checklist of previous illness
- Name of personal physician and phone
- Name of company physician and phone
- Prescription and non-prescription medications currently used.

An incident reporting form is included in Attachment C.

16.2 Responsibilities

16.2.1 Health and Safety Officer (HSO)

The HSO is responsible for ensuring that all personnel are evacuated safely, and that machinery and processes are shut down or stabilized in the event of a stop work order or evacuation. The

HSO is responsible for ensuring the HSM is notified of all incidents, all injuries, near misses, fires, spills, releases, or equipment damage. The HSO is required to immediately notify the HSM of any fatalities or catastrophes (three or more workers injured and hospitalized) so that the HSM can notify OSHA within the required time limit.

16.2.2 Emergency Coordinator

The HSO or their designated alternate will serve as the Emergency Coordinator. The Emergency Coordinator is responsible for ensuring that all personnel are evacuated safely, and that machinery and processes are shut down or stabilized in the event of a stop work order or evacuation. They are also responsible for ensuring the HSM is notified of all incidents, all injuries, near misses, fires, spills, releases, or equipment damage. The Emergency Coordinator is required to immediately notify the HSM of any fatalities or catastrophes (three or more workers injured and hospitalized.

The Emergency Coordinator must locate emergency phone numbers and identify hospital routes prior to beginning work on the sites. The Emergency Coordinator must make necessary arrangements to be prepared for any emergencies that could occur.

The Emergency Coordinator is responsible for implementing the Emergency Response Plan.

16.2.3 Site Personnel

Project site personnel are responsible for knowing the Emergency Response Plan and the procedures contained herein. All personnel are expected to notify the Emergency Coordinator of situations that could constitute a site emergency. Project site personnel, including all subcontractors, will be trained in the Emergency Response Plan.

16.3 Communications

Once an emergency situation has been stabilized, the injured Langan personnel should contact *WorkCare - Incident Intervention®* at 1-888-479-7787 to report their injuries. For all other communications, contact the Langan Incident Hotline at **973-560-4699** as soon as possible.

16.4 Local Emergency Support Units

In order to be able to deal with any emergency that might occur during investigative activities at the site, the Emergency Notification Numbers (Table 5) will be posted and provided to all personnel conducting work within the EZ.

Figure 2 shows the hospital route map. Outside emergency number 911 and local ambulance should be relied on for response to medical emergencies and transport to emergency rooms. Always contact first responders when there are serious or life-threatening emergencies on the

site. Project personnel are instructed not to drive injured personnel to the Hospital. In the event of an injury, provide first aid and keep the injured party calm and protected from the elements, and treat for shock when necessary.

16.5 Pre-Emergency Planning

Langan will communicate directly with administrative personnel from the emergency room at the hospital to determine whether the hospital has the facilities and personnel needed to treat cases of trauma resulting from any of the contaminants expected to be found on the site. Instructions for finding the hospital will be posted conspicuously in the site office and each site vehicle.

16.6 Emergency Medical Treatment

The procedures and rules in this HASP are designed to prevent employee injury. However, if an injury occurs, no matter how slight, it will be reported to the HSO immediately. First-aid equipment will be available on-site at the following locations:

- First Aid Kit: Contractor Vehicles
- Emergency Eye Wash: Contractor Vehicles

During the site safety briefing, project personnel will be informed of the location of the first aid station(s) that has been set up. Some injuries, such as severe cuts and lacerations or burns, may require immediate treatment. First-aid instructions provided from off-site doctors or paramedics, before an emergency-response squad arrives at the site or before the injured person can be transported to the hospital, will be followed closely. Only in non-emergency situations may an injured person be transported to an urgent care facility. Due to hazards that may be present at the site and the conditions under which operations are conducted, an emergency may develop. Emergencies can be characterized as injury or acute chemical exposure to personnel, fire or explosion, environmental release, or hazardous weather conditions.

16.8 Emergency Site Evacuation Routes and Procedures

All project personnel will be instructed on proper emergency response procedures and locations of emergency telephone numbers during the initial site safety meeting. If an emergency occurs as a result of the site investigation activities, including but not limited to fire, explosion, or significant release of toxic gas into the atmosphere, the Langan Project Manager will be verbally notified immediately. All heavy equipment will be shut down and all personnel will evacuate the work areas and assemble at the nearest intersection to be accounted for and to receive further instructions.

If an emergency arises, the FTL will implement an immediate evacuation of all project personnel due to immediate or impending danger. The FTL will also immediately communicate with the contractor to coordinate any needed evacuation of the property.

The FTL or Site Supervisor will give necessary instructions until the Designated Incident Commander (IC) assumes control. After the emergency has been resolved, the FTL or Site Supervisor will coordinate with the IC and indicate when staff should resume their normal duties. If dangers are present for those at the designated assembly point, another designated location of assembly will be established.

It will be the responsibility of the FTL or Site Supervisor to report a fire or emergency, assess the seriousness of the situation, and initiate emergency measures until the arrival of the local fire fighters or other first responders, should they be necessary. The FTL, working with emergency responders, may also order the closure of the Site for an indefinite period as long as it is deemed necessary.

Under no circumstances will incoming visitors be allowed to proceed to the area of concern once an emergency evacuation has been implemented. Visitors or other persons present in the area of the emergency must be instructed to evacuate the area. The FTL will ensure that access roads are not obstructed and will remain on-site to provide stand-by assistance upon the arrival of emergency personnel.

If it is necessary to temporarily control traffic in the event of an emergency, those persons controlling traffic will wear proper reflection warning vests until the arrival of police or fire personnel.

16.8.1 Designated Assembly Locations

All personnel will evacuate the site and assemble at a designated assembly location. The assembly location will be designated by Langan personnel and discussed during each shift's pre-job safety briefing.

16.8.2 Accounting for Personnel

All contractor and subcontractor supervisors are responsible for the accounting of all personnel assembled at the designed assembly area. The Designated Incident Commander must be notified if personnel are not found.

16.9 Fire Prevention and Protection

In the event of a fire or explosion, procedures will include immediately evacuating the site and notification of the Langan Project Manager of the investigation activities. Portable fire

extinguishers will be provided at the work zone. The extinguishers located in the various locations should also be identified prior to the start of work. No personnel will fight a fire beyond the stage where it can be put out with a portable extinguisher (incipient stage).

16.9.1 Fire Prevention

Fires will be prevented by adhering to the following precautions:

- Good housekeeping and storage of materials.
- Storage of flammable liquids and gases away from oxidizers.
- Shutting off engines to refuel.
- Grounding and bonding metal containers during transfer of flammable liquids.
- Use of UL approved flammable storage cans.
- Fire extinguishers rated at least 10 pounds ABC located on all heavy equipment, in all trailers and near all hot work activities.

The person responsible for the control of fuel source hazards and the maintenance of fire prevention and/or control equipment is the HSO.

16.10 Significant Vapor Release

Based on the proposed tasks, the potential for a significant vapor release is low. However, if a release occurs, the following steps will be taken:

- Move all personnel to an upwind location. All non-essential personnel must evacuate.
- Upgrade to Level C Respiratory Protection.
- Downwind perimeter locations must be monitored for volatile organics.
- If the release poses a potential threat to human health or the environment in the community, the Emergency Coordinator must notify the Langan Project Manager.
- Local emergency response coordinators will be notified.

16.11 Overt Chemical Exposure

The following are standard procedures to treat chemical exposures. Other, specific procedures detailed on the Material Safety Data Sheet (MSDS) will be followed, when necessary.

SKIN AND EYE: Use copious amounts of soap and water from eye-wash kits and portable hand-wash stations.

CONTACT: Wash/rinse affected areas thoroughly, then provide appropriate medical attention. Skin must also be rinsed for 15 minutes if contact with caustics, acids, or hydrogen peroxide occurs. Affected items of clothing must also be removed from contact with skin.

Providing wash water and soap will be the responsibility of each individual contractor or subcontractor on-site.

16.12 Decontamination during Medical Emergencies

If emergency lifesaving first aid and/or medical treatment is required, normal decontamination procedures may need to be abbreviated or omitted. The HSO or designee will accompany contaminated victims to the medical facility to advice on matters involving decontamination when necessary. The outer garments can be removed if they do not cause delays, interfere with treatment, or aggravate the problem. Respiratory equipment must always be removed. Protective clothing can be cut away. If the outer contaminated garments cannot be safely removed on site, a plastic barrier placed between the injured individual and clean surfaces should be used to help prevent contamination of the inside of ambulances and/or medical personnel. Outer garments may then be removed at the medical facility. No attempt will be made to wash or rinse the victim if his/her injuries are life threatening unless it is known that the individual has been contaminated with an extremely toxic or corrosive material which could also cause severe injury or loss of life to emergency response personnel. For minor medical problems or injuries, normal decontamination procedures will be followed.

16.13 Adverse Weather Conditions

In the event of adverse weather conditions, the HSO will determine if work will continue without potentially risking the safety of all field workers. Some of the items to be considered prior to determining if work should continue are:

- Potential for heat stress and heat-related injuries.
- Potential for cold stress and cold-related injuries.
- Treacherous weather-related working conditions (hail, rain, snow, ice, high winds).
- Limited visibility (fog).
- Potential for electrical storms.
- Earthquakes.
- Other major incidents.

Site activities will be limited to daylight hours, or when suitable artificial light is provided, and acceptable weather conditions prevail. The HSO will determine the need to cease field operations or observe daily weather reports and evacuate, if necessary, in case of severe inclement weather conditions.

16.14 Spill Control and Response

All small spills/environmental releases must be contained as close to the source as possible. Whenever possible, the MSDS will be consulted to assist in determining proper waste characterization and the best means of containment and cleanup. For small spills, sorbent materials such as sand, sawdust, or commercial sorbents should be placed directly on the substance to contain the spill and aid recovery. Any acid spills should be diluted or neutralized carefully prior to attempting recovery. Berms of earthen or sorbent materials can be used to contain the leading edge of the spills. All spill containment materials will be properly disposed of. An exclusion zone of 50 to 100 feet around the spill area should be established depending on the size of the spill.

All contractor vehicles must have spill kits on them with enough material to contain and absorb the worst-case spill from that vehicle. All vehicles and equipment must be inspected prior to being admitted on-site. Any vehicle or piece of equipment that develops a leak will be taken out of service and removed from the job site.

The following seven steps must be taken by the Emergency Coordinator:

1. Determine the nature, identity, and amounts of major spills.
2. Make sure all unnecessary persons are removed from the spill area.
3. Notify the HSO immediately.
4. Use proper PPE in consultation with the HSO.
5. If a flammable liquid, gas, or vapor is involved, remove all ignition sources, and use non-sparking and/or explosion-proof equipment to contain or clean up the spill (diesel-only vehicles, air-operated pumps, etc.)
6. If possible, try to stop the leak with the appropriate material.
7. Remove all surrounding materials that can react or compound with the spill.

In addition to the spill control and response procedures described in this HASP, Langan personnel will coordinate with the designated project manager relative to spill response and control actions. Notification to the Project Manager must be immediate and, to the extent possible, include the following information:

- Time and location of the spill.
- Type and nature of the material spilled.
- Amount spilled.
- Whether the spill has affected or has a potential to affect a waterway or sewer.
- A brief description of affected areas/equipment.
- Whether the spill has been contained.

- Expected time of cleanup completion. If spill cleanup cannot be handled by Langan's on-site personnel alone, such fact must be conveyed to the Project Manager immediately.

Langan field personnel must notify the project manager when they observe a spill or encounter conditions suggesting one might have occurred.

16.15 Emergency Equipment

The following minimum emergency equipment must be kept and maintained on site:

- Industrial first aid kit.
- Fire extinguishers (one per site).

16.16 Restoration and Salvage

After an emergency, prompt restoration of utilities, fire protection equipment, medical supplies, and other equipment will reduce the possibility of further losses. Some of the items that may need to be addressed are:

- Refilling fire extinguishers.
- Refilling medical supplies.
- Recharging eyewashes and/or showers.
- Replenishing spill control supplies.

16.17 Documentation

Immediately following an incident or near miss, unless emergency medical treatment is required, either the employee or a coworker must contact the Langan Incident/Injury Hotline at 1-(800)-9-LANGAN (extension 4699) and the client representative to report the incident or near miss. For emergencies involving personnel injury and/or exposure, the HSO and affected employee will complete and submit an Employee Exposure/Injury Incident Report (Attachment C) to the Langan Corporate Health and Safety Manager as soon as possible following the incident.

17.0 SPECIAL CONDITIONS

This guideline contains information and requirements for special conditions that may not be routinely encountered.

17.1 Scope

The guideline applies to the specific projects identified within this document. Additional provisions will be addressed in each Site-Specific Health and Safety Plan (HASP), as needed.

17.2 Responsibilities

Site Personnel - All site personnel must be alert to safety hazards on work sites and take action to minimize such hazards. Personnel must utilize the buddy system, watch for inappropriate behavior, and be alerted to changes in site conditions.

Health and Safety Officer (HSO) - The HSO is responsible for considering these procedures in the development of site-specific HASPs. The HSO must schedule frequent "tail gate" safety briefings to enhance safety awareness and discuss potential problems.

17.3 Procedures

The procedures outlined below must be followed when such conditions are encountered.

17.3.1 Ladders

Langan safety procedures must be used to ensure employee safety when using ladders in the office or work sites. All ladders must be coated or repaired to prevent injury to the employee from punctures or lacerations and to prevent snagging or clothing. Any wood ladders used must have an opaque covering except for identification or warning labels, which may be placed on one face only of a side rail.

17.3.1.1 Ladder Use

Employees must only use ladders for the purposes they were designed for and must not be used as scaffolding. Ladders will be maintained and inspected prior to use for slip hazards including oil and grease. Employees must use ladders only on stable and level surfaces unless the ladder is secured to prevent displacement. Ladders should not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement. Ladders should not be used in locations where they could be displaced by workplace activities or traffic. Ladder rungs, cleats and steps must be parallel, level and uniformly spaced when the ladder is in the use position.

Employees should not be carrying anything including equipment that could cause injury if there was a fall while utilizing the ladder. The top and bottom of the ladder area must remain clear while in use. When ascending and descending the ladder, employees must face the ladder.

Ladders must not be loaded beyond the maximum intended load for which they were built or the manufacturer’s rated capacity.

17.3.1.2 Portable Ladders

Rungs, cleats, and steps for portable ladders and fixed ladders must be spaced not less than 10 inches apart, nor more than 14 inches apart, as measured between center lines of the rungs, cleats, and steps. When used to access an upper landing surface, the ladder side rails must extend at least three feet above the upper landing surface to which the ladder is used to gain access. If this is not possible, due to the length of the ladder, then the top of the ladder must be secured at its top to a rigid support.

17.3.1.3 Step Stools

Rungs, cleats, and steps of step stools must not be less than 8 inches apart, nor more than 12 inches apart, as measured between center lines of the rungs, cleats, and steps.

17.3.1.4 Extension Ladders

Rungs, cleats, and steps of the base section of extension trestle ladders must be spaced not less than 8 inches apart, nor more than 18 inches apart, as measured between center lines of the rungs, cleats, and steps. The rung spacing on the extension section of the extension trestle ladder must not be less than 6 inches nor more than 12 inches, as measured between the center lines of the rungs, cleats and steps. Ladders must be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (the distance along the ladder between the foot and the top support).

17.3.1.5 Inspection

Ladders will be inspected for visible detects periodically, prior to utilization or after any occurrence that could have negatively affected the ladder. Portable ladders with defects including broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty components must not be used. The ladder will be immediately marked as defective, tagged as "Do Not Use" or blocked from being used and removed from service until repaired.

17.3.2 First Aid/Cardiopulmonary Resuscitation (CPR)

Langan field and office personnel will be encouraged to be trained in First Aid and Cardiopulmonary Resuscitation (CPR). Training will be provided free of charge by Langan to all employees. Employees will receive a training certificate that will be kept on file with the Health & Safety Coordinator (HSC). Training and certification will be provided by a credited provider such as American Red Cross or equivalent.

17.3.2.1 Emergency Procedures

Prior to site work, the Langan employees certified in first aid and CPR will be identified in the site-specific HASP. Langan will endear to have at least one employee at a job site trained and able to render first aid and CPR. The site-specific HASP will contain first aid information on both potential chemical and physical hazards. Emergency procedures to be followed in case of injury or illnesses are provided in the HASP. The HASP will include emergency contact information including local police and fire departments, hospital emergency rooms, ambulance services, on-site medical personnel, and physicians. The HASP will also include directions and contact information for the nearest emergency facility in case immediate medical attention is required. The emergency contact information will be conspicuously posted at the worksite. Employees that are injured and require immediate medical attention must call either 911 or the local posted emergency contacts. Employees should use ambulatory services to transport injured workers to the nearest facility for emergency medical care. In areas where 911 is not available, the telephone numbers of physicians, hospitals, or ambulances must be conspicuously posted.

17.3.2.2 First Aid Supplies

First aid supplies are readily available to all Langan employees when required. First aid kits are located in each Langan office. Portable first aid kits are available for employees to use at work sites. First aid kits should consist of items needed to treat employees for potential chemical and physical injuries. At a minimum, first aid kits should contain items to allow basic first aid to be rendered. Where the eyes or body of an employee may be exposed to corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body must be provided within the work area for immediate emergency use including eye wash.

First aid kits will be weatherproof with individually sealed packages of each item. All portable first aid kits must be inspected by Langan employees before and after use to ensure all used items are replaced. When out in the field, employees must check first aid kits weekly to ensure used items are replaced.

17.3.3 Hydrogen Sulfide

Langan employees with the potential to be exposed to hydrogen sulfide while at work sites must have training in hydrogen sulfide awareness. The training will include the identification of areas where employees could be exposed to hydrogen sulfide, health effects, permissible exposure limits, first aid procedures, and personnel protective equipment. Langan employees could be exposed to hydrogen sulfide while at job sites including petroleum refineries, hazardous waste treatment, storage and disposal facilities, uncontrolled hazardous waste sites, and remediation projects.

17.3.3.1 Characteristics

Hydrogen sulfide is a colorless gas with a strong odor of rotten eggs that is soluble in water. Hydrogen sulfide is used to test and make other chemicals. It is also found as a by-product of chemical reactions, such as in sewer treatment. It is a highly flammable gas and a dangerous fire hazard. Poisonous gases are produced in fires including sulfur oxides. Hydrogen sulfide is not listed as a carcinogen.

17.3.3.2 Health Effects

Hydrogen Sulfide can affect employees if inhaled or through contact with skin or eyes. Acute (or short-term) health effects of hydrogen sulfide exposure include irritation of the nose and throat, dizziness, confusion, headache, and trouble sleeping. Inhalation of hydrogen sulfide can irritate the lungs causing coughing and/or shortness of breath. Higher levels of exposure can cause a build-up of fluid in the lungs (pulmonary edema), a medical emergency, with severe shortness of breath.

Chronic (or long-term) health effects of low levels of exposure to hydrogen sulfide can cause pain and redness of the eyes with blurred vision. Repeated exposure may cause bronchitis with cough, phlegm, and shortness of breath.

17.3.3.3 Protective Clothing and Equipment

Respirators are required for those operations in which employees will be exposed to hydrogen sulfide above OSHA permissible exposure level. The maximum OSHA permissible exposure limit (PEL) for hydrogen sulfide is 20 parts of hydrogen sulfide vapor per million parts of air (20 ppm) for an 8-hour workday and the maximum short-term exposure limit (STEL) is 10 ppm for any 10-minute period.

Where employees are exposed to levels up to 100 parts of hydrogen sulfide vapor per million parts of air (100 ppm), the following types of respiratory protection are allowed:

- Any powered, air-purifying respirator with cartridge(s).
- Any air-purifying, full-facepiece respirator (gas mask) with a chin style, front- or back-mounted canister.
- Any supplied air system with escape self-contained breathing apparatus, if applicable; and,
- Any self-contained breathing apparatus with a full facepiece.

Respirators used by employees must have joint Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (NIOSH) seal of approval. Cartridges or canisters must be replaced before the end of their service life, or the end of the shift, whichever

occurs first. Langan employees that have the potential to be exposed to hydrogen sulfide will be trained in the proper use of respirators. Respirator training is discussed under– Langan's Respiratory Protection Program.

Employees with potential exposure to hydrogen sulfide, or when required by the client, will wear a portable hydrogen sulfide gas detector. The detector should have an audible, visual, and vibrating alarm. The detector may also provide detection for carbon monoxide, sulfur dioxide, and oxygen-deficient atmospheres. The hydrogen sulfide monitor will, at a minimum, be calibrated to detect hydrogen sulfide at a level of 20 parts of hydrogen sulfide vapor per million parts of air (20 ppm). Many portable gas detectors will have factory defaults with a low-level alarm at 10 ppm and a high-level alarm at 15 ppm. Langan employees must consult clients to determine if any site-specific threshold levels exist.

If the hydrogen sulfide gas detector sounds and employees are not wearing appropriate respiratory protection, employees must immediately vacate the area and meet at the assigned emergency location. Langan employees may not re- enter the site without proper respiratory protection and approval from the client or property owner if needed.

Employees must wear PPE to prevent eye and skin contact with hydrogen sulfide. Employees must wear appropriate protective clothing including boots, gloves, sleeves, and aprons, over any parts of their body that could be exposed to hydrogen sulfide. Non-vented, impact-resistant goggles should be worn when working with or exposed to hydrogen sulfide.

17.3.3.4 Emergency and First Aid Procedures

Eye and Face Exposure

If hydrogen sulfide comes in contact with eyes, it should be washed out immediately with large amounts of water for 30 minutes, occasionally lifting the lower and upper eye lids. Seek medical attention immediately.

Skin Exposure

If hydrogen sulfide contaminates clothing or skin, remove the contaminated clothing immediately and wash the exposed skin with large amounts of water and soap. Seek medical attention immediately. Contaminated clothing should either be disposed of or washed before wearing again.

Breathing

If a Langan employee or other personnel breathe in hydrogen sulfide, immediately get the exposed person to fresh air. If breathing has stopped, artificial respiration should be started. Call for medical assistance or a doctor as soon as possible.

Safety Precautions

Hydrogen sulfide is a highly flammable gas and a dangerous fire hazard. Containers of hydrogen sulfide may explode in a fire situation. Poisonous gases are produced during fires.

Langan employees should contact property owners and operators prior to conducting work onsite to be aware of any site-specific contingency plans, identify where hydrogen sulfide is used at the facility, and be informed about additional safety rules or procedures.

17.3.4 Fire Protection/Extinguishers

Langan field personnel that have been provided with portable fire extinguishers for use at worksites will be trained to familiarize employees with general principles of fire extinguisher use and hazards associated with the incipient stage of firefighting. Training will be provided prior to the initial assignment for field work and annually thereafter.

Portable fire extinguishers must be visually inspected monthly and subjected to an annual maintenance check. Langan will retain records of the annual maintenance date.

17.3.5 Overhead lines

When field work is performed near overhead lines, the lines must be de-energized and grounded, or other protective measures must be provided before the work commences. If overhead lines are to be de-energized, arrangements must be made with the client, property owner, or organization that operates or controls the electric circuits involved to de-energize and ground them. If protective measures, such as guarding, isolating, or insulating, are provided, these precautions must prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or equipment.

When unqualified Langan personnel are working in an elevated position near overhead lines, the location must be such that the person and the longest conductive object they may contact cannot come closer to any unguarded, energized overhead line than the following distances:

1. For voltages to ground 50 kilovolts (kV) or below - 10 feet; and
2. For voltages to ground over 50kV - 10 feet, plus 4 inches for every 10kV over 50kV.

As previously indicated, Langan does not retain qualified employees to perform work on energized equipment.

17.3.5.1 Vehicle and Equipment Clearance

Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines must be operated so that a clearance of 10 feet is maintained. If the voltage of the overhead lines is higher than 50kV, the clearance must be increased by 4 inches for every 10kV over that voltage.

If any of the following discussed conditions occur, the clearance may be reduced.

- If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. If the voltage is higher than 50kV, the clearance must be increased to 4 inches for every 10 kV over that voltage.
- If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not a part of or an attachment to the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.

Employees standing on the ground may not contact the vehicle or mechanical equipment or any of its attachments unless the employee is using protective equipment rated for the voltage, or the equipment is located so that no uninsulated part of its structure (that portion of the structure that provides a conductive path to employees on the ground) can come closer to the overhead line than permitted.

If any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines is intentionally grounded, employees working on the ground near the point of grounding may not stand at the grounding location whenever there is a possibility of overhead line contact. Additional precautions, such as the use of barricades or insulation, must be taken to protect employees from hazardous ground potentials, depending on earth resistivity and fault currents, which can develop within the first few feet or more outward from the grounding point.

17.3.6 Trade Secret

Langan employees could potentially be provided trade secret information by the client or property owner when site-specific information is provided about highly hazardous chemicals. Trade secret means any confidential formula, pattern, process, device, information, or compilation of information that is used in an employer's business, and that allows the employer to obtain an advantage over competitors who do not know or use it. Langan employees understand that this

information should be kept confident and if required, may enter into a confidentiality agreement with the client.

17.3.7 Bloodborne Pathogens

Langan employees that can anticipate exposure to blood or other potentially infectious material while at work sites must have training in bloodborne pathogens. Applicable employees would include those trained in first aid and serving a designated role as an emergency medical care provider. Bloodborne pathogens are pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include but are not limited to, hepatitis B virus and human immunodeficiency virus.

17.3.7.1 Training

Langan employees with potential occupational exposure to blood or other potentially infectious material must participate in a training program. Training must be conducted prior to the initial assignment where there would be potential for exposure and annually thereafter within one year of previous training. The training program will be provided to Langan employees at no cost to them and during working hours.

Langan will ensure the training program must consist of the following:

- An accessible copy of the regulatory text of 29 CFR 1910.1030 and an explanation of its contents.
- A general explanation of the epidemiology and symptoms of bloodborne diseases.
- An explanation of the modes of transmission of bloodborne pathogens.
- An explanation of Langan's exposure control plan and how the employee can obtain a copy of the written plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- An explanation of the use and limitations of personal protective equipment (PPE) to prevent and reduce exposure.
- Information on the types, proper use, location, removal, handling, and disposal of PPE.
- An explanation of the basis for the selection of PPE.
- Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.

- Information on the post-exposure evaluation and determining whether the employer is required to provide for the employee following an exposure incident.
- An explanation of the signs and labels and/or color coding required by paragraph 29 CFR 1910.1030(g)(1); and
- An opportunity for interactive questions and answers with the person conducting the training session.

Langan will develop and implement a written Exposure Control Plan, which will be designed to eliminate or minimize employee exposure to bloodborne pathogens. The Exposure Control Plan will contain the following elements:

- An exposure determination for employees.
- The schedule and method of implementation for Methods of Compliance (29 CFR 191.1030(d)), Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up (29 CFR 1910.1030(f)), Communication of Hazards to Employees (29 CFR 1910.1030(g)) and (h) Recordkeeping (29 CFR 1910.1030(h)).
- The procedure for the evaluation of circumstances surrounding exposure incidents.
- Ensure a copy of the Exposure Control Plan will be accessible to employees; and,
- The Exposure Control Plan must be reviewed and updated at least annually.

Langan employees with occupational exposure to bloodborne pathogens include any employees trained in first aid that would be expected to provide emergency medical care. This determination is made without regard to the use of PPE, which could eliminate or minimize exposure.

Universal precautions must be observed to prevent contact with blood or other potentially infectious materials. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for bloodborne pathogens. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids must be considered potentially infectious materials.

Work practice controls must be used to eliminate or minimize employee exposure, if applicable. Since Langan employees will have occupational exposure only during the rendering of first aid, personnel protective equipment will be utilized to reduce or minimize exposure. PPE that could be available to Langan personnel when administering first aid includes safety glasses, gloves, and Tyvek suits or sleeves. PPE and first aid kits will be provided to employees at no cost to them.

Langan employees that render first aid in office areas will have access to hand-washing facilities or restrooms. For first aid rendered at field locations, first aid kits will contain an appropriate antiseptic hand cleanser and clean cloth/paper towels or antiseptic towelettes. After using

antiseptic hand cleansers or towelettes, employees must wash their hands with soap and running water as soon as feasible.

After administering first aid, potentially infectious materials, including towels, personnel protective equipment, clothes, and bandages, must be placed in a container, which prevents leakage during collection, handling, processing, storage, transport, or shipping. All PPE will be disposed of after use. Any equipment or working surfaces which was been exposed to blood or potentially infectious materials due to an injury will be decontaminated prior to reuse.

Langan will make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident. These services will be available to the employee at no cost to them through a medical provider.

17.3.7.2 Recordkeeping

Langan will maintain training and medical records for each employee with occupational exposure to blood or potentially infectious materials. Medical and training records will be maintained by Langan's H&S Department.

Training records will include the following:

- Dates of the training sessions.
- Contents or a summary of the training sessions.
- Names and qualifications of persons conducting the training; and
- Names and job titles of all persons attending the training sessions.

Training records must be maintained for 3 years from the date on which the training occurred. Medical records will be preserved and maintained for the duration of employment plus 30 years.

All records will be made available upon request to employees, the Assistant Secretary of Labor for Occupational Safety and Health, and the Director of the National Institute for Occupational Safety and Health Director of OSHA for examination and copying. Medical records must have written consent from the employee before releasing.

If Langan ceases to do business, all records must be transferred to the successor employer. The successor employer must receive and maintain these records.

If there will not be a successor, Langan will notify current employees of their rights to access records at least three months prior to the cessation of business.

18.0 RECORDKEEPING

The following is a summary of required health and safety logs, reports, and recordkeeping.

18.1 Field Change Authorization Request

Any changes to the work to be performed that are not included in the HASP will require an addendum that is approved by the Langan project manager and Langan HSM to be prepared. Approved changes will be reviewed with all field personnel at a safety briefing.

18.2 Medical and Training Records

Copies or verification of training (40-hour, 8-hour, supervisor, site-specific training, documentation of three-day on-the-job training (OJT)), and respirator fit-test records) and medical clearance for site work and respirator use will be maintained in the office and available upon request. Records for all subcontractor employees must also be available upon request. All employee medical records will be maintained by the HSM.

18.3 Onsite Log

A log of personnel on-site each day will be kept by the HSO or designee.

18.4 Daily Safety Meetings ("Tailgate Talks")

Completed safety briefing forms will be maintained by the HSO.

18.5 Exposure Records

All personal monitoring results, laboratory reports, calculations, and air sampling data sheets are part of an employee exposure record. These records will be maintained by the HSO during site work. At the end of the project, they will be maintained according to 29 CFR 1910.1020.

18.6 Hazard Communication Program/MSDS-SDS

Material safety data sheets (MSDS) Safety Data Sheets (SDS) have been obtained for applicable substances and are included in this HASP (Attachment D). Langan's written hazard communication program, in compliance with 29 CFR 1910.1200, is maintained by the HSM.

18.7 Documentation

Immediately following an incident or near miss, unless emergency medical treatment is required, either the employee or a coworker must contact the Langan incident/injury hotline at 1-800-952-6426, extension 4699, and the Project Manager to report the incident or near miss. The Project Manager will contact the client or client representative. A written report must be completed and

submitted HSM within 24 hours of the incident. For emergencies involving personnel injury and/or exposure, the employee will complete and submit the Langan incident/injury report to the Langan corporate health and safety manager as soon as possible following the incident. Accidents will be investigated in-depth to identify all causes and to recommend hazard control measures.

18.7.1 Accident and Injury Report Forms

18.7.1.1 Accident/Incident Report

All injuries, no matter how slight, must be reported to the FTL and the PM immediately. The accident/incident report forms, attached in Attachment C, will be filled out on all accidents by the applicable contractor supervision personnel, the FTL, or the HSO. Copies of all accident/incident reports must be kept on-site and available for review. Project personnel will be instructed on the location of the first aid station, hospital, and doctor and ambulance service near the job. The emergency telephone numbers will be conspicuously posted in site vehicles near the work zone. First aid supplies will be centrally located and conspicuously posted between restricted and nonrestricted areas to be readily accessible to all on the site.

18.7.1.2 First Aid Treatment Record

The forms will be used for recording all non-lost time injuries treated by the project first-aid attendant, the local physician or hospital will be entered in detail on this record. "Minor" treatment of scratches, cuts, etc. will receive the same recording attention as treatment of more severe injuries.

18.7.1.3 OSHA Form 300

An OSHA Form 300 will be kept at the Langan Corporate Office in Parsippany, New Jersey. All recordable injuries or illnesses will be recorded on this form. Subcontractor employers must also meet the requirements of maintaining an OSHA 300 form. The Incident Report form used to capture the details of work-related injuries/illnesses meets the requirements of the OSHA Form 301 (supplemental record) and must be maintained with the OSHA Form 300 for all recordable injuries or illnesses. Forms for recording OSHA work-related injuries and illnesses are included in Attachment C.

19.0 CONFINED SPACE ENTRY

Confined spaces are not anticipated at the Site during planned construction activities. If confined spaces are identified, the contractor must implement their own confined space program that all

applicable federal, state, and local regulations. Confined spaces **will not** be entered by Langan personnel.

20.0 HASP ACKNOWLEDGEMENT FORM

All Langan personnel and contractors will sign this HASP Compliance Agreement indicating that they have become familiar with this HASP and that they understand it and agree to abide by it.

Printed Name	Signature	Company	Date

TABLES

TABLE 1
TASK HAZARD ANALYSES

Task	Hazard	Description	Control Measures	First Aid
1.3.1 – 1.3.14	Contaminated Soil or Groundwater-Dermal Contact	Contaminated water spills on skin, splashes in eyes; contact with contaminated soil/fill during construction activities or sampling.	Wear proper PPE; follow safe practices, maintain safe distance from construction activities	See Table 2, seek medical attention as required
1.3.1 – 1.3.14	Lacerations, abrasions, punctures	Cutting bailer twine, pump tubing, acetate liners, etc. with knife; cuts from sharp site objects or previously cut piles, tanks, etc.; Using tools in tight spaces	Wear proper PPE; follow safe practices	Clean wound, apply pressure and/or bandages; seek medical attention as required.
1.3.1 – 1.3.14	Contaminated Media Inhalation	Opening drums, tanks, wells; vapors for non-aqueous phase liquids or other contaminated site media; dust inhalation during excavation; vapor accumulation in excavation	Follow air monitoring plan; have quick access to respirator, do not move or open unlabeled drums found at the site, maintain safe distance from construction activities	See Table 2, seek medical attention as required
1.3.1 – 1.3.14	Lifting	Improper lifting/carrying of equipment and materials causing strains	Follow safe lifting techniques. Langan employees are not to carry contractor equipment or materials	Rest, ice, compression, elevation; seek medical attention as required
1.3.1 – 1.3.14	Slips, trips, and falls	Slips, trips, and falls due to uneven surfaces, cords, steep slopes, debris, and equipment in work areas	Good housekeeping at site; constant awareness and focus on the task; avoid climbing on stockpiles; maintain safe distance from construction activities and excavations; avoid elevated areas over six feet unless fully accredited in fall protection and wearing an approved fall protection safety apparatus	Rest, ice, compression, elevation; seek medical attention as required
1.3.1 – 1.3.14	Noise	Excavation equipment, hand tools, drilling equipment.	Wear hearing protection; maintain safe distance from construction activities	Seek medical attention as required
1.3.1 – 1.3.14	Falling objects	Soil material, tools, etc. dropping from drill rigs, front-end loaders, etc.	Hard hats to be worn at all times while in work zones; maintain safe distance from construction activities and excavations	Seek medical attention as required
1.3.1 – 1.3.14	Underground/ overhead utilities	Excavation equipment, drill rig auger contacts underground object; boom touches overhead utility	"One Call" before dig; follow safe practices; confirm utility locations with contractor; wear proper PPE; maintain safe distance from construction activities and excavations	Seek medical attention as required
1.3.1 – 1.3.14	Insects (bees, wasps, hornet, mosquitoes, and spider)	Sings, bites	Insect Repellent; wear proper protective clothing (work boots, socks, and light-colored pants); field personnel who may have insect allergies (e.g., bee sting) should provide this information to the HSO or FSO prior to commencing work and will have allergy medication on site.	Seek medical attention as required
1.3.1 – 1.3.14	Vehicle traffic / Heavy Equipment Operation	Vehicles unable to see workers on site, operation of heavy equipment in tight spaces, equipment failure, malfunctioning alarms	Wear proper PPE, especially visibility vest; use a buddy system to look for traffic; rope off area of work with cones and caution tape or devices at points of hazard, maintain safe distance from construction activities and equipment	Seek medical attention as required

TABLE 2
CONTAMINANT HAZARDS OF CONCERN

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Acetone Dimethyl ketone Ketone propane 2-Propanone	67-64-1	PID	1000 ppm 2500 ppm	Groundwater Soil	inhalation, ingestion, skin, and/or eye contact	irritation to the eyes, nose, throat; headache, dizziness, central nervous system depression; dermatitis	Eye: Irrigate immediately Skin: Soap wash immediately Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Anthracene	120-12-7	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Soil	inhalation, skin, or eye contact, ingestion	irritation to the skin, eyes, mucous membranes, and upper respiratory tract, abdominal pain if ingested.	Eye: Irrigate immediately, seek medical attention immediately, Skin: Soap wash immediately, Breathing: Move to fresh air, refer to medical attention. Swallow: refer to medical attention
1.3.1 – 1.3.14	Arsenic	NA	None	0.5 mg/m^3 NA	Groundwater Soil	inhalation, ingestion, skin, and/or eye contact	irritation skin, dermatitis; resp distress; diarrhea; muscle tremor, convulsions; possible gastrointestinal tract	Eye: Irrigate immediately Skin: Soap wash immediately Breathing: Respiratory support Swallow: Medical attention immediately

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Barium	10022-31-8	None	0.5 mg/m^3 50 mg/m^3	Groundwater Soil	inhalation, ingestion, skin, and/or eye contact	irritation to the eyes, skin, upper respiratory system; skin, burns; gastroenteritis; muscle spasm; slow pulse	Eye: Irrigate immediately Skin: Water flush immediately Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Benzo(a)anthracene Benzanthracene Benzanthrene 1,2-Benzanthracene Benzo[b]phenanthrene Tetraphene	56-55-3	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Groundwater Soil	inhalation, skin, or eye contact, ingestion	dermatitis, bronchitis, [potential occupational carcinogen]	Eye: Irrigate immediately Skin: Soap wash immediately Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Benzo(a)pyrene	50-32-8	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Soil	inhalation, skin, or eye contact, ingestion	dermatitis, bronchitis, [potential occupational carcinogen]	Eye: Irrigate immediately, seek medical attention Skin: Soap wash immediately. Breathing: move to fresh air. Swallow: Induce vomiting if conscious, seek medical attention immediately

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Benzo(b)fluoranthene	205-99-2	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Soil	inhalation, skin, or eye contact, ingestion	irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache)	Eye: Irrigate immediately, refer to medical attention Skin: Soap wash immediately Breathing: move to fresh air Swallow: Medical attention immediately
1.3.1 – 1.3.14	Benzo(g,h,i)perylene Benzo(ghi)perylene	191-24-2	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Soil	inhalation, skin, or eye contact, ingestion	irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache)	Eye: Irrigate immediately, refer to medical attention Skin: Soap wash immediately Breathing: move to fresh air Swallow: Medical attention immediately
1.3.1 – 1.3.14	Benzo(k)fluoranthene	207-08-9	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Soil	inhalation, skin, or eye contact, ingestion	irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache)	Eye: Irrigate immediately, refer to medical attention Skin: Soap wash immediately Breathing: move to fresh air Swallow: Medical attention immediately

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Cadmium	7440-43-9	None	0.005 mg/m^3 9 mg/m^3	Soil	inhalation, ingestion	pulmonary edema, dyspnea (breathing difficulty), cough, chest tightness, substernal (occurring beneath the sternum) pain; headache; chills, muscle aches; nausea, vomiting, diarrhea; anosmia (loss of the sense of smell), emphysema, proteinuria, mild anemia; [potential occupational carcinogen]	Eye: Irrigate immediately Skin: Soap wash Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Carbazole 9-azafluorene Dibenzopyrrole Diphenylenimine diphenyleneimide	86-74-8	None	NA NA	Soil	inhalation, skin absorption (liquid), skin, and/or eye contact	irritation to eyes and skin, respiratory irritation	Eye: Irrigate immediately, refer to medical attention Skin: Soap wash immediately Breathing: move to fresh air Swallow: Medical attention immediately
1.3.1 – 1.3.14	Carbon disulfide	75-15-0	PID	20 ppm 500 ppm	Soil Groundwater Vapor	inhalation, skin, or eye contact, ingestion	irritation to the eyes, skin, respiratory system	Eye: Irrigate immediately (liquid) Skin: Water flush immediately (liquid) Breathing: Respiratory support

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Chloroform Methane trichloride Trichloromethane Chloro-3-methyl phenol	67-66-3	None	50 ppm 500 ppm	Groundwater Soil	inhalation, skin absorption, ingestion, skin, and/or eye contact	irritation to the eyes, skin; dizziness, mental dullness, nausea, confusion; headache, lassitude (weakness, exhaustion); anesthesia; enlarged liver; [potential occupational carcinogen]	Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Chromium Total Chromium Chromium, Total	7440-47-3	None	1.0 mg/m^3 250 mg/m^3	Groundwater Soil	inhalation absorption ingestion	irritation to eye, skin, and respiratory	Eye: Irrigate immediately Skin: Soap wash Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Chrysene Benzo[a]phenanthrene 1,2-Benzphenanthrene	218-01-9	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Groundwater Soil	inhalation, absorption, ingestion, consumption	irritation to eye, skin, and respiratory, gastrointestinal irritation nausea, vomit, diarrhea [potential occupational carcinogen]	Eyes: Irrigate immediately Skin: Soap wash promptly. Breath: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Dibenz(a,h)anthracene Dibenzo(a,h)anthracene Dibenzo[a,h]anthracene	53-70-3	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Groundwater Soil	inhalation, absorption, ingestion, consumption	irritation to eyes, skin, respiratory, and digestion [potential occupational carcinogen]	Eyes: Irrigate immediately Skin: Soap wash promptly. Breath: Respiratory support PID Swallow: Medical attention immediately

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Diesel Fuel automotive diesel fuel oil No. 2 distillate diesoline diesel oil diesel oil light diesel oil No. 1-D summer diesel	68334-30-5	PID	NA NA	Groundwater Soil Vapor	inhalation, ingestion, skin, and/or eye contact	irritation to the eyes, skin, nose, throat; burning sensation in chest; headache, nausea, lassitude (weakness, exhaustion), restlessness, incoordination, confusion, drowsiness; vomiting, diarrhea; dermatitis; chemical pneumonitis (aspiration liquid)	Eye: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Ethyl ether Diethyl ether Diethyl oxide Ethyl oxide Ether Solvent ether	60-29-7	PID	400 ppm 1900 ppm	Groundwater Soil Vapor	inhalation, ingestion, skin, and/or eye contact	irritation to the eyes, skin, upper respiratory system; dizziness, drowsiness, headache, excited, narcosis; nausea, vomiting	Eye: Irrigate immediately Skin: Water wash promptly Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Fluoranthene Benzo(j,k)fluorene	206-44-0	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Groundwater Soil	inhalation, skin, or eye contact, ingestion	irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache)	Eye: Irrigate immediately, refer to medical attention Skin: Soap wash immediately Breathing: move to fresh air Swallow: Medical attention immediately

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Fuel Oil No. 2	68476-30-2	PID	NA NA	Groundwater Soil Vapor	inhalation, ingestion, skin, and/or eye contact	irritation to the eyes, skin, nose, throat; burning sensation in chest; headache, nausea, lassitude (weakness, exhaustion), restlessness, incoordination, confusion, drowsiness; vomiting, diarrhea; dermatitis; chemical pneumonitis (aspiration liquid)	Eye: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Gasoline	8006-61-9	PID	NA NA	Groundwater Soil Vapor	inhalation, skin absorption, ingestion, skin, and/or eye contact	irritation to the eyes, skin, mucous membrane; dermatitis; headache, lassitude (weakness, exhaustion), blurred vision, dizziness, slurred speech, confusion, convulsions; chemical pneumonitis (aspiration liquid)	Eye: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Helium	7440-59-7	Helium Detector	NA NA	NA	inhalation	dizziness, headache, and nausea	Breathing: Respiratory support
1.3.1 – 1.3.14	Indeno(1,2,3-cd)pyrene Indeno(1,2,3-c,d)Pyrene Indeno[1,2,3-cd]Pyrene	193-39-5	None	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Groundwater Soil	inhalation, absorption, ingestion, consumption	irritation to eyes, skin, respiratory, and digestion [potential occupational carcinogen]	Eyes: Irrigate immediately Skin: Soap wash promptly. Breath: Respiratory support Swallow: Medical attention immediately, wash mouth with water

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Lead	7439-92-1	None	0.050 mg/m^3 100 mg/m^3	Groundwater Soil	inhalation, ingestion, skin, and/or eye contact	lassitude (weakness, exhaustion), insomnia; facial pallor; anorexia, weight loss, malnutrition; constipation, abdominal pain, colic; anemia; gingival lead line; tremor; paralysis wrist, ankles; encephalopathy; kidney disease; irritation to the eyes; hypertension	Eye: Irrigate immediately Skin: Soap flush promptly Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Mercury	7439-97-6	None	0.1 mg/m^3 10 mg/m^3	Groundwater Soil	inhalation, skin absorption, ingestion, skin, and/or eye contact	irritation to the eyes, skin; cough, chest pain, dyspnea (breathing difficulty), bronchitis, pneumonitis; tremor, insomnia, irritability, headache, lassitude (weakness, exhaustion); stomatitis, salivation; gastrointestinal disturbance, anorexia, weight loss; proteinuria	Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Methylene Chloride Dichloromethane Methylene dichloride	75-09-2	PID	25 ppm 2300 ppm	Groundwater Soil Vapor	inhalation, skin absorption, ingestion, skin, and/or eye contact	irritation to the eyes, skin; lassitude (weakness, exhaustion), drowsiness, dizziness; numb, tingle limbs; nausea; [potential occupational carcinogen]	Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Non-Flammable Gas Mixture CALGAS (Equipment Calibration Gas : Oxygen Methane Hydrogen Sulfide Carbon Monoxide Nitrogen	 7782-44-7 74-82-8 7783-08-4 830-08-0 7727-37-9	Multi-Gas PID	 NA/NA NA/NA 10/100 ppm 50/1200 ppm NA/NA	NA	inhalation	dizziness, headache, and nausea	Breathing: Respiratory support
1.3.1 – 1.3.14	Non-Flammable Gas Mixture CALGAS (Equipment Calibration Gas : Oxygen Isobutylene Nitrogen	 7782-44-7 115-11-7 7727-37-9	PID	 NA/NA NA/NA NA/NA	NA	inhalation	dizziness, headache, and nausea	Breathing: Respiratory support
1.3.1 – 1.3.14	Phenanthrene	85-01-8	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Groundwater Soil	inhalation, skin, or eye contact, ingestion	irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache)	Eye: Irrigate immediately, refer to medical attention Skin: Soap wash immediately Breathing: move to fresh air Swallow: Medical attention immediately
1.3.1 – 1.3.14	Pyrene benzo[def]phenanthrene	129-00-0	PID	0.2 mg/m^3 80 mg/m^3 (Coal Pitch Tar)	Groundwater Soil	inhalation, skin, or eye contact, ingestion	irritation to eyes and skin, respiratory irritation (dizziness, weakness, fatigue, nausea, headache)	Eye: Irrigate immediately, refer to medical attention Skin: Soap wash immediately Breathing: move to fresh air Swallow: Medical attention immediately

Task	Contaminant	CAS Number	Monitoring Device	PEL/ IDLH	Source of Concentration on Site	Route of Exposure	Symptoms	First Aid
1.3.1 – 1.3.14	Tetrachloroethylene Perchlorethylene Perchloroethylene PCE Perk Tetrachlorethylene Tetrachloroethene	127-18-4	PID	100 ppm 150 ppm	Groundwater Soil Vapor	inhalation, skin absorption, ingestion, skin, and/or eye contact	irritation to the eyes, skin, nose, throat, respiratory system; nausea; flush face, neck; dizziness, incoordination; headache, drowsiness; skin, erythema (skin, redness); liver damage; [potential occupational carcinogen]	Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Toluene Methyl benzene Methyl benzol Phenyl methane Toluol	108-88-3	PID	200 ppm 500 ppm	Groundwater Soil Vapor	inhalation, skin absorption, ingestion, skin, and/or eye contact	irritation to the eyes, nose; lassitude (weakness, exhaustion), confusion, euphoria, dizziness, headache; dilated pupils, lacrimation (discharge of tears); anxiety, muscle fatigue, paresthesia; dermatitis	Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately
1.3.1 – 1.3.14	Trichloroethylene Trichloroetheneylenes Ethylene trichloride TCE Trichloroethene Trilene	79-01-6	PID	100 ppm 1000 ppm	Groundwater Soil Vapor	inhalation, skin absorption, ingestion, skin, and/or eye contact	irritation to the eyes, skin; headache, visual disturbance, lassitude (weakness, exhaustion), dizziness, tremor, drowsiness, nausea, vomiting; dermatitis; cardiac arrhythmias, paresthesia; liver injury; [potential occupational carcinogen]	Eye: Irrigate immediately Skin: Soap wash promptly Breathing: Respiratory support Swallow: Medical attention immediately

EXPLANATION OF ABBREVIATIONS

PID = Photoionization Detector
PEL = Permissible Exposure Limit (8-hour Time Weighted Average)
IDLH = Immediately Dangerous to Life and Health
ppm = part per million
mg/m^3 = milligrams per cubic meter
500 mg/m^3

TABLE 3
SUMMARY OF MONITORING EQUIPMENT

Instrument	Operation Parameters
Photoionization Detector (PID)	**Hazard Monitored:** Many organic and some inorganic gases and vapors. **Application:** Detects total concentration of many organic and some inorganic gases and vapors. Some identification of compounds is possible if more than one probe is measured. **Detection Method:** Ionizes molecules using UV radiation; produces a current that is proportional to the number of ions. **General Care/Maintenance:** Recharge or replace battery. Regularly clean lamp window. Regularly clean and maintain the instrument and accessories. **Typical Operating Time:** 10 hours. 5 hours with strip chart recorder.
Oxygen Meter	**Hazard Monitored:** Oxygen (O_2). **Application:** Measures the percentage of O_2 in the air. **Detection Method:** Uses an electrochemical sensor to measure the partial pressure of O_2 in the air and converts the reading to O_2 concentration. **General Care/Maintenance:** Replace detector cell according to manufacturer's recommendations. Recharge or replace batteries prior to explanation of the specified interval. If the ambient air is less than 0.5% C O_2, replace the detector cell frequently. **Typical Operating Time:** 8 – 12 hours.
Additional equipment (if needed, based on site conditions)	
Combustible Gas Indicator (CGI)	**Hazard Monitored:** Combustible gases and vapors. **Application:** Measures the concentration of combustible gas or vapor. **Detection Method:** A filament, usually made of platinum, is heated by burning the combustible gas or vapor. The increase in heat is measured. Gases and vapors are ionized in a flame. A current is produced in proportion to the number of carbon atoms present. **General Care/Maintenance:** Recharge or replace battery. Calibrate immediately before use. **Typical Operating Time:** Can be used for as long as the battery lasts, or for the recommended interval between calibrations, whichever is less.
Flame Ionization Detector (FID) with Gas Chromatography Option *(i.e., Foxboro Organic Vapor Analyzer (OVA))*	**Hazard Monitored:** Many organic gases and vapors (approved areas only). **Application:** In survey mode, detects the concentration of many organic gases and vapors. In gas chromatography (GC) mode, identifies and measures specific compounds. In survey mode, all the organic compounds are ionized and detected at the same time. In GC mode, volatile species are separated. **General Care/Maintenance:** Recharge or replace battery. Monitor fuel and/or combustion air supply gauges. Perform routine maintenance as described in the manual. Check for leaks. **Typical Operating Time:** 8 hours; 3 hours with strip chart recorder.
Potable Infrared (IR) Spectrophotometer	**Hazard Monitored:** Many gases and vapors. **Application:** Measures concentration of many gases and vapors in air. Designed to quantify one or two component mixtures. **Detection Method:** Passes different frequencies of IR through the sample. The frequencies absorbed are specific for each compound. **General Care/Maintenance:** As specified by the manufacturer.

Instrument	Operation Parameters
Direct Reading Colorimetric Indicator Tube	**Hazard Monitored:** Specific gas and vapors. **Application:** Measures concentration of specific gases and vapors. **Detection Method:** The compound reacts with the indicator chemical in the tube, producing a stain whose length or color change is proportional to the compound's concentration. **General Care/Maintenance:** Do not use a previously opened tube even if the indicator chemical is not stained. Check pump for leaks before and after use. Refrigerate before use to maintain a shelf life of about 2 years. Check expiration dates of tubes. Calibrate pump volume at least quarterly. Avoid rough handling which may cause channeling.
Aerosol Monitor	**Hazard Monitored:** Airborne particulate (dust, mist, fume) concentrations. **Application:** Measures total concentration of semi-volatile organic compounds, PCBs, and metals. **Detection Method:** Based on light-scattering properties of particulate matter. Using an internal pump, air sample is drawn into the sensing volume where near infrared light scattering is used to detect particles. **General Care/Maintenance:** As specified by the mfr. Also, the instrument must be calibrated with particulates of a size and refractive index similar to those to be measured in the ambient air.
Monitox	**Hazard Monitored:** Gases and vapors. **Application:** Measures specific gases and vapors. **Detection Method:** Electrochemical sensor specific for the chemical species in question. **General Care/Maintenance:** Moisten sponge before use; check the function switch; change the battery when needed.
Gamma Radiation Survey Instrument	**Hazard Monitored:** Gamma Radiation. **Application:** Environmental radiation monitor. **Detection Method:** Scintillation detector. **General Care/Maintenance:** Must be calibrated annually at a specialized facility. **Typical Operating Time:** Can be used for as long as the battery lasts, or for the recommended interval between calibrations, whichever is less.

TABLE 4
INSTRUMENTATION ACTION LEVELS

Photoionization Detector Action Levels	**Action Required**
Background to 5 parts per million (ppm)[1]	No respirator needed; no further action
>5ppm but </= 15 ppm at the perimeter of the work area	• Work temporarily halted and monitoring continues. • If instantaneous readings decrease below 5 ppm above background, work activities will resume with continued monitoring
>5ppm but </= 25 ppm at the downwind perimeter of the hot zone	• Work activities will be halted. • Source of vapors identified. • Corrective actions taken to abate emissions. • Continued monitoring. • Workers will don appropriate respirators and work can resume if vapor levels 200 feet downwind or the hot zone or half the distance to the nearest potential receptor or residential or commercial structure, whichever is less – but in no case less than 20 feet – is below 5 ppm above background for the 15-minute average
>25ppm at the parameter of the hot zone	Activities will shut down

Particulate Monitoring Action Levels	**Action Required**
Background to 100 micrograms per cubic meter (µg/m³)[2], no dust observed	No further action
Background to 100 µg/m³, dust observed leaving the work area	Dust suppression must be employed.
100 to 150 µg/m³ at the downwind parameter of the hot zone	• Work activities will be halted. • Source of dust identified. • Dust suppression activities initiated. • Corrective actions taken to abate emissions. • Continued monitoring. • Workers will don appropriate respirators. • Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM10 concentration to within 150 µg/m³ of the upwind level and in preventing visible dust migration.
>150 µg/m³ at the parameter of the hot zone	Activities will shut down

[1] VOC concentrations are 15-minute averages above site background (upwind parameter)
[2] Particulate concentrations are 15-minute averages above site background (upwind parameter)

TABLE 5
EMERGENCY NOTIFICATION LIST

ORGANIZATION	CONTACT	TELEPHONE
Local Police Department		911
Local Fire Department		911
Ambulance/Rescue Squad		911
Hospital	Westchester Medical Center Health Alliance	911 or 845-331-3131
Langan Incident Hotline		800-952-6426 extension 4699
Medical Treatment Hotline	WorkCare™	911 or 888-449-7757
Langan Environmental Project Manager	Lamees Esmail	919-694-3345 (cell)
Langan Health and Safety Manager (HSM)	Tony Moffa	215-756-2523 (cell)
Langan Health & Safety Officer (HSO)	William Bohrer	410-984-3068 (cell)
Langan Field Team Leader (FTL)	To Be Determined	
Client's Representative	Lauren Lopez Rutkowski	845-471-1047
National Response Center (NRC)		800-424-8802
Chemical Transportation Emergency Center (Chemtrec)		800-424-9300
Center for Disease Control (CDC)		404-639-3534
EPA (RCRA Superfund Hotline)		800-424-9346
TSCA Hotline		202-554-1404
Poison Control Center		800-222-1222

Immediately following an injury, unless immediate emergency medical treatment is required, the injured employee must contact WorkCare - Incident Intervention® at 888-449-7787.

For all other incidents or near misses, unless emergency response is required, either the employee or a coworker must contact the Langan Incident Hotline at 973-560-4699.

TABLE 6
SUGGESTED FREQUENCY OF PHYSIOLOGICAL MONITORINGFOR FIT AND ACCLIMATED WORKERS[A]

Adjusted Temperature[b]	Normal Work Ensemble[c]	Impermeable Ensemble
90°F or above (32.2°C) or above	After each 45 min. of work	After each 15 min. of work
87.5°F (30.8°-32.2°C)	After each 60 min. of work	After each 30 min. of work
82.5°-87.5°F (28.1°-30.8°C)	After each 90 min. of work	After each 60 min. of work
77.5°-82.5°F (25.3°-28.1°C)	After each 120 min. of work	After each 90 min. of work
72.5°-77.5°F (22.5°-25.3°C)	After each 150 min. of work	After each 120 min. of work

a For work levels of 250 kilocalories/hour.

b Calculate the adjusted air temperature (ta adj) by using this equation: ta adj ^{o}F = ta ^{o}F + (13 x % sunshine). Measure air temperature (ta) with a standard mercury-in-glass thermometer, with the bulb shielded from radiant heat. Estimate percent sunshine by judging what percent time the sun is not covered by clouds that are thick enough to produce a shadow. (100 percent sunshine = no cloud cover and a sharp, distinct shadow; 0 percent sunshine = no shadows.)

c A normal work ensemble consists of cotton coveralls or other cotton clothing with long sleeves and pants.

TABLE 7

HEAT INDEX

ENVIRONMENTAL TEMPERATURE (Fahrenheit)

RELATIVE HUMIDITY	70	75	80	85	90	95	100	105	110	115	120
	APPARENT TEMPERATURE*										
0%	64	69	73	78	83	87	91	95	99	103	107
10%	65	70	75	80	85	90	95	100	105	111	116
20%	66	72	77	82	87	93	99	105	112	120	**130**
30%	67	73	78	84	90	96	104	113	123	**135**	**148**
40%	68	74	79	86	93	101	110	123	**137**	**151**	
50%	69	75	81	88	96	107	120	**135**	**150**		
60%	70	76	82	90	100	114	**132**	**149**			
70%	70	77	85	93	106	124	**144**				
80%	71	78	86	97	113	**136**					
90%	71	79	88	102	122						
100%	72	80	91	108							

*Combined Index of Heat and Humidity...what it "feels like" to the body
Source: National Oceanic and Atmospheric Administration

How to use Heat Index:
1. Across top locate Environmental Temperature
2. Down left side locate Relative Humidity
3. Follow across and down to find Apparent Temperature
4. Determine Heat Stress Risk on chart at right

Note: Exposure to full sunshine can increase Heat Index values by up to 15 degrees F.

Apparent Temperature	Heat Stress Risk with Physical Activity and/or Prolonged Exposure
90-105	Heat Cramps or Heat Exhaustion Possible
105-130	Heat Cramps or Heat Exhaustion Likely, Heat Stroke Possible
>130	Heatstroke Highly Likely

FIGURES

FIGURE 1
SITE LOCATION MAP



LANGAN 368 Ninth Avenue, 8th Floor New York, NY 10001-2727 T: 212.479.5400 F: 212.479.5444 www.langan.com Langan Engineering & Environmental Services, Inc. Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. Langan International LLC Collectively known as Langan	Project 615 BROADWAY BLOCK No. 3, LOT No. 16 KINGSTON ULSTER COUNTY NEW YORK	Figure Title SITE LOCATION MAP	Project No. 170803001 Date 3/4/2025 Scale 1"=2,000' Drawn By GS Submission Date	Figure No. 1

Path: \\langan.com\data\NYC\data9\170803001\Project Data\ArcGIS\APRX\170803001\170803001.aprx Date: 3/4/2025 User: Gsajbel Time: 9:56 AM

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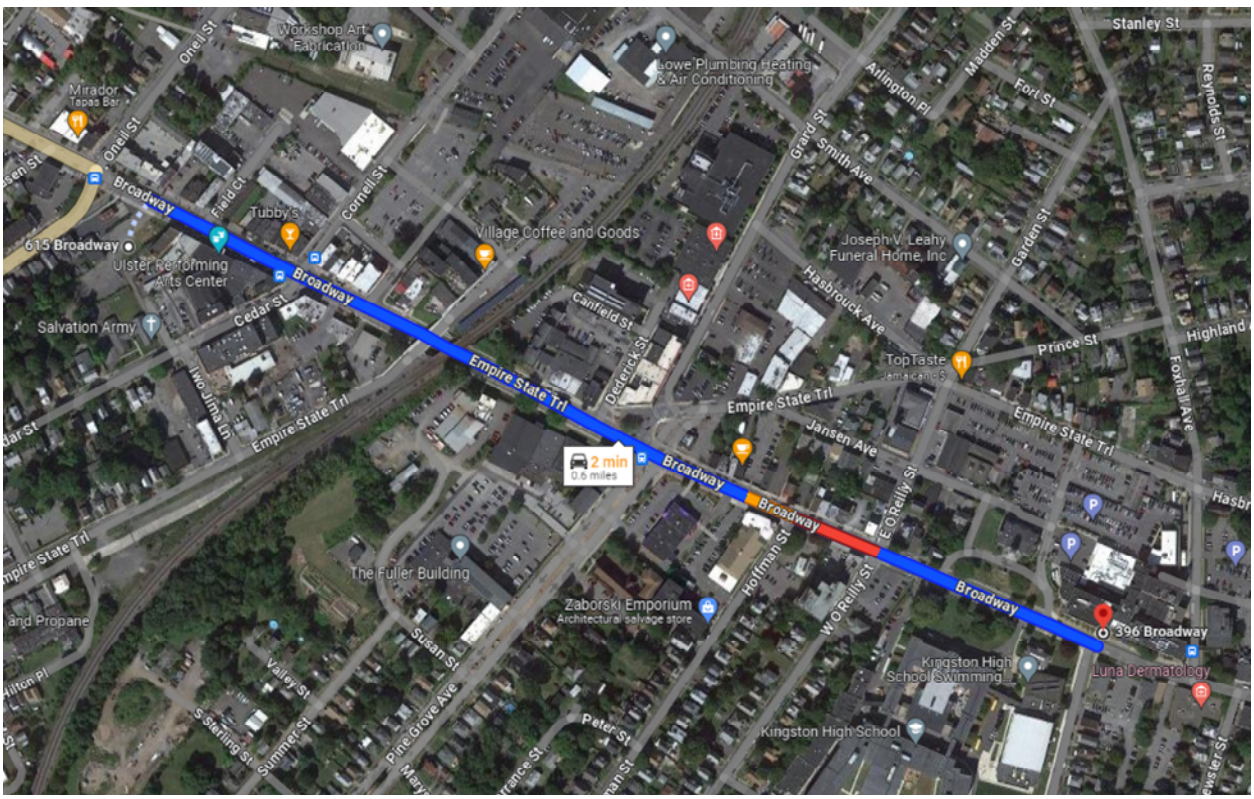
FIGURE 2
HOSPITAL ROUTE PLAN

Hospital Location: **Westchester Medical Center Health Alliance**
396 Broadway
Kingston, New York
845-331-3131

START: 615 Broadway, Kingston, New York

1. Head southeast on Broadway towards Field Ct, destination will be on the left.

END: Westchester Medical Center Health Alliance, 396 Broadway, Kingston, New York



ATTACHMENTS

ATTACHMENT A

STANDING ORDERS

STANDING ORDERS

GENERAL

- No smoking, eating, or drinking in this work zone.
- Upon leaving the work zone, personnel will thoroughly wash their hands and face.
- Minimize contact with contaminated materials through proper planning of work areas and decontamination areas, and by following proper procedures. Do not place equipment on the ground. Do not sit on contaminated materials.
- No open flames in the work zone.
- Only properly trained and equipped personnel are permitted to work in potentially contaminated areas.
- Always use the appropriate level of personal protective equipment (PPE).
- Maintain close contact with your buddy in the work zone.
- Contaminated material will be contained in the Exclusion Zone (EZ).
- Report any unusual conditions.
- Work areas will be kept clear and uncluttered. Debris and other slip, trip, and fall hazards will be removed as frequently as possible.
- The number of personnel and equipment in the work zone will be kept to an essential minimum.
- Be alert to the symptoms of fatigue and heat/cold stress, and their effects on the normal caution and judgment of personnel.
- Conflicting situations which may arise concerning safety requirements and working conditions must be addressed and resolved quickly by the site HSO.

TOOLS AND HEAVY EQUIPMENT

- Do not, under any circumstances, enter or ride in or on any backhoe bucket, materials hoist, or any other device not specifically designed to carry passengers.
- Loose-fitting clothing or loose long hair is prohibited around moving machinery.
- Ensure that heavy equipment operators and all other personnel in the work zone are using the same hand signals to communicate.
- Drilling/excavating within 10 feet in any direction of overhead power lines is prohibited.
- The locations of all underground utilities must be identified and marked out prior to initiating any subsurface activities.
- Check to ensure that the equipment operator has lowered all blades and buckets to the ground before shutting off the vehicle.
- If the equipment has an emergency stop device, have the operator show all personnel its location and how to activate it.
- Help the operator ensure adequate clearances when the equipment must negotiate in tight quarters; serve as a signal operator to direct backing, as necessary.
- Ensure that all heavy equipment that is used in the Exclusion Zone is kept in that zone until the job is done and that such equipment is completely decontaminated before moving it into the clean area of the work zone.
- Samplers must not reach into or get near rotating equipment such as the drill rig. If personnel must work near any tools that could rotate, the equipment operator must completely shut down the rig prior to initiating such work. It may be necessary to use a remote sampling device.

ATTACHMENT B

DECONTAMINATION PROCEDURES

PERSONNEL DECONTAMINATION

LEVEL C DECONTAMINATION

Station 1:	Equipment Drop	1. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross-contamination. During hot weather operations, cool down stations may be set up within this area.
Station 2:	Outer Garment, Boots, and Gloves Wash and Rinse	2. Scrub outer boots, outer gloves, and chemical-resistant splash suit with decon solution or detergent and water. Rinse off using copious amounts of water.
Station 3:	Outer Boot and Glove Removal	3. Remove outer boots and gloves. Deposit in container with plastic liner.
Station 4:	Canister or Mask Change	4. If worker leaves Exclusion Zone to change canister (or mask), this is the last step in the decontamination procedure. Worker's canister is exchanged, new outer gloves and boot covers donned, joints taped, and worker returns to duty.
Station 5:	Boot, Gloves and Outer Garment Removal	5. Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
Station 6:	Face piece Removal	6. Face piece is removed (avoid touching face with fingers). Face piece deposited on plastic sheets.
Station 7:	Field Wash	7. Hands and face are thoroughly washed. Shower as soon as possible.

LEVEL D DECONTAMINATION

Station 1:	Equipment Drop	1. Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, cool down stations may be set up within this area.
Station 2:	Outer Garment, Boots, and Gloves Wash and Rinse	2. Scrub outer boots, outer gloves and chemical-resistant splash suit with decon solution or detergent and water. Rinse off using copious amounts of water.
Station 3:	Outer Boot and Glove Removal	3. Remove outer boots and gloves. Deposit in container with plastic liner.
Station 4:	Boot, Gloves and Outer Garment Removal	4. Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
Station 5:	Field Wash	5. Hands and face are thoroughly washed. Shower as soon as possible.

EQUIPMENT DECONTAMINATION

GENERAL:

Equipment to be decontaminated during the project may include tools, monitoring equipment, respirators, sampling containers, laboratory equipment, and drilling equipment.

All decontamination will be done by personnel in protective gear, appropriate for the level of decontamination, as determined by the site HSO. The decontamination work tasks will be split or rotated among support and work crews.

Depending on site conditions, backhoes and pumps may be decontaminated over a portable decontamination pad to contain wash water; or wash water may be allowed to run off into a storm sewer system. Equipment needed may include a steam generator with high-pressure water, empty drums, screens, screen support structures, and shovels. Drums will be used to hold contaminated wash water pumped from the lined pit. These drums will be labeled as such.

Miscellaneous tools and equipment will be dropped into a plastic bucket, tub, or other containers. They will be brushed off and rinsed with a detergent solution, and finally rinsed with clean water.

MONITORING EQUIPMENT:

Monitoring equipment will be protected as much as possible from contamination by draping, masking, or otherwise covering as many of the instruments as possible with plastic without hindering the operation of the unit. The PID, HNu, or OVA meter, for example, can be placed in a clear plastic bag, which allows reading of the scale and operation of knobs. The probes can be partially wrapped keeping the sensor tip and discharge port clear.

The contaminated equipment will be taken from the drop area and the protective coverings removed and disposed of in the appropriate containers. Any dirt or obvious contamination will be brushed or wiped with a disposable paper wipe.

RESPIRATORS:

Respirators will be cleaned and disinfected after every use. Taken from the drop area, the masks (with the cartridges removed and disposed of with other used disposable gear) will be immersed in a cleaning solution and scrubbed gently with a soft brush, followed by a rinse in plain warm water, and then allowed to air dry. In the morning, new cartridges will be installed. Personnel will inspect their own masks for serviceability prior to donning them. And, once the mask is on, the wearer will check the respirator for leakage using the negative and positive pressure fit check techniques.

ATTACHMENT C

EMPLOYEE EXPOSURE/INJURY INCIDENT REPORT

EMPLOYEE INCIDENT/INJURY REPORT
LANGAN ENGINEERING & ENVIRONMENTAL SERVICES

(Complete and return to Tony Moffa in the Doylestown Office)

Affected Employee Name: _____ Date: _____

Incident type: ☐ Injury ☐ Report Only/No Injury
☐ Near Miss ☐ Other: _____

EMPLOYEE INFORMATION (Person completing Form)

Employee Name: _____ Employee No: _____

Title: _____ Office Location: _____

Length of time employed or date of hire: _____

Mailing address: _____

_____

Sex: M ☐ F ☐ Birth date: _____

Business phone & extension: _____ Residence/cell phone: _____

ACCIDENT INFORMATION

Project: _____ Project #: _____

Date & time of incident: _____ Time work started & ended: _____

Site location: _____

Incident Type: Possible Exposure ☐ Exposure ☐ Physical Injury ☐

Names of person(s) who witnessed the incident:_____

_____

_____

Exact location incident occurred:

_____

_____

Describe work being done:_____

_____

_____

_____

Describe what affected employee was doing prior to the incident occurring:

_____

_____

_____

Describe in detail how the incident occurred:

_____

_____

_____

_____

Nature of the incident (List the parts of the body affected):

_____

_____

_____

_____

Person(s) to whom the incident was reported (Time and Date):

_____

_____

List the names of other persons affected during this incident:

_____

_____

Possible causes of the incident (equipment, unsafe work practices, lack of PPE, etc.):

Weather conditions during incident:

MEDICAL CARE INFORMATION

Did affected employee receive medical care? Yes ☐ No ☐

If Yes, when, and where was medical care received:

Provide name of facility (hospital, clinic, etc.):

Length of stay at the facility.

Did the employee miss any work time? Yes ☐ No ☐ Undetermined ☐

Date employee last worked: Date employee returned to work:

Has the employee returned to work? Yes ☐ No ☐

Does the employee have any work limitations or restrictions from the injury? : Yes ☐ No ☐

If Yes, please describe:

Did the exposure/injury result in permanent disability? Yes ☐ No ☐ Unknown ☐

If Yes, please describe:

HEALTH & SAFETY INFORMATION

Was the operation being conducted under an established site-specific Health and Safety Plan?
Yes ☐ No ☐ Not Applicable: ☐

Describe protective equipment and clothing used by the employee:

_____

_____

_____

Did any limitations in safety equipment or protective clothing contribute to or affect exposure/injury? If so, explain:

_____

_____

_____

_____

Employee Signature Date

_____

Langan Representative Date

ATTACHMENT D

CALIBRATION LOG

DATE:_____ **PROJECT:**_____

CALIBRATION LOG

Date & Time	Inst Type	Inst #	Media	Initial Reading	Span #	Calibrate Reading	Performed By:

ATTACHMENT E

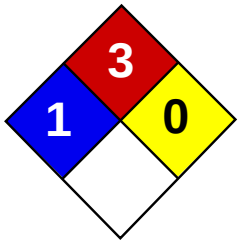
MATERIAL SAFETY DATA SHEETS
SAFETY DATA SHEETS

All Langan Field Personnel Completing This Work Plan Are To Have Real-Time Accessibility To Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDSs) Through Their Smart Phone.

The link is http://www.msds.com/
The login name is "drapehead"
The password is "2angan987"

If You Are Unable To Use the Smart Phone App, You Are To Bring Printed Copies of the MSDS/SDSs to the Site







Material Safety Data Sheet
Acetone MSDS

Section 1: Chemical Product and Company Identification

Product Name: Acetone

Catalog Codes: SLA3502, SLA1645, SLA3151, SLA3808

CAS#: 67-64-1

RTECS: AL3150000

TSCA: TSCA 8(b) inventory: Acetone

CI#: Not applicable.

Synonym: 2-propanone; Dimethyl Ketone; Dimethylformaldehyde; Pyroacetic Acid

Chemical Name: Acetone

Chemical Formula: C3-H6-O

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Acetone	67-64-1	100

Toxicological Data on Ingredients: Acetone: ORAL (LD50): Acute: 5800 mg/kg [Rat]. 3000 mg/kg [Mouse]. 5340 mg/kg [Rabbit]. VAPOR (LC50): Acute: 50100 mg/m 8 hours [Rat]. 44000 mg/m 4 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. The substance is toxic to central nervous system (CNS). The substance may be toxic to kidneys, the reproductive system, liver, skin. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 465°C (869°F)

Flash Points: CLOSED CUP: -20°C (-4°F). OPEN CUP: -9°C (15.8°F) (Cleveland).

Flammable Limits: LOWER: 2.6% UPPER: 12.8%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances: Highly flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks, of oxidizing materials, of acids.

Fire Fighting Media and Instructions:
Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards: Vapor may travel considerable distance to source of ignition and flash back.

Special Remarks on Explosion Hazards:
Forms explosive mixtures with hydrogen peroxide, acetic acid, nitric acid, nitric acid + sulfuric acid, chromic anydride, chromyl chloride, nitrosyl chloride, hexachloromelamine, nitrosyl perchlorate, nitryl perchlorate, permonosulfuric acid, thiodiglycol + hydrogen peroxide, potassium ter-butoxide, sulfur dichloride, 1-methyl-1,3-butadiene, bromoform, carbon, air, chloroform, thitriazylperchlorate.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:
Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, acids, alkalis.

Storage:
Store in a segregated and approved area (flammables area) . Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Keep away from direct sunlight and heat and avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 500 STEL: 750 (ppm) from ACGIH (TLV) [United States] TWA: 750 STEL: 1000 (ppm) from OSHA (PEL) [United States] TWA: 500 STEL: 1000 [Austalia] TWA: 1185 STEL: 2375 (mg/m3) [Australia] TWA: 750 STEL: 1500 (ppm) [United Kingdom (UK)] TWA: 1810 STEL: 3620 (mg/m3) [United Kingdom (UK)] TWA: 1800 STEL: 2400 from OSHA (PEL) [United States]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Fruity. Mint-like. Fragrant. Ethereal

Taste: Pungent, Sweetish

Molecular Weight: 58.08 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 56.2°C (133.2°F)

Melting Point: -95.35 (-139.6°F)

Critical Temperature: 235°C (455°F)

Specific Gravity: 0.79 (Water = 1)

Vapor Pressure: 24 kPa (@ 20°C)

Vapor Density: 2 (Air = 1)

Volatility: Not available.

Odor Threshold: 62 ppm

Water/Oil Dist. Coeff.: The product is more soluble in water; log(oil/water) = -0.2

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, ignition sources, exposure to moisture, air, or water, incompatible materials.

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 3000 mg/kg [Mouse]. Acute toxicity of the vapor (LC50): 44000 mg/m3 4 hours [Mouse].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED]. Causes damage to the following organs: central nervous system (CNS). May cause damage to the following organs: kidneys, the reproductive system, liver, skin.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May affect genetic material (mutagenicity) based on studies with yeast (S. cerevisiae), bacteria, and hamster fibroblast cells. May cause reproductive effects (fertility) based upon animal studies. May contain trace amounts of benzene and formaldehyde which may cancer and birth defects. Human: passes the placental barrier.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause skin irritation. May be harmful if absorbed through the skin. Eyes: Causes eye irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. Inhalation: Inhalation at high concentrations affects the sense organs, brain and causes respiratory tract irritation. It also may affect the Central Nervous System (behavior) characterized by dizzness, drowsiness, confusion, headache, muscle weakeness, and possibly motor incoordination, speech abnormalities, narcotic effects and coma. Inhalation may also affect the gastrointestinal tract (nausea, vomiting). Ingestion: May cause irritation of the digestive (gastrointestinal) tract (nausea, vomiting). It may also

affect the Central Nevous System (behavior), characterized by depression, fatigue, excitement, stupor, coma, headache, altered sleep time, ataxia, tremors as well at the blood, liver, and urinary system (kidney, bladder, ureter) and endocrine system. May also have musculoskeletal effects. Chronic Potential Health Effects: Skin: May cause dermatitis. Eyes: Eye irritation.

Section 12: Ecological Information

Ecotoxicity:
Ecotoxicity in water (LC50): 5540 mg/l 96 hours [Trout]. 8300 mg/l 96 hours [Bluegill]. 7500 mg/l 96 hours [Fatthead Minnow]. 0.1 ppm any hours [Water flea].

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification: : Acetone UNNA: 1090 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Benzene California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Benzene California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Benzene, Formaldehyde Connecticut hazardous material survey.: Acetone Illinois toxic substances disclosure to employee act: Acetone Illinois chemical safety act: Acetone New York release reporting list: Acetone Rhode Island RTK hazardous substances: Acetone Pennsylvania RTK: Acetone Florida: Acetone Minnesota: Acetone Massachusetts RTK: Acetone Massachusetts spill list: Acetone New Jersey: Acetone New Jersey spill list: Acetone Louisiana spill reporting: Acetone California List of Hazardous Substances (8 CCR 339): Acetone TSCA 8(b) inventory: Acetone TSCA 4(a) final test rules: Acetone TSCA 8(a) IUR: Acetone

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R11- Highly flammable. R36- Irritating to eyes. S9- Keep container in a well-ventilated place. S16- Keep away from sources of ignition - No smoking. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 1

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References:
-Material safety data sheet issued by: la Commission de la SantÃ© et de la SÃ©curitÃ© du Travail du QuÃ©bec. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. LOLI, RTECS, HSDB databases. Other MSDSs

Other Special Considerations: Not available.

Created: 10/10/2005 08:13 PM

Last Updated: 05/21/2013 12:00 PM

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SAFETY DATA SHEET

Version 4.9
Revision Date 04/20/2015
Print Date 12/11/2015

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Anthracene

Product Number : A89200
Brand : Aldrich

CAS-No. : 120-12-7

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear eye protection/ face protection.

P280	Wear protective gloves.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Photosensitizer., Lachrymator.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	$C_{14}H_{10}$
Molecular weight	:	178.23 g/mol
CAS-No.	:	120-12-7
EC-No.	:	204-371-1

Hazardous components

Component	Classification	Concentration
Anthracene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
	Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H315, H319, H335, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
No data available

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Anthracene	120-12-7	TWA	0.200000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Remarks	1910.1002 As used in §1910.1000 (Table Z-1), coal tar pitch volatiles include the fused polycyclic hydrocarbons which volatilize from the distillation residues of coal, petroleum (excluding asphalt), wood, and other organic matter. Asphalt (CAS 8052-42-4, and CAS 64742-93-4) is not covered under the 'coal tar pitch volatiles' standard OSHA specifically regulated carcinogen		

		TWA	0.100000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen NIOSH considers coal tar, coal tar pitch, and creosote to be coal tar products. cyclohexane-extractable fraction See Appendix C See Appendix A		

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Anthracene	120-12-7	1-Hydroxypyrene (1-HP)		Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Chloroprene
Minimum layer thickness: 0.6 mm
Break through time: 480 min
Material tested:Camapren® (KCL 722 / Aldrich Z677493, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 30 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator.For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: crystalline Colour: beige
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 210 - 215 °C (410 - 419 °F) - lit.
f)	Initial boiling point and boiling range	340 °C (644 °F) - lit.
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Lower explosion limit: 0.6 %(V)
k)	Vapour pressure	1.3 hPa (1.0 mmHg) at 145.0 °C (293.0 °F)
l)	Vapour density	No data available
m)	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	log Pow: 4.45
p)	Auto-ignition temperature	540.0 °C (1,004.0 °F)
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents, Hypochlorites

10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
Inhalation: No data available

Dermal: No data available

LD50 Intraperitoneal - Mouse - 430 mg/kg

Skin corrosion/irritation
Skin - Mouse
Result: Mild skin irritation

Serious eye damage/eye irritation
Irritating to eyes. The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling.

Respiratory or skin sensitisation
Causes photosensitivity. Exposure to light can result in allergic reactions resulting in dermatologic lesions, which can vary from sunburnlike responses to edematous, vesiculated lesions, or bullae

Germ cell mutagenicity
No data available

Carcinogenicity

IARC:	3 - Group 3: Not classifiable as to its carcinogenicity to humans (Anthracene)
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	OSHA specifically regulated carcinogen (Anthracene)

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure
Inhalation - May cause respiratory irritation.
The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: CA9350000

Possible tumor promoter., Headache, Nausea, Weakness

Blood -

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Lepomis macrochirus (Bluegill) - 0.001 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0.10 mg/l - 48 h

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
Indication of bioaccumulation.
Bioaccumulation Pimephales promelas (fathead minnow) - 42 d - 0.01191 mg/l

Bioconcentration factor (BCF): 649

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Anthracene)
Reportable Quantity (RQ): 5000 lbs

Poison Inhalation Hazard: No

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Anthracene)
Marine pollutant:yes

IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Anthracene)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Anthracene	120-12-7	2007-07-01

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Anthracene	120-12-7	2007-07-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Anthracene	120-12-7	2007-07-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Anthracene	120-12-7	2007-07-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.	CAS-No.	Revision Date
Anthracene	120-12-7	2007-09-28

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Irrit.	Eye irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.9 Revision Date: 04/20/2015 Print Date: 12/11/2015

Material Safety Data Sheets

Division of Facilities Services

DOD Hazardous Material Information (ANSI Format)
For Cornell University Convenience Only

ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Section 1 - Product and Company Identification	Section 9 - Physical & Chemical Properties
Section 2 - Compositon/Information on Ingredients	Section 10 - Stability & Reactivity Data
Section 3 - Hazards Identification Including Emergency Overview	Section 11 - Toxicological Information
Section 4 - First Aid Measures	Section 12 - Ecological Information
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Section 8 - Exposure Controls & Personal Protection	Section 16 - Other Information

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Section 1 - Product and Company Identification
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Product Identification: ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE
Date of MSDS: 08/01/1997 **Technical Review Date:** 09/01/1999
FSC: 6810 **NIIN: LIIN:** 00N092040
Submitter: N NF
Status Code: A
MFN: 01
Article: N
Kit Part: N

Manufacturer's Information

Manufacturer's Name: UNITED MINERAL & CHEMICAL CORP
Manufacturer's Address1: 1100 VALLEYBROOK AVE
Manufacturer's Address2: LYNDHURST, NJ 07071
Manufacturer's Country: US
General Information Telephone: 201-507-3300
Emergency Telephone: (800)424-9300
Emergency Telephone: (800)424-9300
Chemtec Telephone: (800)424-9300
Proprietary: N
Reviewed: Y
Published: Y
CAGE: 87730

Contractor Information

Contractor's Name: UNITED MINERAL & CHEMICAL CORP
Contractor's Address1: 1100 VALLEYBROOK AVE
Contractor's Address2: LYNDHURST, NJ 07071
Contractor's Telephone: 201-507-3300
Contractor's CAGE: 87730

Section 2 - Compositon/Information on Ingredients
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Ingredient Name: ARSENIC; (ARSENIC METAL)
Ingredient CAS Number: 7440-38-2 **Ingredient CAS Code:** T
RTECS Number: CG0525000 **RTECS Code:** T
=WT: 100. **=WT Code:** M
=Volume: =Volume Code:
>WT: >WT Code:
>Volume: >Volume Code:
<WT: <WT Code:
<Volume: <Volume Code:
% Low WT: % Low WT Code:
% High WT: % High WT Code:
% Low Volume: % Low Volume Code:
% High Volume: % High Volume Code:
% Text:
% Enviromental Weight:
Other REC Limits: N/P
OSHA PEL: N/P **OSHA PEL Code:**
OSHA STEL: N/P **OSHA STEL Code:**
ACGIH TLV: 0.01 MG/M3 **ACGIH TLV Code:** T
ACGIH STEL: NOT ESTABLISHED **ACGIH STEL Code:** T
EPA Reporting Quantity: 1 LB
DOT Reporting Quantity: 1 LB
Ozone Depleting Chemical: N

Section 3 - Hazards Identification, Including Emergency Overview
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Health Hazards Acute & Chronic: ARSENIC METAL IS NOT AS READILY AVAIL IN THE BODY AS ARSENIC IN THE FORM OF DUST OR VAP OR WHEN PROCESSED INTO ARSENIC CMPDS (ARSENICALS). INORGANIC ARSENICALS ARE MORE TOXIC THAN ORGANIC ARSENICALS. ACUTE EFTS: ARSENIC IS POISON BY SUBCUTANEOUS, INTRAMUSCULAR & INTRAPERITONEAL ROUTES. ACUTE ARSENIC POISONING FROM INGEST RSLTS IN MARKED IRRIT OF STOMACH & INTESTINES W/NAUS, VOMIT & DIARR. IN SEV C ASES STOOLS & VOMIT ARE BLOODY & PATIENT MAY GO INTO COLLAPSE & SHOCK W/WEAK, RAPID PULSE, COLD SWEATS, COMA & DEATH. INHAL MAY CAUSE ULCERATION OF NASAL SEPTUM, RESP IRRIT. SKIN/EYE CNTCT MAY CAUSE DERM, SKIN & EYE (EFTS OF OVEREXP)

Signs & Symptoms of Overexposure:
HLTH HAZS: IRRIT. CHRONIC EFTS: ARSENIC IS CONFIRMED HUMAN CARCIN PRODUCING LIVER TUMORS & AN EXPERIMENTAL TERATOGEN (MAY CAUSE DMG TO DEVELOPING FETUS). CHRONIC ARSENIC POISONING MAY INCL ANY/ALL OF FOLLOWING: DIGEST SYS DISTURBS, LOSS OFAPPETITE, CRAMPS, NAUS, CONSTIP, DIARR; LIVER DMG WHICH MAY RSLT IN JAUN; DISTURBS OF BLOOD, KIDNEYS & NERVOUS SYS; SKIN ABNORMS INCL ITCHING, PIGMENTATION & POS S CANCEROUS CHGS. TARGET ORGANS FOR INORGANIC CMPDS AS AS): LIVER, KIDNEYS, SKIN, LUNGS, LYMPHATIC SYS. TLV: 0.01 MG/M3 TWA ARSENIC, ELEMENTAL & INORGANIC CMPDS (EXCEPT ARSINE), AS AS. OSHA PEL: (SUPD AT)

Medical Conditions Aggravated by Exposure:
KNOWN EFFECTS ON OTHER ILLNESSES: GASTROINTESTINAL. NERVOUS SYSTEM. SKIN. LIVER & KIDNEY PROBLEMS. AFTER EXPOSURE HAVE URINE TEST.

LD50 LC50 Mixture: LD50: (ORAL, RAT) 763 MG/M3

Route of Entry Indicators:
- **Inhalation:** YES
- **Skin:** YES
- **Ingestion:** YES

Carcenogenicity Indicators
- **NTP:** YES
- **IARC:** YES
- **OSHA:** YES

Carcinogenicity Explanation: ARSENIC: IARC MONOGRAPHS, SUPPLEMENT, VOL 7, PG 100, 1987: GROUP 1. NTP 8TH ANNUAL REPORT ON CARCINOGENS, 1998: KNOWN TO BE CARCINOGEN. OSHA REGULATED: CFR 29 1910.1018.

Section 4 - First Aid Measures
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

First Aid:
SKIN: FLUSH WITH SOAP AND WATER. AVOID RUBBING INTO SKIN. CONTACT MD IMMEDIATELY. EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. CONTACT PHYSICIAN IMMEDIATELY. INHALATION: REMOVE TO FRESH AIR. PROVID E OXYGEN IF NECESSARY. CONTACT PHYSICIAN IMMEDIATELY. INGESTION: TREATMENT WITH BAS(DIMERCAPTOL) IS OF QUESTIONABLE EFFECTIVENESS IN TRIVALENT ARSENIC COMPOUNDS. INDUCE VOMITING AND DO GASTRIC LAVAGE. GET PERSONNEL TO HOSPITAL IMMEDIATELY. A PHYSICIAN CAN INITIATE AN EXCHANGE TRANSFUSION AND DIALYSIS. ALSO ABSORPTION AND REMOVAL WITH ANIMAL BONE COAL OR FE(OH)*2 SHOULD BE DONE.

Section 5 - Fire Fighting Measures
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Fire Fighting Procedures:
USE NIOSH APPRVD SCBA & FULL PROT EQUIP (FP N). RESTRICT PERS NOT WEARING PROT EQUIP FROM AREA. TRY TO SNUFF FIRE W/SAND, DRY MEDIA, FOAM OR CO*2. IF NO OTHER OPTIONS AVAILABLE, USE WATER & ALWAYS WEA R NIOSH APPRVD SCBA OR NIOSH TOXIC VAPOR RESP. POISONOUS GASES ARE PRODUCED IN FIRE, INCLUDING ARSENIC OXIDES.
Unusual Fire or Explosion Hazard:
ARSENIC, WHEN HEATED OR IN CONTACT W/ACID OR ACID FUMES, CAN PRODUCE HIGHLY TOXIC FUMES. ARSENIC REACTS VIGOROUSLY W/OXIDIZING MATLS. ARSENIC IS FLAMMABLE IN FORM OF DUST WHEN EXPOSED TO HEAT OR FLAME OR BY CHEMICAL RXN W/POWERFUL OXIDIZERS. SLIGHT EXPLOSION HAZ EXISTS IN FORM OF DUST WHEN EXPOSED TO (ECOLOGICAL INFO)
Extinguishing Media:
FOAM, CARBON DIOXIDE, DRY CHEMICAL.
Flash Point: Flash Point Text: NONE

Autoignition Temperature:
Autoignition Temperature Text: N/K
Lower Limit(s): N/A
Upper Limit(s): N/A

Section 6 - Accidental Release Measures
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Spill Release Procedures:
RESTRICT PERSONS NOT WEARING PROTECTIVE EQUIPMENT FROM AREA UNTIL CLEANUP IS COMPLETE. WEARING NIOSH APPROVED RESPIRATOR, GLOVES, GOGGLES, LAB COAT, GATHER UP CHUNKS, RODS OR GRANULES WITH VACUUM OR U TENSILS RESERVED FOR POISONOUS SOLIDS. AVOID RAISING DUST. VENTILATE THE AREA AFTER CLEANUP IS COMPLETE.

Section 7 - Handling and Storage
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Handling and Storage Precautions:

Other Precautions:

Section 8 - Exposure Controls & Personal Protection
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Repiratory Protection:
NIOSH APPROVED, AIR PURIFYING, TOXIC VAPOR RESPIRATOR TO PARTICULATE AND FUME AIR LEVEL. FOR INORGANIC ARSENIC APPLICATIONS, SEE 29 CFR 1910.1018 FOR PROPER RESPIRATOR SELECTION.
Ventilation:
LOC EXHST/MECH (GEN) SCRUBBER OR TRAP IF POSS TO MAINTAIN EXPOS TO LESS THAN PERMISSIBLE LIMITS FOR ELEMENTAL ARSENIC & ANY CMPDS BEING GENERATED.

Protective Gloves:
NEOPRENE OR PLASTIC.
Eye Protection: ANSI APPROVED CHEMICAL WORKERS GOGGLES (FP N).
Other Protective Equipment: ANSI APPROVED EYE WASH AND DELUGE SHOWER (FP N). LAB COAT.
Work Hygenic Practices: N/P
Supplemental Health & Safety Information: EFTS OF OVEREXP: 0.01 MG/M3 AS AS & INORGANIC CMPDS; 0.5 AS AS ORGANIC CMPDS. ACGIH TLV: 0.01 MG/M3 TWA ARSENIC, ELEMENTAL & INORGANIC CMPDS (EXCEPT ARSINE), AS AS. ALSO SEE TOXICOLOGICAL INFO. WASTE DISP METH: HAZ DEPENDING ON LEVEL OF TOX CHARACT OF ARSENIC. SEE 40 CFR 261.24 FOR DETERMINATION. (OTHER INFO)

Section 9 - Physical & Chemical Properties
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

HCC:
NRC/State License Number:
Net Property Weight for Ammo:
Boiling Point: =612.C, 1133.6F **Boiling Point Text:** SUBLIMES
Melting/Freezing Point: =814.C, ######F **Melting/Freezing Text:** @ 36 ATM. FP:N/A
Decomposition Point: Decomposition Text: N/P
Vapor Pressure: 1 MMHG @ 372C **Vapor Density:** N/A
Percent Volatile Organic Content:
Specific Gravity: 5.727
Volatile Organic Content Pounds per Gallon:
pH: NONE-0% IN H*2O
Volatile Organic Content Grams per Liter:
Viscosity: N/P
Evaporation Weight and Reference: N/A
Solubility in Water: INSOLUBLE
Appearance and Odor: SILVER GRAY CRYSTALLINE CHUNKS, RODS OR GRANULES; NO ODOR AS (ECOLOGICAL INFO)
Percent Volatiles by Volume: N/A (BY WT)
Corrosion Rate: N/P

Section 10 - Stability & Reactivity Data
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Stability Indicator: YES
Materials to Avoid:
INCOMPATIBLE W/BROMINE AZIDE, DIRUBIDIUM ACETYLIDE, HALOGENS, PALLADIUM ZINC, PLATINUM, NCL*3, AGNO*3, CRO*3, NA*2O*2, HEXAFLUOROISOPROPYLIDENEAMINO LITHIUM. CAN REACT W/ACIDS OR ACID FUMES & POWERFUL OXIDIZERS SUCH AS BROM
Stability Condition to Avoid:
AVOID OPEN CONTAINERS AND CONTACT WITH INCOMPATIBLE MATERIALS.
Hazardous Decomposition Products:
ARSENIC FUMES, ARSINE, OTHER ARSENIC COMPOUNDS.
Hazardous Polymerization Indicator: NO
Conditions to Avoid Polymerization:
N/P

Section 11 - Toxicological Information

ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Toxicological Information:
LD50: TDLO 605 ?G/KG. ORAL-MAN TDLO 7857 MG/KG/55Y SKIN. DERMAL IRRITATION-RABBIT: UNKNOWN; SUBCUTANEOUS IMPLANT RABBIT LTLO 75 MG/KG. EYE IRRITATION-RABBIT: UNKNOWN.

Section 12 - Ecological Information
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Ecological Information:
N/P. EXPLO HAZ: FLAME. IN EVENT OF A FIRE OR SPILL CONTACT THE STATE DEPARTMENT OF THE ENVIRONMENT & YOUR REGIONAL OFFICE OF THE FEDERAL EPA. PHYSICAL DATA - APPEAR/ODOR: METAL AS COMPOUND, ASH*3, HAS GARLIC ODOR. ODOR THRESHOLD: N/A. MATLS TO AVOID: CHLORATES, IODATES, PEROXIDES, LITHIUM, NACL*3, KMNO*3, RB*2C*2, AGNO*4, NOCL, IF*5, CRO*3, CLF*3, CLO, BRF*3, BRF*5, BRN*3, RBC*3BCH, CSC*3BCH.

Section 13 - Disposal Considerations
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Waste Disposal Methods:
SOLID WASTES SHOULD BE VITRIFIED, PLACED IN LABELED CNTNR & BURIED IN EPA SUPERVISED FACILITY. ETCHING SOLNS & CUTTING WASTES SHOULD BE PRECIPITATED, CEMENTED/VITRIFIED & PLACED IN METAL/PLASTIC LABEL ED CNTNRS & BURIED IN EPA SUPERVISED FACILITY. PASS GAS THRU POTASSIUM PERMANGANATE, PRECIPITATE & T REAT AS ABOVE. WASTE MAY BE CONSIDERED (SUPDAT)

Section 14 - MSDS Transport Information
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Transport Information:
DOT REGULATED: YES. RQ: (NA - PIECES ARE LARGER THAN 100 MICROMETERS IN DIAMETER). IF REGULATED, PROPER SHIPPING NAME: ARSENIC. HAZARD CLASS: (6.1). IDENTIFICATION NO: (UN1558). PACKING GROUP: (III). LABEL REQUIRED: (POISON). INLAND B/L: ARSENIC, 6.1, UN1558, PACKING GROUP II, POISON. EMERGENCY RESPONSE GUIDE NO: (152).

Section 15 - Regulatory Information
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

SARA Title III Information:
SARA TITLE III, SECT 313: LISTED.
Federal Regulatory Information:
TSCA: WE CERTIFY THAT ALL COMPONENTS OF THIS PRODUCT ARE REGISTERED UNDER THE REGULATIONS OF THE TOXIC SUBSTANCES CONTROL ACT. HMIS: HEALTH (4); FLAMMABILITY (0); REACTIVITY (1).
State Regulatory Information:

Section 16 - Other Information
ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE

Other Information:
WASTE DISP METH: HAZARDOUS DEPENDING ON LEVEL OF TOXICITY CHARACTERISTIC OF ARSENIC. SEE 40 CFR 261.24 FOR DETERMINATION. RCRA HAZARDOUS WASTE: YES RCRA @: D004; IF TESTED POSITIVE AS CHARACT OF TOXIC ITY FOR ARSENIC. CERCLA: YES. RQ (1 LB RQ IS APPLICABLE ONLY IF DIAMETER OF PIECES OF SOLID METAL RELEASED IS LESS THAN 100 MICROMETERS OR 0.004 INCH. THIS PROD FORM IS LARGER THAN 100 MICROMETERS & H AS NO RQ IN ITS CURRENT FORM. IF AS HAZ WASTE CHARACT OF ARSENIC, THEN RQ=1LB. FOLLOW ALL LOCAL, STATE AND FEDERAL INFO & REGULATIONS.

HAZCOM Label Information

Product Identification: ARSENIC METAL-MBE CHARGES, ARSENIC CHUNK & GRANULE
CAGE: 87730
Assigned Individual: N
Company Name: UNITED MINERAL & CHEMICAL CORP
Company PO Box:
Company Street Address1: 1100 VALLEYBROOK AVE
Company Street Address2: LYNDHURST, NJ 07071 US
Health Emergency Telephone: (800)424-9300
Label Required Indicator: Y
Date Label Reviewed: 09/01/1999
Status Code: A
Manufacturer's Label Number:
Date of Label:
Year Procured: N/K
Organization Code: F
Chronic Hazard Indicator: Y
Eye Protection Indicator: YES
Skin Protection Indicator: YES
Respiratory Protection Indicator: YES
Signal Word: DANGER
Health Hazard: Severe
Contact Hazard: Severe
Fire Hazard: None
Reactivity Hazard: Slight

8/9/2002 10:40:46 AM

Barium Metal

MSDS # 84.00

Section 1: Product and Company Identification

Barium Metal

Synonyms/General Names: Barium
Product Use: For educational use only
Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925.

24 Hour Emergency Information Telephone Numbers

CHEMTREC (USA): 800-424-9300 **CANUTEC (Canada): 613-424-6666**

ScholAR Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification

Soft, silvery, lustrous metal immersed in heavy mineral oil; no odor.

HMIS (0 to 4)

Health	**3**
Fire Hazard	**3**
Reactivity	**2**

WARNING! Flammable solid, dangerous when wet, highly toxic by ingestion.
Flammable solid, keep away from all ignition sources. Contact with water produces flammable gas.
Target organs: Central nervous system, kidneys.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition / Information on Ingredients

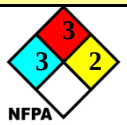
Barium Metal (7440-39-3), 100%

Section 4: First Aid Measures

Always seek professional medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.
Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.
Ingestion: Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 tbsp of activated charcoal mixed with 8 oz water.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures



Flammable solid. When heated to decomposition, emits acrid fumes and explosive hydrogen gas.
Protective equipment and precautions for firefighters: Do Not Use carbon dioxide, foam, water or halogenated extinguishing agents. Use class D extinguisher or smother with dry sand, dry clay, dry ground limestone or dry graphite. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Material is not sensitive to mechanical impact or static discharge.

Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all ignition sources and ventilate area. Sweep up spill and place material in a dry container for disposal. See Section 13 for disposal information.

Section 7: Handling and Storage Red

Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.
Storage: Store in Flammable Area [Red Storage] with other flammable materials and away from any strong oxidizers. Store in a dedicated flammables cabinet. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with a dust cartridge. Exposure guidelines: Barium compounds: OSHA PEL: 0.5 mg/m^3 and ACGIH TLV: 0.5 mg/m^3, STEL: N/A.

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Section 9: Physical and Chemical Properties

Molecular formula	Ba.	**Appearance**	Silver metal in heavy mineral oil.
Molecular weight	137.33.	**Odor**	No odor.
Specific Gravity	3.62 g/mL @ 20°C..	**Odor Threshold**	N/A.
Vapor Density (air=1)	N/A.	**Solubility**	Reacts violently with water.
Melting Point	850°C.	**Evaporation rate**	N/A *(Butyl acetate = 1).*
Boiling Point/Range	1695°C.	**Partition Coefficient**	N/A *(log P_{OW}).*
Vapor Pressure (20°C)	N/A.	**pH**	N/A.
Flash Point:	N/A.	**UEL**	N/A.
Autoignition Temp.:	N/A.	**LEL**	N/A.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and ignition sources
Stability: Stable under normal conditions of use.
Incompatibility: Water, acids, chlorine, iodine, bromine and oxidizing agents.
Shelf life: Indefinite if stored properly.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: ***Eyes***: Stinging pain, burns, watering of eyes, inflammation of eyelids and conjunctivitis. Avoid looking at burning magnesium. ***Skin***: Irritation, redness, burns. Powdered metal ignites readily on skin causing burns. ***Ingestion***: Nausea, vomiting and headache. ***Inhalation***: Rapid irregular breathing, headache, burns to mucous membranes. Inhalation of dust or fumes causes metal fume fever.
Chronic Effects: Repeated/prolonged skin contact may cause dryness or rashes.
Sensitization: none expected
Barium: LD50 [oral, rat]; Not Available; LC50 [rat]; Not Available; LD50 Dermal [rabbit]; Not Available
Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): LC50 – 500mg/l – 96h – Cyprinodon variegates.

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Use a licensed chemical waste disposal firm for proper disposal.

Section 14: Transport Information

DOT Shipping Name:	Barium.	**Canada TDG:**	Barium .
DOT Hazard Class:	4.3, pg II.	**Hazard Class:**	4.3, pg II.
Identification Number:	UN1400.	**UN Number:**	UN1400.

Section 15: Regulatory Information

EINECS: Listed (231-149.1) .
WHMIS Canada: B6:D2B: Reactive Flammable: Toxic Material.
TSCA: All components are listed or are exempt.
California Proposition 65: Not listed.
The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: September 22, 2012
Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. ***S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.***

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SAFETY DATA SHEET

Based on Directive 2001/58/EC et seq. of the Commission of the European Communities

BENZO[b]FLUORANTHENE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: benz[e]acephenanthrylene

CAS No.	: 205-99-2	**BCR number**	: BCR-47
EC index No.	: 601-034-00-4	**NFPA code**	: N.D.
EINECS No.	: 205-911-9	**Molecular weight**	: 252.32
RTECS No.	: CU1400000	**Formula**	: $C_{20}H_{12}$

1.2 Use of the substance or the preparation:
Certified reference material for laboratory use only

1.3 Company/undertaking identification:
Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel. : +32 14 57 12 11
Fax : +32 14 58 42 73

1.4 Telephone number for emergency:
+32 70 245 245
Antigifcentrum
p/a Militair Hospitaal Koningin Astrid, Bruynstraat, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
benzo[b]fluoranthene	205-99-2 205-911-9	100	T;N	45-50/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- May cause cancer
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

4. First aid measures

4.1 Eye contact:
- Consult a doctor/medical service if irritation persists
- Rinse immediately with water
- Do not apply neutralizing agents

4.2 Skin contact:
- Consult a doctor/medical service if irritation persists
- Wash with water and soap
- Remove clothing before washing
-- Do not apply (chemical) neutralizing agents

4.3 After inhalation:
- Consult a doctor/medical service if breathing problems develop
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:
- Consult a doctor/medical service if you feel unwell

- Immediately give lots of water to drink
-- Never give water to an unconscious person
- Do not induce vomiting

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Polymer foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:
- Not easily combustible
- Upon combustion CO and CO2 are formed

5.4 Instructions:
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions: see 8.1/8.3/10.3

6.2 Environmental precautions:
- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Dam up the solid spill

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Carefully collect the spill/leftovers
- Scoop solid spill into closing containers
- Take collected spill to manufacturer/competent authority
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Avoid raising dust
- Do not discharge the waste into the drain
- Clean contaminated clothing

7.2 Storage:
- Keep container tightly closed.
- Store in a cool area
- Store in a dry area
- Store in a dark area
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

Storage temperature : N.D. **°C**
Quantity limits : N.D. **kg**
Storage life : N.D.
Materials for packaging : N.D.

7.3 Specific uses: N.D.

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	:	not listed
TLV-STEL	:	not listed
TLV-Ceiling	:	not listed
OES-LTEL	:	not listed
OES-STEL	:	not listed
MEL-LTEL	:	not listed
MEL-STEL	:	not listed
MAK	:	not listed
TRK	:	not listed
MAC-TGG 8 h	:	not listed
MAC-TGG 15 min.	:	not listed
MAC-Ceiling	:	not listed
VME-8 h	:	not listed
VLE-15 min.	:	not listed
GWBB-8 h	:	not listed
GWK-15 min.	:	not listed
Momentary value	:	not listed

Sampling methods:

- Benzo(b)fluoranthene (Polynuclear aromatic hydrocarbons) NIOSH 5515
- Benzo(b)fluoranthene (Polynuclear aromatic hydrocarbons) NIOSH 5506

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see 13

8.3 Personal protection:

8.3.1 respiratory protection:
- Dust production: dust mask with filter type P3
- High dust production: compressed air/oxygen apparatus

8.3.2 hand protection:
- Gloves
  Suitable materials: No data available

- Breakthrough time: N.D.

8.3.3 eye protection:
- Safety glasses
- In case of dust production: protective goggles

8.3.4 skin protection:
- Protective clothing
- In case of dust production: head/neck protection
  Suitable materials: No data available

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	:	Crystalline solid / Needles
Odour	:	Odourless
Colour	:	Colourless to off-white

9.2 Important health, safety and environmental information:

pH value	:	N.D.	
Boiling point/boiling range	:	N.D.	**°C**
Flashpoint	:	N.D.	**°C**
Explosion limits	:	N.D.	**vol%** (**°C**)
Vapour pressure (at 20°C)	:	0.00000067	**hPa**
Vapour pressure (at 50°C)	:	N.D.	**hPa**
Relative density (at 20°C)	:	N.D.	
Water solubility	:	0.00000012	**g/100 ml**
Soluble in	:	Acetone, oils/fats	
Relative vapour density	:	N.D.	
Viscosity	:	N.D.	**Pa.s**
Partition coëfficient n-octanol/water	:	6.57	
Evaporation rate			
ratio butyl acetate	:	N.D.	
ratio ether	:	N.D.	

9.3 Other information:

Melting point/melting range	:	168	**°C**
Auto-ignition point	:	N.D.	**°C**
Saturation concentration	:	N.D.	**g/m^3**

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:
- Stable under normal conditions

10.2 Materials to avoid:
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

10.3 Hazardous decomposition products:
- Upon combustion CO and CO2 are formed
- Reacts violently with (strong) oxidizers
- Decomposes on exposure to (strong) acids

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	:	N.D.	**mg/kg**
LD50 dermal rat	:	N.D.	**mg/kg**
LD50 dermal rabbit	:	N.D.	**mg/kg**
LC50 inhalation rat	:	N.D.	**mg/l/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

benzo[b]fluoranthene

EC carc. cat.	:	2
EC muta. cat.	:	not listed
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	A2
Carcinogenicity (MAC)	:	K
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	2
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	-
IARC classification	:	2B

11.3 Routes of exposure: ingestion, inhalation, eyes and skin
Caution! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

- **AFTER SKIN CONTACT**
  Slight irritation

11.5 Chronic effects:

- Probably human carcinogenic
- Not classified as toxic to reproduction (EC)

- **ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:**
  No specific information available

- SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:
  Feeling of weakness
  Cracking of the skin
  Skin rash/inflammation
  Photoallergy
  Skin cancer
  Lung tissue affection/degeneration
  Enlargement/affection of the liver
  Affection of the renal tissue

12. Ecological information

12.1 Ecotoxicity:

- - No data available

12.2 Mobility:

- **Volatile organic compounds (VOC):** 0%

- Photolysis in water
- Forming sediments in water
- Insoluble in water

For other physicochemical properties see heading 9.

12.3 Persistence and degradability:

- **biodegradation BOD_5** : N.D. **% ThOD**
- **water** : - Not readily biodegradable in water
  - test: E 1/2 > 100 d.
- **soil** : **T ½:** > 87 **days**

12.4 Bioaccumulative potential:

- **log P_{ow}** : 6.57
- **BCF** : 168 h : 2800 (LAMELLIBRANCHIATA)
- Highly bioaccumulative

12.5 Other adverse effects:

- **WGK** : 3 (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (Council Regulation (EC) No 3093/94, O.J. L333 of 22/12/94)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 201/118/EC, O.J. L47 of 16/2/2001):16 05 06 (laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory)
- Waste material code (Flanders): 001, 045, 691
- Waste code (Germany): 59302
- Hazardous waste (91/689/EEC)

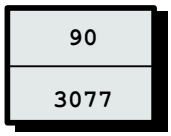
13.2 Disposal methods:

- Dissolve or mix with a combustible solvent
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into surface water (2000/60/EEC, Council Decision 2455/2001/EC, O.J. L331 of 15/12/2001)

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations

UN number	: 3077
CLASS	: 9
SUB RISKS	: -
PACKING	: III
PROPER SHIPPING NAME	: UN 3077, Environmentally hazardous substance, solid, n.o.s. (benz[e]acephenanthrylene)

14.2 ADR (transport by road)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.3 RID (transport by rail)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.4 ADNR (transport by inland waterways)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.5 IMDG (maritime transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
MFAG	: -
EMS	: -
MARINE POLLUTANT	: P

14.6 ICAO (air transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:
PACKING INSTRUCTIONS CARGO AIRCRAFT	:

14.7 Special precautions in connection with transport : none

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Enumerated in substance list Annex I of directive 67/548/EEC et sequens



Toxic



Dangerous for the environment

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S53 : Avoid exposure - obtain special instructions before use
S45 : In case of accident or if you feel unwell, seek medical advice (show the label where possible)
S60 : This material and/or its container must be disposed of as hazardous waste
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Full text of any R-phrases referred to under heading 2:

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Exposure limits:
TLV : Threshold Limit Value - ACGIH USA 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - The Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

Chronic toxicity:
K : List of the carcinogenic substances and processes - The Netherlands 2002

Institute for Reference Materials and Measurements

SAFETY DATA SHEET

Based on Regulation (EC) No. 1907/2006 (REACH) Article 31 and Annex II

BCR-048R: benzo[k]fluoranthene

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Product name: BCR-048R: benzo[k]fluoranthene

CAS number	207-08-9
EC index number	601-036-00-5
EINECS number	205-916-6
RTECS number	DF6350000
Molecular mass	252.32 g/mol
Formula	C20H12

1.2 Use of the substance/preparation:

Certified reference material for laboratory use only

1.3 Company/undertaking identification:

Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel: +32 14 57 12 11
Fax: +32 14 59 04 06
JRC-IRMM-RM-Sales@ec.europa.eu

1.4 Emergency telephone:

Poison Centre: +32 70 245 245

2. Hazards identification

NFPA: 1-1-2(*)

DSD/DPD

May cause cancer

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Other hazards

Its dust is explosive with air

Dust cloud can be ignited by a spark

Slightly irritant to skin

Slightly irritant to eyes

Caution! Substance is absorbed through the skin

No certainty about human mutagenic properties

Highly bioaccumulative

Not readily biodegradable in water

CLP

Carc. 1B	May cause cancer. (H350)
Aquatic Acute 1	Very toxic to aquatic life. (H400)
Aquatic Chronic 1	Very toxic to aquatic life with long lasting effects. (H410)

Other hazards

Its dust is explosive with air

Dust cloud can be ignited by a spark

Slightly irritant to skin

Slightly irritant to eyes

Caution! Substance is absorbed through the skin

No certainty about human mutagenic properties

Highly bioaccumulative

Not readily biodegradable in water

3. Composition/information on ingredients

Name	CAS No EINECS/ELINCS	Conc.	Classification according to DSD/DPD	Classification according to CLP	Note
benzo[k]fluoranthene	207-08-9 205-916-6		Carc. Cat. 2; R45 N; R50-53	Carc. 1B; H350 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	

4. First aid measures

4.1 After inhalation:

Remove the victim into fresh air

Respiratory problems: consult a doctor/medical service

4.2 Skin contact:

Rinse with water

Do not apply (chemical) neutralizing agents

Take victim to a doctor if irritation persists

4.3 Eye contact:

Rinse with water

Do not apply neutralizing agents

Take victim to an ophthalmologist if irritation persists

4.4 After ingestion:

Rinse mouth with water

Immediately after ingestion: give lots of water to drink

Do not induce vomiting

Consult a doctor/medical service if you feel unwell

5. Fire-fighting measures

5.1 Suitable extinguishing media:

Water spray

Polyvalent foam

ABC powder

Carbon dioxide

5.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known

5.3 Special exposure hazards:

Heating increases the fire hazard

Dust cloud can be ignited by a spark

Upon combustion CO and CO2 are formed

5.4 Instructions:

Take account of toxic fire-fighting water

Use water moderately and if possible collect or contain it

5.5 Special protective equipment for fire-fighters:

Gloves

Protective clothing

Heat/fire exposure: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal precautions:

See heading 8.2

6.2 Environmental precautions:

Dam up the solid spill

Prevent soil and water pollution

Prevent spreading in sewers

See heading 13

6.3 Methods for cleaning up:

Scoop solid spill into closing containers
Carefully collect the spill/leftovers
Clean contaminated surfaces with an excess of water
Take collected spill to manufacturer/competent authority
Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:

Avoid raising dust
Warning! Avoid exposure
Keep away from naked flames/heat
Obtain special instructions before use
Observe strict hygiene
Keep container tightly closed
Do not discharge the waste into the drain

7.2 Storage:

Safe storage requirements:

Store in a cool area
Store in a dry area
Keep container in a well-ventilated place
Keep locked up
Unauthorized persons are not admitted
Meet the legal requirements

Keep away from:

oxidizing agents
(strong) acids

7.3 Specific use(s):

See information supplied by the manufacturer for the identified use(s)

8. Exposure controls/Personal protection

8.1 Exposure limit values:

8.1.1 Occupational exposure:

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods:

Product name	Test	Number	Sampling method	Remarks
Benz(a)Anthracene	OSHA	CSI		
Benz(a)Anthracene (Polynuclear aromatic hydrocarbons)	NIOSH	5506	adsorption tubes	
Benz(a)Anthracene (Polynuclear aromatic hydrocarbons)	NIOSH	5515	adsorption tubes	

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

Measure the concentration in the air regularly
Carry operations in the open/under local exhaust/ventilation or with respiratory protection
Personal protective equipment:

a) Respiratory protection:

Dust production: dust mask with filter type P3

b) Hand protection:

Gloves

c) Eye protection:

Safety glasses
In case of dust production: protective goggles

d) Skin protection:

Protective clothing

8.2.2 Environmental exposure controls:

See headings 6.2, 6.3 and 13

9. Physical and chemical properties

9.1 General information:

Physical form	Crystalline solid
	Needles
Colour	Light yellow

9.2 Important health, safety and environmental information:

Boiling point	480 °C
Vapour pressure (20°C)	< 0.00001 hPa
Solubility in water	< 0.00001 g/100 ml
Solubility in solvents	Soluble in ethanol
	Soluble in acetic acid
	Soluble in oils/fats
Log Pow	6.84

9.3 Other information:

Melting point	217 °C

10. Stability and reactivity

10.1 Conditions to avoid:

Possible fire hazard

heat sources

ignition sources

Stability

No data available

Reactions

Reacts violently with (strong) oxidizers

10.2 Materials to avoid:

oxidizing agents

(strong) acids

10.3 Hazardous decomposition products:

Upon combustion CO and CO2 are formed

11. Toxicological information

11.1 Acute toxicity:

No (test)data available.

11.2 Chronic toxicity:

Probably human carcinogenic

No certainty about human mutagenic properties

Not classified as toxic to reproduction (EC)

BCR-048R: benzo[k]fluoranthene

EC carc cat	2
Listed in SZW - List of carcinogenic substances	yes
IARC - classification	2B
MAK - Krebserzeugend Kategorie	2
MAK - Keimzellmutagen Kategorie	3B
MAK - Schwangerschaft Gruppe	-
CLP carc cat	category 1B

11.3 Acute effects/symptoms:

Inhalation:

No data available

Skin contact:

Slight irritation

Eye contact:

Slight irritation

Ingestion:

No data available

11.4 Chronic effects:

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
No specific information available
SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:
Feeling of weakness
Cracking of the skin
Skin rash/inflammation
Photoallergy
Skin cancer
Lung tissue affection/degeneration
Enlargement/affection of the liver
Affection of the renal tissue

12. Ecological information

12.1 Ecotoxicity:

No (test)data available.

12.2 Mobility:

Volatile organic compounds (VOC)	0 %
Solubility in/reaction with water	Insoluble in water
Water physicochemical processes	Forming sediments in water
Soil physicochemical processes	Adsorbs into the soil

12.3 Persistence and degradability:

Water abiotic degradation processes	Ozonation in water
Half-life soil	65 - 1400 days

Not readily biodegradable in water

12.4 Bioaccumulative potential:

Log Pow	6.84

Highly bioaccumulative

12.5 Results of PBT assessment:

Not applicable, based on available data

12.6 Other adverse effects:

Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009)

13. Disposal considerations

13.1 Provisions relating to waste:

Waste material code (Directive 2008/98/EC, decision 2001/118/EC)
16 05 06* : laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
Depending on branch of industry and production process, also other EURAL codes may be applicable
Hazardous waste according to Directive 2008/98/EC

13.2 Disposal methods:

Dissolve or mix with a combustible solvent
Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery
Remove waste in accordance with local and/or national regulations
Do not discharge into surface water (2000/60/EC, Council decision 2455/2001/EC, O.J. L331 of 15/12/2001)

13.3 Packaging/Container:

Waste material code packaging (Directive 2008/98/EC)
15 01 10* : packaging containing residues of or contaminated by dangerous substances

{13.4 Entsorgung verschmutzter Gebinde:}

14. Transport information

ADR

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Techn./chem. name ADR	benzo[k]fluoranthene
UN number	3077
Class	9
Packing group	III
Hazard identification number	90
Classification code	M7
Labels	9
Environmentally hazardous substance mark	yes

RID

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Techn./chem. name RID	benzo[k]fluoranthene
UN number	3077
Class	9
Packing group	III
Classification code	M7
Labels	9
Environmentally hazardous substance mark	yes

ADNR

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Techn./chem. name ADNR	benzo[k]fluoranthene
UN number	3077
Class	9
Packing group	III
Classification code	M7
Labels	9
Environmentally hazardous substance mark	yes

IMO

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Techn./chem. name IMO	benzo[k]fluoranthene
UN number	3077
Class	9
Packing group	III
Labels	9
Marine pollutant	P
Environmentally hazardous substance mark	yes

ICAO

Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Techn./chem. name ICAO	benzo[k]fluoranthene
UN number	3077
Class	9
Packing group	III
Labels	9
Environmentally hazardous substance mark	yes

15. Regulatory information

15.1 EU Legislation:

DSD/DPD

Enumerated in substance list Annex I of directive 67/548/EEC et sequens





Dangerous for the environment

R-phrases

45	May cause cancer
50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S-phrases

53	Avoid exposure - obtain special instructions before use
45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
60	This material and its container must be disposed of as hazardous waste
61	Avoid release to the environment. Refer to special instructions/safety data sheets.

Additional recommendations

	Restricted to professional users.

CLP

Classification and labelling according to Regulation (EC) No 1272/2008 – Annex VI and after evaluation of available test data





Signal word

Dgr	Danger

H-statements

H350	May cause cancer.
H410	Very toxic to aquatic life with long lasting effects.

P-statements

P202	Do not handle until all safety precautions have been read and understood.
P281	Use personal protective equipment as required.
P273	Avoid release to the environment.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P391	Collect spillage.
P405	Store locked up.

Supplemental information

	Restricted to professional users.

15.2 National provisions:

15.3 Specific community rules:

Enumerated in Annex XVII of Regulation (EC) No. 1907/2006: Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

Legislation	Reference legislation
EG/552/2009	See column 1: 28.
EG/552/2009	See column 1: 50. g)

16. Other information

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question.

Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult your BIG licence agreement for details.

(*) = INTERNAL CLASSIFICATION (NFPA)

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive
DPD Dangerous Preparation Directive
CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

Full text of any R-phrases referred to under headings 2 and 3:

R45	May cause cancer
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of any H-statements referred to under headings 2 and 3:

H350	May cause cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of any classes referred to under headings 2 and 3:

Aquatic Acute	Hazardous to the aquatic environment - acute
Aquatic Chronic	Hazardous to the aquatic environment - chronic
Carc.	Carcinogenicity

SAFETY DATA SHEET

Based on Directive 2001/58/EC et seq. of the Commission of the European Communities

BENZ[a]ANTHRACENE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: benzo(a)anthracene

CAS No.	: 56-55-3	**BCR number**	: BCR-271
EC index No.	: 601-033-00-9	**NFPA code**	: N.D.
EINECS No.	: 200-280-6	**Molecular weight**	: 228.30
RTECS No.	: CV9275000	**Formula**	: C18H12

1.2 Use of the substance or the preparation:
Certified reference material for laboratory use only

1.3 Company/undertaking identification:
Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel. : +32 14 57 12 11
Fax : +32 14 58 42 73

1.4 Telephone number for emergency:
+32 70 245 245
Antigifcentrum
p/a Militair Hospitaal Koningin Astrid, Bruynstraat, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
Benzo[a]anthracene	56-55-3 200-280-6	100	T;N	45-50/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- May cause cancer
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

4. First aid measures

4.1 Eye contact:
- Consult a doctor/medical service if irritation persists
- Rinse immediately with water

4.2 Skin contact:
- Consult a doctor/medical service if irritation persists
- Wash with water and soap
- Remove clothing before washing

4.3 After inhalation:
- Consult a doctor/medical service if breathing problems develop
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:
- Consult a doctor/medical service if you feel unwell
- Immediately give lots of water to drink
- Never give water to an unconscious person

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Alcohol foam
- Polymer foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:
- Not easily combustible
- Upon combustion CO and CO2 are formed

5.4 Instructions:
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions: see heading 8.1/8.3/10.3

6.2 Environmental precautions:
- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Dam up the solid spill

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Carefully collect the spill/leftovers
- Scoop solid spill into closing containers
- Take collected spill to manufacturer/competent authority
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Avoid raising dust
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately

7.2 Storage:
- Keep container tightly closed. Store in a cool area. Store in a dry area.
- Store in a dark area.
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

Storage temperature : N.D. **°C**
Quantity limits : N.D. **kg**
Storage life : N.D.
Materials for packaging :
- suitable : no data available

- to avoid : no data available

7.3 Specific uses:
See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	:	**mg/m³**	-	**ppm**
TLV-STEL	:	**mg/m³**	-	**ppm**
TLV-Ceiling	:	**mg/m³**		**ppm**
OES-LTEL	:	**mg/m³**		**ppm**
OES-STEL	:	**mg/m³**		**ppm**
MAK	:	**mg/m³**		**ppm**
TRK	:	**mg/m³**		**ppm**
MAC-TGG 8 h	:	**mg/m³**		
MAC-TGG 15 min.	:	**mg/m³**		
MAC-Ceiling	:	**mg/m³**		
VME-8 h	:	**mg/m³**		**ppm**
VLE-15 min.	:	**mg/m³**		**ppm**
GWBB-8 h	:	**mg/m³**		**ppm**
GWK-15 min.	:	**mg/m³**		**ppm**
Momentary value	:	**mg/m³**		**ppm**
EC	:	**mg/m³**		**ppm**
EC-STEL	:	**mg/m³**		**ppm**

Sampling methods:

-	Benz(a)Anthracene (Polynuclear aromatic hydrocarbons)	NIOSH 5506
-	Benz(a)Anthracene (Polynuclear aromatic hydrocarbons)	NIOSH 5515
-	Benz(a)Anthracene	OSHA CSI

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:
- Dust production: dust mask with filter type P3
- High dust production: compressed air/oxygen apparatus

8.3.2 hand protection:
- Gloves
  Suitable materials: No data available

- Breakthrough time: N.D.

8.3.3 eye protection:
- Safety glasses
- In case of dust production: protective goggles

8.3.4 skin protection:
- Protective clothing
- In case of dust production: head/neck protection
  Suitable materials: No data available

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	:	Crystalline solid / Scales
Odour	:	Odourless
Colour	:	Colourless to fluorescent yellow-green

9.2 Important health, safety and environmental information:

pH value	:	N.D.	
Boiling point/boiling range	:	N.A.	**°C**
Flashpoint	:	N.D.	**°C**
Explosion limits	:	N.D.	**vol%** (**°C**)
Vapour pressure (at 20°C)	:	0.00007	**hPa**
Vapour pressure (at 50°C)	:	N.D.	**hPa**
Relative density (at 20°C)	:	1.3	
Water solubility	:	0.00001	**g/100 ml**
Soluble in	:	Ether, acetone, oils/fats	
Relative vapour density	:	N.D.	
Viscosity	:	N.D.	**Pa.s**
Partition coëfficient n-octanol/water	:	5.61/5.79	
Evaporation rate			
ratio to butyl acetate	:	N.D.	
ratio to ether	:	N.D.	

9.3 Other information:

Melting point/melting range	:	160	**°C**
Auto-ignition point	:	N.D.	**°C**
Saturation concentration	:	N.D.	**g/m^3**

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:
- Stable under normal conditions

10.2 Materials to avoid:
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

10.3 Hazardous decomposition products:
- Upon combustion CO and CO2 are formed
- Reacts violently with (strong) oxidizers
- Decomposes on exposure to (strong) acids

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	:	N.D.	**mg/kg**
LD50 dermal rat	:	N.D.	**mg/kg**
LD50 dermal rabbit	:	N.D.	**mg/kg**
LC50 inhalation rat	:	N.D.	**mg/l/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

EC carc. cat.	:	2
EC muta. cat.	:	not listed
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	A2
Carcinogenicity (MAC)	:	K
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	2
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	-
IARC classification	:	2A

11.3 Routes of exposure: ingestion, inhalation, eyes and skin
Caution! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

AFTER SKIN CONTACT
- Slight irritation

11.5 Chronic effects:

- Probably human carcinogenic
- Mutagenicity: AMES test positive
- Probably human mutagenic

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
- No specific information available

SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:
- Feeling of weakness
- Photoallergy
- Skin rash/inflammation
- Cracking of the skin
- Skin cancer
- Lung tissue affection/degeneration
- Enlargement/affection of the liver
- Affection of the renal tissue

12. Ecological information

12.1 Ecotoxicity:

- LC50 (65 h) : 0.0018 mg/l (PIMEPHALES PROMELAS)
- EC50 (96 h) : 0.01 mg/l (DAPHNIA PULEX)

12.2 Mobility:

- **Volatile organic compounds (VOC):** 0%

- Photolysis in water
- Ozonation in water
- Insoluble in water

For other physicochemical properties see heading 9.

12.3 Persistence and degradability:

- **biodegradation BOD_5** : N.D. **% ThOD**
- **water** : - Not readily biodegradable in water
- **soil** : **T ½:** > 100 **days**

12.4 Bioaccumulative potential:
- **log P_{ow}** : 5.61/5.79
- **BCF** : 72 h : 350 (LEUCISCUS IDUS)
- Highly bioaccumulative

12.5 Other adverse effects:

- **WGK** : 3 (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (Council Regulation (EC) 3093/94)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 16 05 06 (laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals)
- Waste material code (Flanders): 001, 045, 691
- Waste code (Germany): 59302
- Hazardous waste (91/689/EEC)

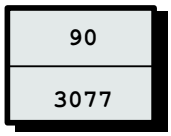
13.2 Disposal methods:

- Dissolve or mix with a combustible solvent
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into surface water (2000/60/EEC, Council Decision 2455/2001/EC)

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations

UN number	: 3077
CLASS	: 9
SUB RISKS	: -
PACKING	: III
PROPER SHIPPING NAME	: UN 3077, Environmentally hazardous substance, solid, n.o.s. (benzo[a]anthracene)

14.2 ADR (transport by road)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.3 RID (transport by rail)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.4 ADNR (transport by inland waterways)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.5 IMDG (maritime transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
MFAG	: -
EMS	: -
MARINE POLLUTANT	: P

14.6 ICAO (air transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:
PACKING INSTRUCTIONS CARGO AIRCRAFT	:

14.7 Special precautions in connection with transport : none

14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Enumerated in substance list Annex I of directive 67/548/EEC et sequens



Toxic



Dangerous for the environment

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S53 : Avoid exposure - obtain special instructions before use
S45 : In case of accident or if you feel unwell, seek medical advice (show the label where possible)
S60 : This material and/or its container must be disposed of as hazardous waste
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Full text of any R-phrases referred to under heading 2:

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Exposure limits:
TLV : Threshold Limit Value - ACGIH USA 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - The Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

Chronic toxicity:
K : List of the carcinogenic substances and processes - The Netherlands 2002

Material Safety Data Sheet

Benzo[a]pyrene, 98%

ACC# 37175

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzo[a]pyrene, 98%
Catalog Numbers: AC105600000, AC105600010, AC105601000, AC377200000, AC377200010, AC377201000 AC377201000
Synonyms: 3,4-Benzopyrene; 3,4-Benzpyrene; Benzo[def]chrysene.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
50-32-8	Benzo[a]pyrene	>96	200-028-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: yellow to brown powder.
Danger! May cause harm to the unborn child. May impair fertility. May cause eye, skin, and respiratory tract irritation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Cancer hazard. May cause allergic skin reaction. May cause heritable genetic damage.
Target Organs: Reproductive system, skin.

Potential Health Effects

Eye: May cause eye irritation.
Skin: May cause skin irritation. May be harmful if absorbed through the skin. May cause an allergic reaction in certain individuals.
Ingestion: May cause irritation of the digestive tract. The toxicological properties of this substance have not been fully investigated. May be harmful if swallowed.
Inhalation: May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. May be harmful if inhaled.
Chronic: May cause cancer in humans. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.
Flash Point: Not available.
Autoignition Temperature: Not available.
Explosion Limits, Lower: Not available.
Upper: Not available.
NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.
Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs

Benzo[a]pyrene	0.2 mg/m3 TWA (as benzene soluble aerosol) (listed under Coal tar pitches).	0.1 mg/m3 TWA (cyclohexane-extractable fraction) (listed under Coal tar pitches).80 mg/m3 IDLH (listed under Coal tar pitches).	0.2 mg/m3 TWA (as benzene soluble fraction) (listed under Coal tar pitches).

OSHA Vacated PELs: Benzo[a]pyrene: No OSHA Vacated PELs are listed for this chemical.
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Powder
Appearance: yellow to brown
Odor: faint aromatic odor
pH: Not available.
Vapor Pressure: Not available.
Vapor Density: Not available.
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 495 deg C @ 760 mm Hg
Freezing/Melting Point:175 - 179 deg C
Decomposition Temperature: Not available.
Solubility: 1.60x10-3 mg/l @25°C
Specific Gravity/Density: Not available.
Molecular Formula:C20H12
Molecular Weight:252.31

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Dust generation.
Incompatibilities with Other Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 50-32-8: DJ3675000
LD50/LC50:

Not available.

Carcinogenicity:
CAS# 50-32-8:

- **ACGIH:** A2 - Suspected Human Carcinogen
- **California:** carcinogen, initial date 7/1/87
- **NTP:** Suspect carcinogen
- **IARC:** Group 1 carcinogen (listed as Coal tar pitches).

Epidemiology: No information found
Teratogenicity: No information found
Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.
Mutagenicity: Mutagenic effects have occurred in humans.Mutagenic effects have occurred in experimental animals.
Neurotoxicity: No information found
Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series:
CAS# 50-32-8: waste number U022.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	NOT REGULATED FOR DOMESTIC TRANSPORT	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOL (Benzo{a} pyrene)
Hazard Class:		9
UN Number:		UN3077
Packing Group:		III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 50-32-8 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 50-32-8: 1 lb final RQ; 0.454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 50-32-8: immediate, delayed.

Section 313

This material contains Benzo[a]pyrene (CAS# 50-32-8, >96%),which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR

Clean Air Act:

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.
CAS# 50-32-8 is listed as a Priority Pollutant under the Clean Water Act.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 50-32-8 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Benzo[a]pyrene, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: CAS# 50-32-8: 0.06 æg/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

T N

Risk Phrases:

R 43 May cause sensitization by skin contact.
R 45 May cause cancer.
R 46 May cause heritable genetic damage.
R 60 May impair fertility.
R 61 May cause harm to the unborn child.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 53 Avoid exposure - obtain special instructions before use.
S 60 This material and its container must be disposed of as hazardou
s waste.
S 61 Avoid release to the environment. Refer to special instructions
/safety data sheets.

WGK (Water Danger/Protection)
CAS# 50-32-8: No information available.

Canada - DSL/NDSL
CAS# 50-32-8 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of D2A.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List
CAS# 50-32-8 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 9/02/1997
Revision #7 Date: 6/30/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

SAFETY DATA SHEET

Revision Date 10-Feb-2015 **Revision Number** 1

1. Identification

Product Name **Benzo[ghi]perylene**

Cat No. : **AC105550000; AC105550050; AC105550250; AC105551000**

Synonyms 1,12-Benzoperylene

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification
Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements
None required

Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

Component	CAS-No	Weight %
Benzo(ghi)perylene	191-24-2	> 98

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

Inhalation Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Obtain medical attention.

Ingestion Clean mouth with water. Get medical attention.

Most important symptoms/effects No information available.
Notes to Physician Treat symptomatically

5. Fire-fighting measures

Unsuitable Extinguishing Media No information available

Flash Point No information available
Method - No information available

Autoignition Temperature No information available
Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Carbon monoxide (CO) Carbon dioxide (CO_2)
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
0	0	0	N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.
Environmental Precautions See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Do not let this chemical enter the environment.

7. Handling and storage

Handling Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist.

Storage Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Yellow
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	276 - 280 °C / 528.8 - 536 °F
Boiling Point/Range	No information available > @ 760 mmHg
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Relative Density	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C22 H12
Molecular Weight	276.33

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable.
Conditions to Avoid	Excess heat. Exposure to light. Incompatible products.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO_2)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information	No acute toxicity information is available for this product
Component Information	
Toxicologically Synergistic	No information available

Products

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Benzo(ghi)perylene	191-24-2	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known
STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability No information available
Bioaccumulation/ Accumulation No information available.

Mobility .

Component	log Pow
Benzo(ghi)perylene	7.23

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL

Benzo(ghi)perylene	-	-	-	205-883-8	-		-	-	-	-	-

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Benzo(ghi)perylene	191-24-2	> 98	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Benzo(ghi)perylene	-	-	X	X

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Benzo(ghi)perylene	5000 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Benzo(ghi)perylene	X	X	X	X	-

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class Non-controlled

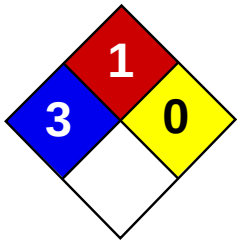
16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Revision Date 10-Feb-2015
Print Date 10-Feb-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS



Health	3
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Cadmium MSDS

Section 1: Chemical Product and Company Identification

Product Name: Cadmium

Catalog Codes: SLC3484, SLC5272, SLC2482

CAS#: 7440-43-9

RTECS: EU9800000

TSCA: TSCA 8(b) inventory: Cadmium

CI#: Not applicable.

Synonym:

Chemical Name: Cadmium

Chemical Formula: Cd

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Cadmium	7440-43-9	100

Toxicological Data on Ingredients: Cadmium: ORAL (LD50): Acute: 2330 mg/kg [Rat.]. 890 mg/kg [Mouse]. DUST (LC50): Acute: 50 ppm 4 hour(s) [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer), of eye contact (irritant). Severe over-exposure can result in death.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2 (Reasonably anticipated.) by NTP. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to kidneys, lungs, liver. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact: No known effect on eye contact, rinse with water for a few minutes.

Skin Contact:
After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact: Not available.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 570°C (1058°F)

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances:
Non-flammable in presence of open flames and sparks, of heat, of oxidizing materials, of reducing materials, of combustible materials, of moisture.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Material in powder form, capable of creating a dust explosion. When heated to decomposition it emits toxic fumes.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage:
Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.01 (ppm) Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Lustrous solid.)

Odor: Not available.

Taste: Not available.

Molecular Weight: 112.4 g/mole

Color: Silvery.

pH (1% soln/water): Not applicable.

Boiling Point: 765°C (1409°F)

Melting Point: 320.9°C (609.6°F)

Critical Temperature: Not available.

Specific Gravity: 8.64 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water, hot water, methanol, diethyl ether, n-octanol.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity: Reacts violently with potassium.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 890 mg/kg [Mouse]. Acute toxicity of the dust (LC50): 229.9 mg/m3 4 hour(s) [Rat].

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified A2 (Suspected for human.) by ACGIH, 2 (Reasonably anticipated.) by NTP. The substance is toxic to kidneys, lungs, liver.

Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, sensitizer).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: An allergen. 0047 Animal: embryotoxic, passes through the placental barrier.

Special Remarks on other Toxic Effects on Humans: May cause allergic reactions, exzema and/or dehydration of the skin.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the original product.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification:

Identification:

Special Provisions for Transport:

Section 15: Other Regulatory Information

Federal and State Regulations:
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Cadmium California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Cadmium Pennsylvania RTK: Cadmium Massachusetts RTK: Cadmium TSCA 8(b) inventory: Cadmium SARA 313 toxic chemical notification and release reporting: Cadmium CERCLA: Hazardous substances.: Cadmium

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R26- Very toxic by inhalation. R45- May cause cancer.

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References:
-Hawley, G.G.. The Condensed Chemical Dictionary, 11e ed., New York N.Y., Van Nostrand Reinold, 1987. -Liste des produits purs tératogènes, mutagènes, cancérogènes. Répertoire toxicologique de la Commission de la Santé et de la Sécurité du Travail du Québec. -Material safety data sheet emitted by: la Commission de la Santé et de la Sécurité du Travail du Québec. -SAX, N.I. Dangerous Properties of Indutrial Materials. Toronto, Van Nostrand Reinold, 6e ed. 1984. -The Sigma-Aldrich Library of Chemical Safety Data, Edition II. -Guide de la loi et du règlement sur le transport des marchandises dangeureuses au canada. Centre de conformité internatinal Ltée. 1986.

Other Special Considerations: Not available.

Created: 10/09/2005 04:29 PM

Last Updated: 11/01/2010 12:00 PM

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SAFETY DATA SHEET

Version 3.8
Revision Date 10/12/2015
Print Date 01/29/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Carbazole

Product Number : C5132
Brand : Sigma

CAS-No. : 86-74-8

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Carcinogenicity (Category 2), H351
Chronic aquatic toxicity (Category 4), H413

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)
H351 Suspected of causing cancer.
H413 May cause long lasting harmful effects to aquatic life.

Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P281 Use personal protective equipment as required.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	$C_{12}H_9N$
Molecular weight	:	167.21 g/mol
CAS-No.	:	86-74-8
EC-No.	:	201-696-0

Hazardous components

Component	Classification	Concentration
Carbazole		
	Carc. 2; Aquatic Chronic 4; H351, H413	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Nitrogen oxides (NOx)

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: powder Colour: beige
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 243 - 246 °C (469 - 475 °F)
f)	Initial boiling point and boiling range	355 °C (671 °F)
g)	Flash point	220.0 °C (428.0 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	The product is not flammable.
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	533 hPa (400 mmHg) at 323 °C (613 °F)
l)	Vapour density	No data available
m)	Relative density	1.1 g/cm3 at 18 °C (64 °F)
n)	Water solubility	0.00091 g/l at 25 °C (77 °F)
o)	Partition coefficient: n-octanol/water	log Pow: 3.72 at 22 °C (72 °F)
p)	Auto-ignition temperature	> 600 °C (> 1,112 °F) at 1,013 hPa (760 mmHg)
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD0 Oral - Rat - > 16,000 mg/kg
(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

Carcinogenicity - Mouse - male and female - Oral
hepatocellular carcinoma

Limited evidence of carcinogenicity in animal studies

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Carbazole)
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: FE3150000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - > 0.93 mg/l - 96.0 h Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 2.30 - 4.90 mg/l - 48 h Remarks: No toxicity at the limit of solubility
Toxicity to algae	Growth inhibition NOEC - Scenedesmus acuminatus - > 0.4 mg/l - 96 h Remarks: No toxicity at the limit of solubility

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential

Bioaccumulation	Cyprinus carpio (Carp) - 42 d - 0.05 mg/l Bioconcentration factor (BCF): 241 Cyprinus carpio (Carp) - 42 d - 0.005 mg/l Bioconcentration factor (BCF): 200

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Carbazole)
Marine pollutant:yes
IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Carbazole)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Carbazole	86-74-8	2009-07-17

New Jersey Right To Know Components

	CAS-No.	Revision Date
Carbazole	86-74-8	2009-07-17

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.	CAS-No.	Revision Date
Carbazole	86-74-8	2007-09-28

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
H351	Suspected of causing cancer.
H413	May cause long lasting harmful effects to aquatic life.

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0
Health hazard:	2
Fire Hazard:	1
Reactivity Hazard:	0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 3.8 Revision Date: 10/12/2015 Print Date: 01/29/2016

SAFETY DATA SHEET

Version 5.6
Revision Date 12/10/2015
Print Date 02/09/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Carbon disulfide

Product Number : 180173
Brand : Sigma-Aldrich
Index-No. : 006-003-00-3

CAS-No. : 75-15-0

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225
Acute toxicity, Inhalation (Category 4), H332
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Reproductive toxicity (Category 2), H361
Specific target organ toxicity - repeated exposure, Inhalation (Category 1), H372
Acute aquatic toxicity (Category 2), H401

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.

H401	Toxic to aquatic life.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	CS_2
Molecular weight	:	76.14 g/mol
CAS-No.	:	75-15-0
EC-No.	:	200-843-6
Index-No.	:	006-003-00-3

Hazardous components

Component	Classification	Concentration
Carbon disulphide		
	Flam. Liq. 2; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; Repr. 2; STOT RE 1; Aquatic Acute 2; H225, H315, H319, H332, H361, H372, H401	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Sulphur oxides
Flash back possible over considerable distance., Container explosion may occur under fire conditions., Vapours may form explosive mixture with air., May explode when heated.

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Refrigerate before opening.
Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Carbon disulphide	75-15-0	TWA	1 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Peripheral Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen Danger of cutaneous absorption		
		TWA	1.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Peripheral Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen Danger of cutaneous absorption		
		TWA	20.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.3-1968		
		CEIL	30.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.3-1968		
		Peak	100.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.3-1968		
		TWA	1.000000 ppm 3.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		ST	10.000000 ppm 30.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		See Table Z-2		
		TWA	20 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.3-1968		
		CEIL	30 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.3-1968		

		Peak	100 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.3-1968		

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Carbon disulphide	75-15-0	2-Thiothiazolidine-4-carboxylix acid (TTCA)	0.5000 mg/g	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift (As soon as possible after exposure ceases)			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid Colour: colourless
b)	Odour	Stench.
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: -112 °C (-170 °F) - lit.
f)	Initial boiling point and boiling range	46 °C (115 °F) - lit.
g)	Flash point	-30 °C (-22 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 50 %(V) Lower explosion limit: 1.3 %(V)
k)	Vapour pressure	394.956 hPa (296.241 mmHg) at 20 °C (68 °F) 1,342.711 hPa (1,007.116 mmHg) at 55 °C (131 °F)
l)	Vapour density	2.63 - (Air = 1.0)
m)	Relative density	1.266 g/mL at 25 °C (77 °F)
n)	Water solubility	2.9 g/l at 20 °C (68 °F) - OECD Test Guideline 105
o)	Partition coefficient: n-octanol/water	log Pow: 2.7 at 25 °C (77 °F)
p)	Auto-ignition temperature	97 - 107 °C (207 - 225 °F)
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

Surface tension	71.9 mN/m at 19.5 °C (67.1 °F)
Relative vapour density	2.63 - (Air = 1.0)

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Alkali metals, Zinc, Amines, Azides, Oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - female - > 2,000 mg/kg
(OECD Test Guideline 423)

LC50 Inhalation - Rat - male and female - 4 h - 10.35 mg/l
(OECD Test Guideline 403)

Dermal: No data available

No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
- Mouse
Result: Does not cause skin sensitisation.
(OECD Test Guideline 429)

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.

Ames test
Salmonella typhimurium
Result: negative

Carcinogenicity

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
Suspected human reproductive toxicant

May cause reproductive disorders.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: FF6650000

May cause convulsions.

Liver - Irregularities - Based on Human Evidence
Liver - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Poecilia reticulata (guppy) - 4 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Immobilization EC50 - Daphnia magna (Water flea) - 2.1 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	Growth inhibition EC50 - Chlorella pyrenoidosa - 21 mg/l - 96 h (OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability: aerobic - Exposure time 28 d
Result: > 80 % - Readily biodegradable
(OECD Test Guideline 301D)

12.3 Bioaccumulative potential

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life.

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1131 Class: 3 (6.1) Packing group: I
Proper shipping name: Carbon disulfide
Reportable Quantity (RQ): 100 lbs

Poison Inhalation Hazard: No

IMDG
UN number: 1131 Class: 3 (6.1) Packing group: I EMS-No: F-E, S-D
Proper shipping name: CARBON DISULPHIDE

IATA
UN number: 1131 Class: 3 (6.1)
Proper shipping name: Carbon disulphide
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

	CAS-No.	Revision Date
Carbon disulphide	75-15-0	2007-07-01

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Carbon disulphide	75-15-0	2007-07-01

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Carbon disulphide	75-15-0	2007-07-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Carbon disulphide	75-15-0	2007-07-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Carbon disulphide	75-15-0	2007-07-01

California Prop. 65 Components

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

	CAS-No.	Revision Date
Carbon disulphide	75-15-0	2008-06-17

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure if inhaled.
H401	Toxic to aquatic life.
Repr.	Reproductive toxicity

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	3
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	3
Reactivity Hazard:	0

Further information

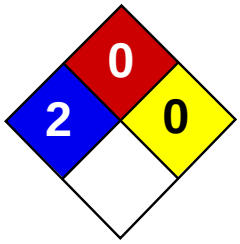
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Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 5.6 Revision Date: 12/10/2015 Print Date: 02/09/2016







Material Safety Data Sheet
Chloroform MSDS

Section 1: Chemical Product and Company Identification

Product Name: Chloroform

Catalog Codes: SLC1888, SLC5044

CAS#: 67-66-3

RTECS: FS9100000

TSCA: TSCA 8(b) inventory: Chloroform

CI#: Not available.

Synonym: Trichloromethane; Methane, trichlor-

Chemical Name: Chloroform

Chemical Formula: CHCl3

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:
1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Chloroform	67-66-3	100

Toxicological Data on Ingredients: Chloroform: ORAL (LD50): Acute: 695 mg/kg [Rat]. 36 mg/kg [Mouse]. 820 mg/kg [Guinea pig]. DERMAL (LD50): Acute: >20000 mg/kg [Rabbit]. VAPOR (LC50): Acute: 47702 mg/m 4 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects: CARCINOGENIC EFFECTS: Classified + (Proven.) by NIOSH. Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. Classified 2 (Some evidence.) by NTP. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, liver, heart. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: May explode if it comes in contact with aluminum powder, lithium, perchlorate, pentoxide, bis(dimethylamino)dimethylstannane, potassium, potassium-sodium alloy, sodium (or sodium hydroxide or sodium methoxide), and methanol

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions: Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as metals, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Sensitive to light. Store in light-resistant containers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: TWA: 10 (ppm) [Australia] Inhalation TWA: 2 (ppm) from OSHA (PEL) [United States] Inhalation STEL: 9.78 (mg/m3) from NIOSH Inhalation STEL: 2 (ppm) from NIOSH Inhalation TWA: 9.78 (mg/m3) from OSHA (PEL) [United States] Inhalation TWA: 10 (ppm) from ACGIH (TLV) [United States] [1999] Inhalation TWA: 2 (ppm) [United Kingdom (UK)] Inhalation TWA: 9.9 (mg/m3) [United Kingdom (UK)] InhalationConsult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Pleasant. Sweetish. Etheric. Non-irritating

Taste: Burning. Sweet.

Molecular Weight: 119.38 g/mole

Color: Colorless. Clear

pH (1% soln/water): Not available.

Boiling Point: 61°C (141.8°F)

Melting Point: -63.5°C (-82.3°F)

Critical Temperature: 263.33°C (506°F)

Specific Gravity: 1.484 (Water = 1)

Vapor Pressure: 21.1 kPa (@ 20°C)

Vapor Density: 4.36 (Air = 1)

Volatility: Not available.

Odor Threshold: 85 ppm

Water/Oil Dist. Coeff.: The product is more soluble in oil; log(oil/water) = 2

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Very slightly soluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, Light

Incompatibility with various substances: Reactive with metals, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity: Light Sensitive. Incompatible with triisopropyl phosphine, acetone, disilane, fluorine, strong bases and reactive metals (aluminum, magnesium in powdered form), light.

Special Remarks on Corrosivity: It will attack some forms of plastics, rubber, and coatings.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation.

Toxicity to Animals: WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 36 mg/kg [Mouse]. Acute dermal toxicity (LD50): >20000 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 47702 mg/m 4 hours [Rat]. 3

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified + (Proven.) by NIOSH. Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. Classified 2 (Some evidence.) by NTP. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: kidneys, liver, heart.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May affect genetic material (possible mutangen) and cause adverse reproductive effects(embryotoxicity and fetotoxicity) Suspected carcinogen (tumorigenic) and teratogen based on animal data. Human: passes the placental barrier, detected in maternal milk.

Special Remarks on other Toxic Effects on Humans: Acute Potential Health Effects: Skin: Causes skin irritation and may cause chemical burns. Eye: Causes eye irritation, burning pain and reversible injury to corneal epithelium. Inhalation: Causes irritation of the respiratory system (mucous membranes). May affect behavior/Nervous system (CNS depressant, fatigue, dizziness, nervousness, giddiness, euphoria, loss of coordination and judgement, weakness, hallucinations, muscle contraction/spasticity, general anesthetic, spastic paralysis, headache), anorexia (neurological and gastrointestinal symtoms resembling chronic alcoholism), and possibly coma and death. May affect the liver, kidneys and gastrointestinal tract (nausea, vomiting). Ingestion: Causes gastrointestinal tract irritation (nausea, vomiting). May affect the liver, urinary system (kidneys), respiration, behavior/nervous system (symptoms similar to inhalation),and heart. Chronic Potential Health Effects: Inhalation: Prolonged or repeated inhalation may affect the liver (hepatitis, jaundice, hepatocellular necrosis), metabolism (weight loss), respiration (fibrosis, pneumoconoisis), behavior/central nervous system (symptoms similar to acute inhalation), blood, musculoskeletal system, and kidneys. Ingestion: Prolonged or repeated ingestion may affect the liver, kidneys, metabolism (weight loss), endocrine system (spleen), blood (changes in cell count).

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity in water (LC50): 43.8 mg/l 96 hours [Trout].

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 6.1: Poisonous material.

Identification: : Chloroform UNNA: UN1888 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations: California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Chloroform California prop. 65 (no significant risk level): Chloroform: 0.02 mg/day (value) California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Chloroform New York release reporting list: Chloroform Rhode Island RTK hazardous substances: Chloroform Pennsylvania RTK: Chloroform Massachusetts RTK: Chloroform New Jersey: Chloroform California Director's List of Hazardous Subtances (8 CCR 339): Chloroform Tennessee: Chloroform TSCA 8(b) inventory: Chloroform TSCA 8(d) H and S data reporting: Chloroform: effective: 6/1/87; sunset: 6/1/97 SARA 302/304/311/312 extremely hazardous substances: Chloroform SARA 313 toxic chemical notification and release reporting: Chloroform CERCLA: Hazardous substances.: Chloroform: 10 lbs. (4.536 kg)

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC): R20/22- Harmful by inhalation and if swallowed. R38- Irritating to skin. R40- Possible risks of irreversible effects. S36/37- Wear suitable protective clothing and gloves.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment: Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

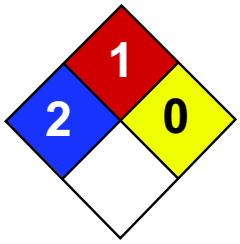
Other Special Considerations: Not available.

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Material Safety Data Sheet
Chromium MSDS

Section 1: Chemical Product and Company Identification

Product Name: Chromium

Catalog Codes: SLC4711, SLC3709

CAS#: 7440-47-3

RTECS: GB4200000

TSCA: TSCA 8(b) inventory: Chromium

CI#: Not applicable.

Synonym: Chromium metal; Chrome; Chromium Metal Chips 2" and finer

Chemical Name: Chromium

Chemical Formula: Cr

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Chromium	7440-47-3	100

Toxicological Data on Ingredients: Chromium LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of ingestion.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, lungs, liver, upper respiratory tract. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: May be combustible at high temperature.

Auto-Ignition Temperature: 580°C (1076°F)

Flash Points: Not available.

Flammable Limits: Not available.

Products of Combustion: Some metallic oxides.

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
Moderate fire hazard when it is in the form of a dust (powder) and burns rapidly when heated in flame. Chromium is attacked vigorously by fused potassium chlorate producing vivid incandescence. Pyrophoric chromium unites with nitric oxide with incandescence. Incandescent reaction with nitrogen oxide or sulfur dioxide.

Special Remarks on Explosion Hazards:
Powdered Chromium metal +fused ammonium nitrate may react violently or explosively. Powdered Chromium will explode spontaneously in air.

Section 6: Accidental Release Measures

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 0.5 (mg/m3) from ACGIH (TLV) [United States] TWA: 1 (mg/m3) from OSHA (PEL) [United States] TWA: 0.5 (mg/m3) from NIOSH [United States] TWA: 0.5 (mg/m3) [United Kingdom (UK)] TWA: 0.5 (mg/m3) [Canada]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Metal solid.)

Odor: Odorless.

Taste: Not available.

Molecular Weight: 52 g/mole

Color: Silver-white to Grey.

pH (1% soln/water): Not applicable.

Boiling Point: 2642°C (4787.6°F)

Melting Point: 1900°C (3452°F) +/- !0 deg. C

Critical Temperature: Not available.

Specific Gravity: 7.14 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:
Insoluble in cold water, hot water. Soluble in acids (except Nitric), and strong alkalies.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Excess heat, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity:
Incompatible with molten Lithium at 180 deg. C, hydrogen peroxide, hydrochloric acid, sulfuric acid, most caustic alkalies and alkali carbonates, potassium chlorate, sulfur dioxide, nitrogen oxide, bromine pentafluoride. It may react violently or ignite with bromine pentafluoride. Chromium is rapidly attacked by fused sodium hydroxide + potassium nitrate. Potentially hazardous incompatibility with strong oxidizers.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC. May cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of inhalation. Slightly hazardous in case of ingestion.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause cancer based on animal data. There is no evidence that exposure to trivalent chromium causes cancer in man.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: May cause skin irritation. Eyes: May cause mechanical eye irritation. Inhalation: May cause irritation of the respiratory tract and mucous membranes of the respiratory tract. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea. Chronic Potential Health Effects: Inhalation: The effects of chronic exposure include irritation , sneezing, reddness of the throat, bronchospasm, asthma, cough, polyps, chronic inflammation, emphysema, chronic bronchitis, pharyngitis, bronchopneumonia, pneumoconoisis. Effects on the nose from chronic chromium exposure include irritation, ulceration, and perforation of the nasal septum. Inflammation and ulceration of the larynx may also occur. Ingestion or Inhalation: Chronic exposure may cause liver and kidney damage.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Chromium Illinois toxic substances disclosure to employee act: Chromium Illinois chemical safety act: Chromium New York release reporting list: Chromium Rhode Island RTK hazardous substances: Chromium Pennsylvania RTK: Chromium Minnesota: Chromium Michigan critical material: Chromium Massachusetts RTK: Chromium Massachusetts spill list: Chromium New Jersey: Chromium New Jersey spill list: Chromium Louisiana spill reporting: Chromium California Director's List of Hazardous Substances: Chromium TSCA 8(b) inventory: Chromium SARA 313 toxic chemical notification and release reporting: Chromium CERCLA: Hazardous substances.: Chromium: 5000 lbs. (2268 kg)

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada): Not controlled under WHMIS (Canada).

DSCL (EEC):
R40- Limited evidence of carcinogenic effect S36/37/39- Wear suitable protective clothing, gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

CHRYSENE

1. Identification of the substance/preparation and of the company/undertaking

1.1 Identification of the substance or preparation:

Synonyms: none
CAS No. : 218-01-9
EC index No. : 601-048-00-0
EINECS No. : 205-923-4
RTECS No. : GC0700000
BCR number : BCR-269
NFPA code : N.D.
Molecular weight : 228.30
Formula : C18H12

1.2 Use of the substance or the preparation:
Certified reference material for laboratory use only

1.3 Company/undertaking identification:
Institute for Reference Materials and Measurements
Retieseweg
B-2440 Geel
Tel. : +32 14 57 12 11
Fax : +32 14 58 42 73

1.4 Telephone number for emergency:
+32 70 245 245
Antigifcentrum
p/a Militair Hospitaal Koningin Astrid, Bruynstraat, B-1120 Brussel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
chrysene	218-01-9 205-923-4	100	T;N	45-50/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- May cause cancer
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

4. First aid measures

4.1 Eye contact:
- Consult a doctor/medical service if irritation persists
- Rinse immediately with water

4.2 Skin contact:
- Consult a doctor/medical service if irritation persists
- Wash with water and soap
- Wipe off dry product from skin
- Remove clothing before washing

4.3 After inhalation:
- Consult a doctor/medical service if breathing problems develop
- Remove the victim into fresh air
- Unconscious: maintain adequate airway and respiration

4.4 After ingestion:
- Consult a doctor/medical service if you feel unwell
- Immediately give lots of water to drink
- Never give water to an unconscious person

- Do not induce vomiting

5. Fire-fighting measures

5.1 Suitable extinguishing media:
- Water spray
- Alcohol foam
- Polymer foam
- ABC powder
- Carbon dioxide

5.2 Unsuitable extinguishing media:
- Solid water jet ineffective as extinguishing medium

5.3 Special exposure hazards:
- Not easily combustible
- Upon combustion CO and CO2 are formed

5.4 Instructions:
- Take account of toxic firefighting water
- Use firefighting water moderately and contain it

5.5 Special protective equipment for firefighters:
- Heat/fire exposure: compressed air/oxygen apparatus
- Dust cloud production: compressed air/oxygen apparatus

6. Accidental release measures

6.1 Personal protection/precautions: see heading 8.1/8.3/10.3

6.2 Environmental precautions:
- Prevent soil and water pollution
- Substance must not be discharged into the sewer
- Dam up the solid spill

6.3 Methods for cleaning up:
- Stop dust cloud by covering with sand/earth
- Carefully collect the spill/leftovers
- Scoop solid spill into closing containers
- Spill must not return in its original container
- Take collected spill to manufacturer/competent authority
- Clean contaminated surfaces with an excess of water
- Wash clothing and equipment after handling

7. Handling and storage

7.1 Handling:
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Avoid raising dust
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately

7.2 Storage:
- Keep container tightly closed. Store only in a limited quantity. Store in a dry area. Store in a dark area.
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

Storage temperature	:	N.D.	**°C**
Quantity limits	:	N.D.	**kg**
Storage life	:	N.D.	
Materials for packaging	:		

- suitable : no data available
- to avoid : no data available

7.3 Specific uses:
- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

TLV-TWA	:	not listed
TLV-STEL	:	not listed
TLV-Ceiling	:	not listed
OES-LTEL	:	not listed
OES-STEL	:	not listed
MEL-LTEL	:	not listed
MEL-STEL	:	not listed
MAK	:	not listed
TRK	:	not listed
MAC-TGG 8 h	:	not listed
MAC-TGG 15 min.	:	not listed
MAC-Ceiling	:	not listed
VME-8 h	:	not listed
VLE-15 min.	:	not listed
GWBB-8 h	:	not listed
GWK-15 min.	:	not listed
Momentary value	:	not listed
EC	:	not listed
EC-STEL	:	not listed

Sampling methods:

- Chrysene (Polynuclear aromatic Hydrocarbons)	NIOSH 5515
- Chrysene	OSHA 58
- Chrysene (Polynuclear aromatic Hydrocarbons)	NIOSH 5506

8.2 Exposure controls:

8.2.1 Occupational exposure controls:
- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:
- Dust production: dust mask with filter type P3
- High dust production: compressed air/oxygen apparatus

8.3.2 hand protection:
- Gloves
  Suitable materials: No data available

- Breakthrough time: N.D.

8.3.3 eye protection:
- Safety glasses
- In case of dust production: protective goggles

8.3.4 skin protection:
- Protective clothing
- In case of dust production: head/neck protection
  Suitable materials: No data available

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	:	Crystalline solid / Flakes
Odour	:	Odourless
Colour	:	White

9.2 Important health, safety and environmental information:

pH value	:	N.D.	
Boiling point/boiling range	:	448	**°C**
Flashpoint	:	N.D.	**°C**
Explosion limits	:	N.D.	**vol%** (**°C**)
Vapour pressure (at 20°C)	:	N.D.	**hPa**
Vapour pressure (at 50°C)	:	N.D.	**hPa**
Relative density (at 20°C)	:	1.27	
Water solubility	:	< 0.001	**g/100 ml**
Soluble in	:	N.D.	
Relative vapour density	:	N.D.	
Viscosity	:	N.D.	**Pa.s**
Partition coëfficient n-octanol/water	:	5.61/5.73	
Evaporation rate			
ratio to butyl acetate	:	N.D.	
ratio to ether	:	N.D.	

9.3 Other information:

Melting point/melting range	:	256	**°C**
Auto-ignition point	:	N.D.	**°C**
Saturation concentration	:	N.D.	**g/m^3**

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:
- Stable under normal conditions

10.2 Materials to avoid:
- Keep away from: heat sources, ignition sources, oxidizing agents, acids

10.3 Hazardous decomposition products:
- Upon combustion CO and CO2 are formed
- Reacts violently with (strong) oxidizers
- Decomposes on exposure to (strong) acids

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	:	N.D.	**mg/kg**
LD50 dermal rat	:	N.D.	**mg/kg**
LD50 dermal rabbit	:	N.D.	**mg/kg**
LC50 inhalation rat	:	N.D.	**mg/1/4 h**
LC50 inhalation rat	:	N.D.	**ppm/4 h**

11.2 Chronic toxicity:

EC carc. cat.	:	2
EC muta. cat.	:	3
EC repr. cat.	:	not listed
Carcinogenicity (TLV)	:	A3
Carcinogenicity (MAC)	:	K
Carcinogenicity (VME)	:	not listed
Carcinogenicity (GWBB)	:	not listed
Carcinogenicity (MAK)	:	2
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	-
IARC classification	:	3

11.3 Routes of exposure: ingestion, inhalation, eyes and skin
Caution! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

AFTER SKIN CONTACT
- Slight irritation

11.5 Chronic effects:

- Probably human carcinogenic
- No certainty about human mutagenic properties

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:
- No specific information available

SIMILAR PRODUCTS CAUSE FOLLOWING SYMPTOMS:
- Feeling of weakness
- Photoallergy
- Cracking of the skin
- Skin rash/inflammation
- Skin cancer
- Lung tissue affection/degeneration
- Enlargement/affection of the liver
- Affection of the renal tissue

12. Ecological information

12.1 Ecotoxicity:

- LC50 (24 h) : 0.0007 mg/l (DAPHNIA MAGNA)
- LC50 (24 h) : >6.7 mg/l (RANA SP.)

12.2 Mobility:

- **Volatile organic compounds (VOC):** N.D.%

- Forming sediments in water
- Adsorbs into the soil
- Insoluble in water

For other physicochemical properties see heading 9.

12.3 Persistence and degradability:

- **biodegradation BOD_5** : N.D. **% ThOD**
- **water** : - Not readily biodegradable in water
- **soil** : **T ½:** > 77 **days**

12.4 Bioaccumulative potential:
- **log P_{ow}** : 5.61/5.73
- **BCF** : 4440 (LAMELLIBRANCHIATA)
- Highly bioaccumulative

12.5 Other adverse effects:

- **WGK** : 3 (Classification based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- **Effect on the ozone layer** : Not dangerous for the ozone layer (Council Regulation (EC) 3093/94)
- **Greenhouse effect** : no data available
- **Effect on waste water purification** : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision
- 2001/118/EC, O.J. L47 of 16/2/2001): 16 05 06 (laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory)
- Waste material code (Flanders): 001, 045, 691
- Waste code (Germany): 59302
- Hazardous waste (91/689/EEC)

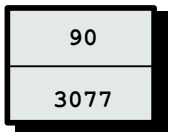
13.2 Disposal methods:

- Dissolve or mix with a combustible solvent
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into surface water (2000/60/EEC, Council

13.3 Packaging/Container:

- Waste material code packaging (91/689/EEC, Council Decision
- 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information



14.1 Classification of the substance in compliance with UN Recommendations

UN number	: 3077
CLASS	: 9
SUB RISKS	: -
PACKING	: III
PROPER SHIPPING NAME	: UN 3077, Environmentally hazardous substance, solid, n.o.s. (chrysene)

14.2 ADR (transport by road)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.3 RID (transport by rail)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.4 ADNR (transport by inland waterways)

CLASS	: 9
PACKING	: III
DANGER LABEL TANKS	: 9
DANGER LABEL PACKAGES	: 9

14.5 IMDG (maritime transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
MFAG	: -
EMS	: -
MARINE POLLUTANT	: P

14.6 ICAO (air transport)

CLASS	: 9
SUB RISKS	: -
PACKING	: III
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:
PACKING INSTRUCTIONS CARGO AIRCRAFT	:

14.7 Special precautions in connection with transport : none

14.8 Limited quantities (LQ) :

When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
each package shall display a diamond-shaped figure with the following inscription:
- 'UN 3077'
or, in the case of different goods with different identification numbers within a single package:
- the letters 'LQ'

15. Regulatory information

Enumerated in substance list Annex I of directive 67/548/EEC et sequens



Toxic



Dangerous for the environment

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

S53 : Avoid exposure - obtain special instructions before use
S45 : In case of accident or if you feel unwell, seek medical advice (show the label where possible)
S60 : This material and/or its container must be disposed of as hazardous waste
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

Full text of any R-phrases referred to under heading 2:

R45 : May cause cancer
R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Exposure limits:
TLV : Threshold Limit Value - ACGIH USA 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - The Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

Chronic toxicity:
K : List of the carcinogenic substances and processes - The Netherlands 2002

Safety data for dibenz(a,h)anthracene



Glossary of terms on this data sheet.

The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the web sites of many chemical suppliers.

General

Synonyms: 1,2:5,6-benzanthracene, 1,2:5,6-dibenzanthracene, dibenzo(a,h) anthracene, DBA, 1,2,5,6-DBA
Use: a common pollutant in smoke and used oils
Molecular formula: $C_{22}H_{14}$
CAS No: 53-70-3
EINECS No: 200-181-8
Annex I Index. No: 601-041-00-2

Physical data

Appearance: white to light yellow crystalline solid
Melting point: 266 - 267 C
Boiling point: 524 C
Vapour density:
Vapour pressure:
Density (g cm^{-3}): 1.28
Flash point:
Explosion limits:
Autoignition temperature:
Water solubility:

Stability

Stable. Combustible. Incompatible with strong oxidizing agents.

Toxicology

Harmful if swallowed or inhaled. Experimental carcinogen, tumorigen and neoplastigen. IARC probable human carcinogen.

Toxicity data

(The meaning of any toxicological abbreviations which appear in this section is given here.)

IVN-MUS LDLO 10 mg kg^{-1}

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)

R45 R50 R53.

Environmental information

Harmful in the environment - may cause long-term damage.

Transport information

(The meaning of any UN hazard codes which appear in this section is given here.)

Non-hazardous for air, sea and road freight.

Personal protection

Safety glasses, gloves, good ventilation. Handle as a possible carcinogen.

Safety phrases

(The meaning of any safety phrases which appear in this section is given here.)

S45 S53 S60 S61.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

This information was last updated on October 8, 2006. We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse, or accuracy. We have not verified this information, and cannot guarantee that it is up-to-date. Note also that the information on the PTCL Safety web site, where this page was hosted, has been copied onto many other sites, often without permission. If you have any doubts about the veracity of the information that you are viewing, or have any queries, please check the URL that your web browser displays for this page. If the URL **begins** "http://msds.chem.ox.ac.uk/" the page is maintained by the Safety Officer in Physical Chemistry at Oxford University. If not, this page is a copy made by some other person and we have no responsibility for it.

MSDS SUMMARY SHEET

Manufacturer:
Name: PHILLIPS PETROLEUM COMPANY
Address 1:
Address 2:
Address 3:
CSZ: BARTLESVILLE **State:** OK **Zipcode:** 74004
Emergency phone: (800) 424-9300
Business phone: 800-762-0942

Product:

Ferndale MSDS#: 1354 **Version # :** 6
Manufacturer MSDS#: 0041
Current? : 2002
Name:

NO. 2 DIESEL FUEL

Synonyms:

CARB **Diesel** TF3
CARB **Diesel**
CARB **Diesel** 10%
Diesel Fuel Oil
EPA Low Sulfur **Diesel** Fuel
EPA Low Sulfur **Diesel** Fuel – Dyed
EPA Off Road High Sulfur **Diesel –** Dyed
Fuel Oil No. 2 – CAS # 68476-30-2
No. 2 **Diesel** Fuel Oil
No. 2 Fuel Oil – Non Hiway – Dyed
No. 2 High Sulfur **Diesel** – Dyed
No. 2 Low Sulfur **Diesel** - Dyed
No. 2 Low Sulfur **Diesel** - Undyed
Crude column 3rd IR
Crude column 3rd side cut
Atmospheric tower 3rd side cut
Ultra Low Sulfur **Diesel** No. 2
Finished **Diesel**
DHT Reactor Feed
Straight Run **Diesel**
Diesel
Middle Distillate

Product/Catalog Numbers:
MSDS Date: 01/01/2002 **(received:** 01/14/2002**)**

NFPA codes:
Health: 0 **Flammability:** 2 **Reactivity:** 0

MATERIAL SAFETY DATA SHEET
No. 2 Diesel Fuel

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: No. 2 Diesel Fuel
Product Code: Multiple
SAP Code:
Synonyms: 1354
CARB Diesel TF3
CARB Diesel
CARB Diesel 10%
Diesel Fuel Oil
EPA Low Sulfur Diesel Fuel
EPA Low Sulfur Diesel Fuel – Dyed
EPA Off Road High Sulfur Diesel – Dyed
Fuel Oil No. 2 – CAS # 68476-30-2
No. 2 Diesel Fuel Oil
No. 2 Fuel Oil – Non Hiway – Dyed
No. 2 High Sulfur Diesel – Dyed
No. 2 Low Sulfur Diesel - Dyed
No. 2 Low Sulfur Diesel – Undyed
No. 2 Ultra Low Sulfur Diesel – Dyed
No. 2 Ultra Low Sulfur Diesel - Undyed
Intended Use: Fuel
Chemical Family:
Responsible Party: Phillip's Petroleum Company
Bartlesville, Oklahoma 74004
For Additional MSDSs: 800-762-0942
Technical Information:

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:
Spill, Leak, Fire or Accident
Call CHEMTREC
North America: (800) 424-9300
Others: (703) 527-3887 (collect)

California Poison Control System: 800-356-3120

Health Hazards/Precautionary Measures: Causes severe skin irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Flammable liquid and vapor. Keep away from heat, sparks, flames, static electricity or other sources of ignition.

Appearance: Straw-colored to dyed red
Physical Form: Liquid
Odor: Characteristic petroleum

HFPA Hazard Class:
Health: 0 (Least)
Flammability: 2 (Moderate)
Reactivity: 0 (Least)

HMIS Hazard Class
Not Evaluated

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS	% VOLUME		EXPOSURE GUIDELINE	
		Limits	Agency	Type
Diesel Fuel No. 2 CAS# 68476-34-6	100	100* mg/m3	ACGIH	TWA-SKIN
Naphthalene CAS# 91-20-3	<1	10ppm	ACGIH	TWA
		15ppm	ACGIH	STEL
		10ppm	OSHA	TWA
		250ppm	NIOSH	IDLH

All components are listed on the TSCA inventory

Tosco Low Sulfur No. 2 Diesel meets the specifications of 40 CFR 60.41 for low sulfur diesel fuel.

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

*Proposed ACGIH (1999)

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Severe skin irritant. Contact may cause redness, itching, burning, and severe skin damage. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin, leading to dermatitis (inflammation). Not actually toxic by skin absorption, but prolonged or repeated skin contact may be harmful (see Section 11).

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingestion (Swallowing): Low degree of toxicity by ingestion. ASPIRATION HAZARD – This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Signs and Symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea, diarrhea and transient excitation followed by signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue).

Cancer: Possible skin cancer hazard (see Sections 11 and 14).

Target Organs: There is limited evidence from animal studies that overexposure may cause injury to the kidney (see Section 11).

Developmental: Inadequate data available for this material.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders and kidney disorders.

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Immediately remove contaminated shoes, clothing, and constrictive jewelry and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek immediate medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops, seek immediate medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): Aspiration hazard; Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties:

Flash Point: >125°F/>52°
OSHA Flammability Class: Combustible liquid
LEL %: 0.3 / UEL %; 10.0
Autoignition Temperature: 500°F/260°C

Unusual Fire & Explosion Hazards: This material is flammable and can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof equipment is recommended.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Use foam on spills to minimize vapors (see Section 5). Spilled material may be absorbed into an appropriate material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7. HANDLING AND STORAGE

Handling: Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. Can accumulate static charge by flow or agitation. Can be ignited by static discharged. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-704 and/or API RP 2003 for specific bonding/grounding requirements.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Use good personal hygiene practices.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing or high pressure hydraulic oil equipment.

“Empty” containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. “Empty” drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSIZ49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area “No Smoking or Open Flame.” Store only in approved containers. Keep away from incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentration below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with an organic vapor cartridge maybe used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is a potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrants a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact, possible irritation and skin damage (see glove manufacturer literature for information on permeability). Depending on conditions of use, apron and/or arm covers may be necessary.

Eyes/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn when skin contact is possible.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1atm).

Appearance: Straw-colored to dyed red
Physical State: Liquid
Odor: Characteristic petroleum
pH: unavailable
Vapor Pressure (mm Hg): 0.40
Vapor Densisty (air=1):>3
Boiling Point/Range: 320-700°F /160-371°C
Freezing/Melting Point: No Data
Solubility in Water: Negligible
Specific Gravity: 0.81-0.88 @ 60°F
Percent Volatile: Negligible
Evaporation Rate (nBuAc=1): <1
Viscosity: 32.6-40.0 SUS @ 100°F
Bulk Density: 7.08 lbs/gal
Flash Point: >125°F / >52°C
Flammable/Expolsive Limits (%): LEL: 0.3 / UEL: 10.0

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Flammable liquid and vapor. Vapor can cause flash fire.

Conditions To Avoid: Avoid all possible sources of ignition (see Sections 5 and 7).

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc.

Hazardous Decomposition Products: The use of hydrocarbon fuels in an area without adequate ventilation may result in hazardous levels of combustion products (e.g., oxides of carbon, sulfur and nitrogen, benzene and other hydrocarbons) and/or dangerously low oxygen levels. ACGIH has included a TLV of 0.05 mg/m3 TWA for diesel exhaust particulate on its 1999 Notice of Intended Changes. See Section 11 for additional information on hazards of engine exhaust.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Diesel Fuel No. 2 (CAS# 68476-34-6)

Carcinogenicity: Chronic dermal application of certain middle distillate streams contained in diesel fuel No. 2 resulted in an increased incidence of skin tumors in mice. This material has not been identified as carcinogen by NTP, IARC, or OSHA. Diesel exhaust is a probable cancer hazard based on tests with laboratory animals.

Target Organ(s): Limited evidence of renal impairment has been noted from a few case reports involving excessive exposure to diesel fuel No. 2.

Naphthalene (CAS# 91-20-3)

Carcinogenicity: Naphthalene has been evaluated in two year inhalation studies in both rats and mice. The National Toxicology Program (NTP) concluded that there is clear evidence of carcinogenicity in male and female rats based on increased incidences of respiratory epithelial adenomas and olfactory epithelial neuroblastomas of the nose. NTP found some evidence of carcinogenicity in female mice (alveolar adenomas) and no evidence of carcinogenicity in male mice. Naphthalene has not been identified as a carcinogen by IARC or OSHA.

12. ECOLOGICAL INFORMATION

Not evaluated at this time

13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, would be a RCRA “characteristic” hazardous waste due to the characteristic(s) of ignitability (D001) and benzene (D018). If the material is spilled to soil or water, characteristic testing of the contaminated materials is recommended. Further, this material, once it becomes a waste, is subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult state and local regulations to determine whether they are more stringent then the federal requirements.

Container contents should be completely used and containers should be emptied prior to discard. Container ?insate? could be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller containers, consult with state and local regulations and disposal authorities.

14. TRANSPORT INFORMATION

DOT Shipping Description: Diesel Fuel, NA1983
Non-Bulk Package Marking: Diesel Fuel, 3, NA 1993, III

15. REGULATORY INFORMATION

EPA SARA 311/312 (Title III Hazard Categories):

Acute Health:	Yes
Chronic Health:	Yes
Fire Hazard:	Yes
Pressure Hazard:	No
Reactive Hazard:	No

SARA 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

Component	CAS Number	Weight %
-- None known --		

California Proposition 65:

Warning: This material contains the following chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

Component	Effect
Benzene	Cancer, Developmental and Reproductive Toxicant
Toluene	Developmental Toxicant

Diesel engine exhaust, while not a component of this material, is on the Proposition 65 list of chemicals known to the State of California to cause cancer.

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any. Diesel exhaust is a probable cancer hazard based on tests in laboratory animals. It has been identified as carcinogen by IARC.

EPA (CERCLA Reportable Quantity: None

16. OTHER INFORMATION

Issue Date: 01/01/02
Previous Issue Date: 05/15/01
Product Code: Multiple
Revised Sections: None
Previous Product Code: Multiple
MSDS Number: 0041

Disclaimer of Expressed and Implied Warranties:

The information presented in this Material Data Safety Sheet is based on data believed to be accurate as of the date this Material Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THE PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

Tosco Refining Company ***Ferndale Refinery***

UltraLow Sulfur Diesel Product Specification

Ferndale Product Code:34380xx (5) Product Code: ULSD2

(COMETS)

Specification	Unit	Limit	Test Procedure	Typical
Appearance				
Water & Sediment	Vol %	0.05 Max	D 2709	
Color	Number	3.0 Max	D 1500	
Haze Rating	Rating	2 Max	D 4176	
Composition				
Carbon Residue (Ramsbottom)	Wt %	0.35 Max	D 524, D 189	
Volatility				
90% Recovered	Deg; F	540 Min	D 86	
	Deg; F	640 Min	D 86	
Flash Point	Deg; F	125 Min (1)	D 93	130 F
Gravity	API	30 Min	D 287, D4052	
Fluidity				
Pour Point	Deg; F	See Season Table (6)	D 97	
Cloud Point	Deg; F	See Season Table (6)	D 2500	10 F
Viscosity @ 104F	cSt	1.9 Min	D 445	
	cSt	4.1 Max	D 445	
Lubricity, SLBOCLE	grams	3100 Min	D 6078	3300gm
Lubricity, HFRR	mm	.45	D 6079	
Combustion				
Cetane Index or Cetane Number (3,4)	Number	40.0 Min	D 976, D613	47.0
Corrosion				
Copper Strip, 3hr @ 50 deg C	Number	3 Max (2)	D 130	
Aromatics (4)	Vol %	35 Max	D 1319	25 %
Contaminants				
Total Sulfur	PPM	30 Max	D 2622, D4294	15-20ppm
Water & Sediment	Vol %	0.05 Max	D 1796	
Ash	Wt %	0.01 Max	D 482	
Additives				
Cetane Improver	Lb/MBbl	675 Max		
Dye		Undyed		

1. Minimum release specification is 125 deg. F. The refinery should target 135 deg. F.
2. Test result reported as a number and letter (e.g. 1a). Any letter is allowable as long as the number meets the spec shown.
3. Either specification must be met.
4. Either cetane index minimum or aromatics maximum must be met.
5. Winter cloud and pour specifications may be relaxed to the summer specifications by agreement with the customer.
6. Season Table

Month	Product Code	Pour Point	Cloud Point
Jan, Feb, Nov, Dec	WI	0 max (5)	14 max (5)
Mar - Oct	SU	15 max	24 max

SAFETY DATA SHEET

Version 3.12
Revision Date 02/26/2015
Print Date 04/30/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Ethyl acetate

Product Number : 154857
Brand : Sigma-Aldrich
Index-No. : 607-022-00-5

CAS-No. : 141-78-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Flammable liquids (Category 2), H225
Eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)
H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Repeated exposure may cause skin dryness or cracking.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	$C_4H_8O_2$
Molecular weight	:	88.11 g/mol
CAS-No.	:	141-78-6
EC-No.	:	205-500-4
Index-No.	:	607-022-00-5
Registration number	:	01-2119475103-46-XXXX

Hazardous components

Component	Classification	Concentration
Ethyl acetate		
	Flam. Liq. 2; ; Eye Irrit. 2A; STOT SE 3; H225,, H319, H336	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Ethyl acetate	141-78-6	TWA	400.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation		

		TWA	400.000000 ppm 1,400.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		TWA	400.000000 ppm 1,400.000000 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		The value in mg/m3 is approximate.		

Derived No Effect Level (DNEL)

Application Area	Exposure routes	Health effect	Value
Workers	Inhalation	Acute systemic effects	1468 mg/m3
Workers	Inhalation	Acute local effects	1468 mg/m3
Workers	Skin contact	Long-term systemic effects	63mg/kg BW/d
Workers	Inhalation	Long-term systemic effects	734 mg/m3
Workers	Inhalation	Long-term local effects	734 mg/m3
Consumers	Inhalation	Acute local effects, Acute systemic effects	734 mg/m3
Consumers	Skin contact	Long-term systemic effects	37mg/kg BW/d
Consumers	Inhalation	Long-term systemic effects	367 mg/m3
Consumers	Ingestion	Long-term systemic effects	4.5mg/kg BW/d
Consumers	Inhalation	Long-term local effects	367 mg/m3

Predicted No Effect Concentration (PNEC)

Compartment	Value
Soil	0.24 mg/kg
Marine water	0.026 mg/l
Fresh water	0.26 mg/l
Marine sediment	0.125 mg/kg
Fresh water sediment	1.25 mg/kg

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Splash contact
Material: butyl-rubber
Minimum layer thickness: 0.3 mm
Break through time: 113 min
Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: clear, liquid Colour: colourless
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	-84.0 °C (-119.2 °F)
f)	Initial boiling point and boiling range	76.5 - 77.5 °C (169.7 - 171.5 °F) - lit.
g)	Flash point	-2.99 °C (26.62 °F) - closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	May form explosive dust-air mixture.
j)	Upper/lower flammability or explosive limits	Upper explosion limit: 11.5 %(V) Lower explosion limit: 2.2 %(V)
k)	Vapour pressure	97.3 hPa (73.0 mmHg) at 20.0 °C (68.0 °F)
l)	Vapour density	No data available
m)	Relative density	0.90 g/cm3 at 20 °C (68 °F)
n)	Water solubility	soluble
o)	Partition coefficient: n-octanol/water	log Pow: 0.73
p)	Auto-ignition temperature	427.0 °C (800.6 °F)
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

Surface tension	24.0 mN/m at 20.0 °C (68.0 °F)

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Heat, flames and sparks.

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 5,620 mg/kg

LC50 Inhalation - Mouse - 2 h - 45,000 mg/m3

LD50 Dermal - Rabbit - > 18,000 mg/kg

No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Mild skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC:	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP:	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: AH5425000

Inhalation of high concentrations may cause:, Headache, Drowsiness, Dizziness, Vomiting, narcosis, anemia, Central nervous system depression

Kidney - Irregularities - Based on Human Evidence
Kidney - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Oncorhynchus mykiss (rainbow trout) - 350.00 - 600.00 mg/l - 96 h
	LC50 - Pimephales promelas (fathead minnow) - 220.00 - 250.00 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 2,300.00 - 3,090.00 mg/l - 24 h
	LC50 - Daphnia magna (Water flea) - 560 mg/l - 48 h
Toxicity to algae	EC50 - Algae - 4,300.00 mg/l - 24 h
	EC50 - SELENASTRUM - 1,800.00 - 3,200.00 mg/l - 72 h

12.2 Persistence and degradability

Biodegradability	Result: 79 % - Readily biodegradable (OECD Test Guideline 301D)

12.3 Bioaccumulative potential

Bioaccumulation	- 3 d
	Bioconcentration factor (BCF): 30

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1173 Class: 3 Packing group: II
Proper shipping name: Ethyl acetate
Reportable Quantity (RQ): 5000 lbs

Poison Inhalation Hazard: No

IMDG

UN number: 1173 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: ETHYL ACETATE

IATA

UN number: 1173 Class: 3 Packing group: II
Proper shipping name: Ethyl acetate

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Ethyl acetate	141-78-6	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Ethyl acetate	141-78-6	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Ethyl acetate	141-78-6	1993-04-24

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

	Combustible dust
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
STOT SE	Specific target organ toxicity - single exposure

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	3
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	3
Reactivity Hazard:	0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 3.12 Revision Date: 02/26/2015 Print Date: 04/30/2016

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

1. PRODUCT IDENTIFICATION

CHEMICAL NAME; CLASS: NON-FLAMMABLE GAS MIXTURE

Containing One or More of the Following Components in a Nitrogen Balance Gas:Oxygen, 0.0015-23.5%;Methane, 0.0005-2.5%;Carbon Monoxide, 0.0005-1.0%; Hydrogen Sulfide, 0.001-0.025%

SYNONYMS: Not Applicable
CHEMICAL FAMILY NAME: Not Applicable
FORMULA: Not Applicable
Document Number: 50018

Note: The Material Safety Data Sheet is for this gas mixture supplied in cylinders with 33 cubic feet (935 liters) or less gas capacity (DOT - 39 cylinders). This MSDS has been developed for various gas mixtures with the composition of components within the ranges listed in Section 2 (Composition and Information on Ingredients). Refer to the product label for information on the actual composition of the product.

PRODUCT USE:	Calibration of Monitoring and Research Equipment
SUPPLIER/MANUFACTURER'S NAME:	CALGAZ
ADDRESS:	821 Chesapeake Drive Cambridge, MD 21613
EMERGENCY PHONE:	CHEMTREC: 1-800-424-9300
BUSINESS PHONE:	1-410-228-6400
General MSDS Information	1-713/868-0440
Fax on Demand:	1-800/231-1366

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH		OSHA		NIOSH	OTHER
			TLV ppm	STEL ppm	PEL ppm	STEL ppm	IDLH ppm	ppm
Oxygen	7782-44-7	0.0015 - 23.5%	There are no specific exposure limits for Oxygen. Oxygen levels should be maintained above 19.5%.					
Methane	74-82-8	0.0005 - 2.5%	There are no specific exposure limits for Methane. Methane is a simple asphyxiant (SA). Oxygen levels should be maintained above 19.5%.					
Hydrogen Sulfide	7783-06-4	0.001- 0.025 %	10 (NIC = 5)	15	10 (Vacated 1989 PEL)	20 (ceiling); 50 (ceiling, 10 min. peak once per 8-hour shift 15 (vacated 1989 PEL)	100	NIOSH REL: STEL = 10 (ceiling) 10 minutes DFG-MAKs: TWA = 10 PEAK = 2•MAK, 10 min., momentary value
Carbon Monoxide	630-08-0	0.0005 - 1.0%	25	NE	50 35 (Vacated 1989 PEL)	200 [ceiling] (Vacated 1989 PEL)	1200	NIOSH RELS: TWA = 35 STEL = 200 (ceiling) DFG MAKs: TWA = 30 PEAK = 2•MAK, 15 min., average value DFG MAK Pregnancy Risk Classification: B
Nitrogen	7727-37-9	Balance	There are no specific exposure limits for Nitrogen. Nitrogen is a simple asphyxiant (SA). Oxygen levels should be maintained above 19.5%.					

NE = Not Established. NIC = Notice of Intended Change See Section 16 for Definitions of Terms Used.
NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This gas mixture has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This gas mixture is a colorless gas which has a rotten-egg odor (due to the presence of Hydrogen Sulfide). The odor cannot be relied on as an adequate warning of the presence of this gas mixture, because olfactory fatigue occurs after over-exposure to Hydrogen Sulfide. Hydrogen Sulfide and Carbon Monoxide (another component of this gas mixture) are toxic to humans in relatively low concentrations. Over-exposure to this gas mixture can cause skin or eye irritation, nausea, dizziness, headaches, collapse, unconsciousness, coma, and death. Additionally, releases of this gas mixture may produce oxygen-deficient atmospheres (especially in small confined spaces or other poorly-ventilated environments); individuals in such atmospheres may be asphyxiated.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant route of over-exposure for this gas mixture is by inhalation.

INHALATION: Due to the small size of an individual cylinder of this gas mixture, no unusual health effects from over-exposure to the product are anticipated under routine circumstances of use. A potential health hazard associated with this gas mixture is the potential of inhalation of Hydrogen Sulfide, a component of this gas mixture. Such over-exposures may occur if this gas mixture is used in a confined space or other poorly-ventilated area. Over-exposures to Hydrogen Sulfide can cause dizziness, headache, and nausea. Over-exposure to this gas could result in respiratory arrest, coma, or unconsciousness, due to the presence of Hydrogen Sulfide. Continuous inhalation of low concentrations of Hydrogen Sulfide may cause olfactory fatigue, so that the odor is no longer an effective warning of the presence of this gas. A summary of exposure concentrations and observed effects are as follows:

CONCENTRATION OF HYDROGEN SULFIDE	**OBSERVED EFFECT**
0.3-30 ppm	Odor is unpleasant.
50 ppm	Eye irritation. Dryness and irritation of nose, throat.
Slightly higher than 50 ppm	Irritation of the respiratory system.
100-150 ppm	Temporary loss of smell.
200-250 ppm	Headache, vomiting nausea. Prolonged exposure may lead to lung damage. Exposures of 4-8 hours can be fatal.
300-500	Swifter onset of symptoms. Death occurs in 1-4 hours.
500 ppm	Headache, excitement, staggering, and stomach ache after brief exposure. Death occurs within 0.5 - 1 hour of exposure.
> 600 ppm	Rapid onset of unconsciousness, coma, death.
> 1000 ppm	Immediate respiratory arrest.

NOTE: This gas mixture contains a maximum of 250 ppm Hydrogen Sulfide. The higher concentration values here are presented to delineate the complete health effects which have been observed for humans after exposure to Hydrogen Sulfide.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD	(BLUE)	3
FLAMMABILITY HAZARD	(RED)	0
PHYSICAL HAZARD	(YELLOW)	0

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY

See Section 8

For Routine Industrial Use and Handling Applications

3. HAZARD IDENTIFICATION (continued)

Inhalation over-exposures to atmospheres containing more than the Threshold Limit Value of Carbon Monoxide (25 ppm), another component of this gas mixture, can result in serious health consequences. Carbon Monoxide is classified as a chemical asphyxiant, producing a toxic action by combining with the hemoglobin of the blood and replacing the available oxygen. Through this replacement, the body is deprived of the required oxygen, and asphyxiation occurs. Since the affinity of Carbon Monoxide for hemoglobin is about 200-300 times that of oxygen, only a small amount of Carbon Monoxide will cause a toxic reaction to occur. Carbon Monoxide exposures in excess of 50 ppm will produce symptoms of poisoning if breathed for a sufficiently long time. If this gas mixture is released in a small, poorly ventilated area (i.e. an enclosed or confined space), symptoms which may develop include the following:

CONCENTRATION OF CARBON MONOXIDE	**OBSERVED EFFECT**
All exposure levels:	Over-exposure to Carbon Monoxide can be indicated by the lips and fingernails turning bright red.
200 ppm:	Slight symptoms (i.e. headache) after several hours of exposure.
400 ppm:	Headache and discomfort experienced within 2-3 hours of exposure.
1,000 -2000 ppm:	Within 30 minutes, slight palpitations of the heart occurs. Within 1.5 hours, there is a tendency to stagger.
200-2500 ppm:	Within 2 hours, there is mental confusion, headaches, and nausea. Unconsciousness within 30 minutes.
>2500 ppm:	Potential for collapse and death before warning symptoms.

Additionally, if mixtures of this gas mixture contain less than 19.5% Oxygen and are released in a small, poorly ventilated area (i.e. an enclosed or confined space), an oxygen-deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Under some circumstances of over-exposure, death may occur. The following effects associated with various levels of oxygen are as follows:

CONCENTRATION OF OXYGEN	**OBSERVED EFFECT**
12-16% Oxygen:	Breathing and pulse rate increased, muscular coordination slightly disturbed.
10-14% Oxygen:	Emotional upset, abnormal fatigue, disturbed respiration.
6-10% Oxygen:	Nausea, vomiting, collapse, or loss of consciousness.
Below 6%:	Convulsive movements, possible respiratory collapse, and death.

SKIN and EYE CONTACT: Hydrogen Sulfide, a component of this gas mixture, may be irritating to the skin. Inflammation and irritation of the eyes can occur at very low airborne concentration of Hydrogen Sulfide (less than 10 ppm). Exposure over several hours may result in "gas eyes" or "sore eyes" with symptoms of scratchiness, irritation, tearing and burning. Above 50 ppm of Hydrogen Sulfide, there is an intense tearing, blurring of vision, and pain when looking at light. Over-exposed individuals may see rings around bright lights. Most symptoms disappear when exposure ceases. However, in serious cases, the eye can be permanently damaged.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Over-exposure to this gas mixture may cause the following health effects:

ACUTE: Due to the small size of the individual cylinder of this gas mixture, no unusual health effects from exposure to the product are anticipated under routine circumstances of use. However the Hydrogen Sulfide and Carbon Monoxide components of this gas mixture are toxic to humans. Over-exposure to this gas mixture can cause nausea, dizziness, headaches, collapse, unconsciousness, coma, and death. Due to the presence of Hydrogen Sulfide, over-exposures to this gas mixture can also irritate the skin and eyes; severe eye contamination can result in blindness.

CHRONIC: Severe over-exposures to the Hydrogen Sulfide component of this gas mixture, which do not result in death, may cause long-term symptoms such as memory loss, paralysis of facial muscles, or nerve tissue damage. In serious cases of over-exposure, the eyes can be permanently damaged. Skin disorders and respiratory conditions may be aggravated by repeated over-exposures to this gas product. Refer to Section 11 (Toxicology Information) for additional information on the components of this gas mixture. Chronic exposure to oxygen-deficient atmospheres (below 18% oxygen in air) may affect the heart and nervous system.

TARGET ORGANS: ACUTE: Respiratory system, blood system, central nervous system effects, cardiovascular system, skin, eyes. CHRONIC: Neurological system, reproductive system, eyes.

4. FIRST-AID MEASURES

RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO THIS GAS MIXTURE WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus must be worn. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

No unusual health effects are anticipated after exposure to this gas mixture, due to the small cylinder size. If any adverse symptom develops after over-exposure to this gas mixture, remove victim(s) to fresh air as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation if necessary.

SKIN EXPOSURE: If irritation of the skin develops after exposure to this gas mixture, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention.

EYE EXPOSURE: If irritation of the eye develops after exposure to this gas mixture, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Seek medical assistance immediately, preferably an ophthalmologist.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory conditions may be aggravated by over-exposure to this gas mixture. Carbon Monoxide, a component of this gas mixture, can aggravate some diseases of the cardiovascular system, such as coronary artery disease and angina pectoris. Because of the presence of Hydrogen Sulfide, eye disorders or skin problems may be aggravated by over-exposure to this gas mixture.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate over-exposure. Hyperbaric oxygen is the most efficient antidote to Carbon Monoxide poisoning, the optimum range being 2-2.5 atm. A special mask, or, preferably, a compression chamber to utilize oxygen at these pressures is required. Avoid administering stimulant drugs. Be observant for initial signs of pulmonary edema in the event of severe inhalation over-exposures.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable.

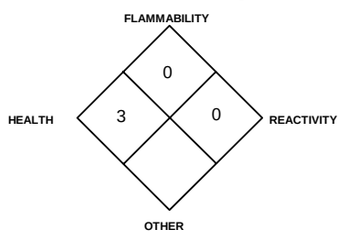
AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): Not applicable.

Upper (UEL): Not applicable.

NFPA RATING



FIRE EXTINGUISHING MATERIALS: Non-flammable gas mixture. Use extinguishing media appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This gas mixture contains toxic gases, Hydrogen Sulfide and Carbon Monoxide, and presents an health hazard to firefighters. This gas mixture is not flammable; however, containers, when involved in fire, may rupture or burst in the heat of the fire.

Explosion Sensitivity to Mechanical Impact: Not Sensitive.

Explosion Sensitivity to Static Discharge: Not Sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES

LEAK RESPONSE: Due to the small size and content of the cylinder, an accidental release of this gas mixture presents significantly less risk of over-exposure to Hydrogen Sulfide and Carbon Monoxide, the toxic components of this gas mixture, and other safety hazards related to the remaining components of this gas mixture, than a similar release from a larger cylinder. However, as with any chemical release, extreme caution must be used during emergency response procedures. In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Such releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel. For emergency disposal,

6. ACCIDENTAL RELEASE MEASURES (continued)

secure the cylinder and slowly discharge the gas to the atmosphere in a well-ventilated area or outdoors. Allow the gas mixture to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for Hydrogen Sulfide, Carbon Monoxide, and Oxygen. Hydrogen Sulfide and Carbon Monoxide level must be below exposure level listed in Section 2 (Composition and Information on Ingredients) and Oxygen levels must be above 19.5% before non-emergency personnel are allowed to re-enter area. If leaking incidentally from the cylinder, contact your supplier.

7. HANDLING and USE

WORK PRACTICES AND HYGIENE PRACTICES: Be aware of any signs of dizziness or fatigue, especially if work is done in a poorly ventilated area; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to olfactory fatigue or oxygen deficiency. Do not attempt to repair, adjust, or in any other way modify cylinders containing a gas mixture with Hydrogen Sulfide or Carbon Monoxide. If there is a malfunction or another type of operational problem, contact nearest distributor immediately. Eye wash stations/safety showers should be near areas where this gas mixture is used or stored. All work operations should be monitored in such a way that emergency personnel can be immediately contacted in the event of a release. All work practices should minimize releases of Hydrogen Sulfide and Carbon Monoxide-containing gas mixtures.

STORAGE AND HANDLING PRACTICES: Cylinders should be firmly secured to prevent falling or being knocked-over. Cylinders must be protected from the environment, and preferably kept at room temperature (approximately 21°C (70°F). Cylinders should be stored in dry, well-ventilated areas, away from sources of heat, ignition, and direct sunlight. Protect cylinders against physical damage. Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time. These cylinders are not refillable. **WARNING! Do not refill DOT 39 cylinders. To do so may cause personal injury or property damage.**

SPECIAL PRECAUTIONS FOR HANDLING GAS CYLINDERS: WARNING! Compressed gases can present significant safety hazards. During cylinder use, use equipment designed for these specific cylinders. Ensure all lines and equipment are rated for proper service pressure.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely. Always use product in areas where adequate ventilation is provided.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: No special ventilation systems or engineering controls are needed under normal circumstances of use. As with all chemicals, use this gas mixture in well-ventilated areas. If this gas mixture is used in a poorly-ventilated area, install automatic monitoring equipment to detect the levels of Oxygen, Hydrogen Sulfide, and Carbon Monoxide.

RESPIRATORY PROTECTION: No special respiratory protection is required under normal circumstances of use. Use supplied air respiratory protection if the levels of components exceeds exposure limits presented in Section 2 (Composition and Information of Ingredients) and Oxygen levels are below 19.5%, or unknown, during emergency response to a release of this gas mixture. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces. Oxygen levels below 19.16.33% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998). The following NIOSH respiratory protection recommendations for Hydrogen Sulfide and Carbon Monoxide are provided for further information.

NIOSH/OSHA RECOMMENDATIONS FOR HYDROGEN SULFIDE CONCENTRATIONS IN AIR:

Up to 100 ppm:	Powered air-purifying respirator with cartridge(s) to protect against hydrogen sulfide; gas mask with canister to protect against hydrogen sulfide; or SAR; or full-facepiece SCBA.
Emergency or Planned Entry into Unknown Concentration or IDLH Conditions:	Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.
Escape:	Gas mask with canister to protect against hydrogen sulfide; or escape-type SCBA
NOTE:	The IDLH concentration for Hydrogen Sulfide is 100 ppm.

NIOSH/OSHA RECOMMENDATIONS FOR CARBON MONOXIDE CONCENTRATIONS IN AIR:

Up to 350 ppm	Supplied Air Respirator (SAR)
Up to 875 ppm	Supplied Air Respirator (SAR) operated in a continuous flow mode.
Up to 1200 ppm	Gas mask with canister to protect against carbon monoxide; or full-facepiece SCBA; or full-facepiece Supplied Air Respirator (SAR).
Emergency or Planned Entry into Unknown Concentration or IDLH Conditions:	Positive pressure, full-facepiece SCBA; or positive pressure, full-facepiece Supplied Air Respirator (SAR) with an auxiliary positive pressure SCBA.
Escape:	Gas mask with canister to protect against carbon monoxide; or escape-type SCBA. **NOTE**: End of Service Life Indicator (ESLI) required for gas masks.
NOTE:	The IDLH concentration for Carbon Monoxide is 1200 ppm.

EYE PROTECTION: Safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Wear leather gloves when handling cylinders. Chemically resistant gloves should be worn when using this gas mixture. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: No special protection is needed under normal circumstances of use. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

The following information is for Nitrogen, the main component of this gas mixture.

GAS DENSITY @ 32°F (0°C) and 1 atm: .072 lbs/ ft^3 (1.153 kg/m^3)

FREEZING/MELTING POINT @ 10 psig: -345.8°F (-210°C)

SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C): 0.906

SOLUBILITY IN WATER vol/vol @ 32°F (0°C) and 1 atm: 0.023

EVAPORATION RATE (nBuAc = 1): Not applicable.

VAPOR PRESSURE @ 70°F (21.1°C) (psig): Not applicable.

COEFFICIENT WATER/OIL DISTRIBUTION: Not applicable.

BOILING POINT: -320.4°F (-195.8°C)

pH: Not applicable.

MOLECULAR WEIGHT: 28.01

EXPANSION RATIO: Not applicable.

SPECIFIC VOLUME (ft^3/lb): 13.8

The following information is for this gas mixture.

ODOR THRESHOLD: 0.13 ppm (Hydrogen Sulfide)

APPEARANCE AND COLOR: This gas mixture is a colorless gas which has an rotten egg-like odor, due to the presence of Hydrogen Sulfide.

HOW TO DETECT THIS SUBSTANCE (warning properties): Continuous inhalation of low concentrations of this gas mixture may cause olfactory fatigue, due to the presence of Hydrogen Sulfide, so the odor is not a good warning property of a release of this gas mixture. In terms of leak detection, fittings and joints can be painted with a soap solution to detect leaks, which will be indicated by a bubble formation. Wet lead acetate paper can be used for leak detection. The paper turns black in the presence of Hydrogen Sulfide. Cadmium chloride solutions can also be used. Cadmium solutions will turn yellow upon contact with Hydrogen Sulfide.

10. STABILITY and REACTIVITY

STABILITY: Normally stable in gaseous state.

DECOMPOSITION PRODUCTS: The thermal decomposition products of Methane include carbon oxides. The decomposition products of Hydrogen Sulfide include water and sulfur oxides. The other components of this gas mixture do not decompose, per se, but can react with other compounds in the heat of a fire.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Titanium will burn in Nitrogen (the main component of this gas mixture). Lithium reacts slowly with Nitrogen at ambient temperatures. Components of this gas mixture (Hydrogen Sulfide, Methane) are also incompatible with strong oxidizers (i.e. chlorine, bromine pentafluoride, oxygen, oxygen difluoride, and nitrogen trifluoride). Carbon Monoxide is mildly corrosive to nickel and iron (especially at high temperatures and pressures). Hydrogen Sulfide is corrosive to most metals, because it reacts with these substances to form metal sulfides.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Contact with incompatible materials. Cylinders exposed to high temperatures or direct flame can rupture or burst.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following toxicology data are available for the components of this gas mixture:

NITROGEN:

There are no specific toxicology data for Nitrogen. Nitrogen is a simple asphyxiant, which acts to displace oxygen in the environment.

METHANE:

There are no specific toxicology data for Methane. Methane is a simple asphyxiant, which acts to displace oxygen in the environment.

CARBON MONOXIDE:

LC_{50} (Inhalation-Rat) 1807 ppm/4 hours
LC_{50} (Inhalation-Mouse) 2444 ppm/4 hours
LC_{50} (Inhalation-Guinea Pig) 5718 ppm/4 hours
LC_{50} (Inhalation-wild bird species) 1334 ppm
LCLo (Inhalation-Human) 4 mg/m^3/12 hours: Behavioral: coma; Vascular: BP lowering not characterized in autonomic section; Blood: methemoglobinemia-carboxyhemoglobin
LCLo (Inhalation-Man) 4000 ppm/30 minutes
LCLo (Inhalation-Human) 5000 ppm/5 minutes
LCLo (Inhalation-Dog) 4000 ppm/46 minutes
LCLo (Inhalation-Rabbit) 4000 ppm
LCLo (Inhalation-Mammal-species unspecified) 5000 ppm/5 minutes
TCLo (Inhalation-Human) 600 mg/m^3/10 minutes: Behavioral: headache
TCLo (Inhalation-Man) 650 ppm/45 minutes: Blood: methemoglobinemia-carboxyhemoglobin; Behavioral: changes in psychophysiological tests
TCLo (Inhalation-Rat) 1800 ppm/1 hour/14 days-intermittent: Cardiac: other changes
TCLo (Inhalation-Rat) 30 mg/m^3/8 hours/10 weeks-intermittent: Brain and Coverings: other degenerative changes; Behavioral: muscle contraction or spasticity
TCLo (Inhalation-Rat) 96 ppm/24 hours/90 days-continuous: Blood: pigmented or nucleated red blood cells, other changes
TCLo (Inhalation-Rat) 250 ppm/5 hours/20 days-intermittent: Blood :pigmented or nucleated red blood cells, changes in other cell count (unspecified), changes in erythrocyte (RBC) count
TDLo (Subcutaneous-Rat) 5983 mg/kg/18 weeks-intermittent: Blood: changes in serum composition (e.g. TP, bilirubin, cholesterol)
TCLo (Inhalation-Monkey) 200 ppm/24 hours/90 days-continuous: Blood: pigmented or nucleated red blood cells, other changes
TCLo (Inhalation-Rabbit) 200 mg/m^3/3 hours/13 weeks-intermittent: Brain and Coverings: other degenerative changes; Cardiac: other changes; Blood: hemorrhage
TCLo (Inhalation-Guinea Pig) 200 mg/m^3/5 hours/30 weeks-continuous: Cardiac: arrhythmias (including changes in conduction), EKG changes not diagnostic of specified effects, pulse rate increase, without fall in BP

CARBON MONOXIDE (continued):

TCLo (Inhalation-Mouse) 50 ppm/30 days-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi
TCLo (Inhalation-Guinea Pig) 200 mg/m^3/5 hours/4 weeks-intermittent: Endocrine: hyperglycemia
TCLo (Inhalation-Guinea Pig) 200 ppm/24 hours/90 days-continuous: Blood: pigmented or nucleated red blood cells, other changes
TCLo (Inhalation-Rat) 75 ppm/24 hours: female 0-20 day(s) after conception: Reproductive: Maternal Effects: other effects; Effects on Newborn: behavioral
TCLo (Inhalation-Rat) 150 ppm/24 hours: female 1-22 day(s) after conception: Reproductive: Specific Developmental Abnormalities: cardiovascular (circulatory) system
TCLo (Inhalation-Rat) 150 ppm/24 hours: female 1-22 day(s) after conception: Reproductive: Effects on Newborn: growth statistics (e.g.%, reduced weight gain), behavioral
TCLo (Inhalation-Rat) 1 mg/m^3/24 hours: female 72 day(s) pre-mating: Reproductive: Maternal Effects: menstrual cycle changes or disorders, parturition; Fertility: female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated)
TCLo (Inhalation-Rat) 150 ppm/24 hours: female 0-20 day(s) after conception: Reproductive: Effects on Newborn: behavioral
TCLo (Inhalation-Rat) 75 ppm/24 hours: female 0-20 day(s) after conception: Reproductive: Specific Developmental Abnormalities: immune and reticuloendothelial system
TCLo (Inhalation-Mouse) 65 ppm/24 hours: female 7-18 day(s) after conception: Reproductive: Effects on Newborn: behavioral
TCLo (Inhalation-Mouse) 250 ppm/7 hours: female 6-15 day(s) after conception: Reproductive: Fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants); Specific Developmental Abnormalities: musculoskeletal system
TCLo (Inhalation-Mouse) 125 ppm/24 hours: female 7-18 day(s) after conception: Reproductive: Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus)
TCLo (Inhalation-Mouse) 8 pph/1 hour: female 8 day(s) after conception: Reproductive: Fertility: litter size (e.g. # fetuses per litter; measured before birth); Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus), fetal death

CARBON MONOXIDE (continued):

TCLo (Inhalation-Rabbit) 50 ppm/24 hours/8 weeks-continuous: Blood: changes in platelet count
TCLo (Inhalation-Mouse) 8 pph/1 hour: female 8 day(s) after conception: Reproductive: Specific Developmental Abnormalities: Central Nervous System
TCLo (Inhalation-Rabbit) 180 ppm/24 hours: female 1-30 day(s) after conception: Reproductive: Effects on Newborn: stillbirth, viability index (e.g., # alive at day 4 per # born alive)
Micronucleus Test (Inhalation-Mouse)1500 ppm/10 minutes
Sister Chromatid Exchange (Inhalation-Mouse) 2500 ppm/10 minutes

HYDROGEN SULFIDE:

LC_{50} (Inhalation-Rat) 444 ppm: Lungs, Thorax, or Respiration: other changes; Gastrointestinal: hypermotility, diarrhea; Kidney, Ureter, Bladder: urine volume increased
LC_{50} (Inhalation-Mouse) 634 ppm/1 hour
LCLo (Inhalation-Human) 600 ppm/30 minutes
LCLo (Inhalation-Man) 5700 µg/kg: Behavioral: coma; Lungs, Thorax, or Respiration: chronic pulmonary edema
LCLo (Inhalation-Human) 800 ppm/5 minutes
LCLo (Inhalation-Mammal-species unspecified) 800 ppm/5 minutes
TCLo (Inhalation-Rat) 30 ppm/6 hours/10 weeks-intermittent: Sense Organs and Special Senses (Olfaction): olfactory nerve change, effect, not otherwise specified
TCLo (Inhalation-Rat) 1200 mg/m^3/2 hours/5 days-intermittent: Brain and Coverings: other degenerative changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: true cholinesterase
TCLo (Inhalation-Rat) 100 ppm/8 hours/5 weeks-intermittent: Brain and Coverings: other degenerative changes; Lungs, Thorax, or Respiration: other changes; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: cytochrome oxidases (including oxidative phosphorylation)
TCLo (Inhalation-Rat) 80 ppm/6 hours/90 days-intermittent: Brain and Coverings: changes in brain weight; Nutritional and Gross Metabolic: weight loss or decreased weight gain
TCLo (Inhalation-Rat) 20 ppm: female 6-22 day(s) after conception lactating female 21 day(s) post-birth: Reproductive: Effects on Newborn: physical
TCLo (Inhalation-Mouse) 80 ppm/6 hours/90 days-intermittent: Nutritional and Gross Metabolic: weight loss or decreased weight gain; Related to Chronic Data: death
TCLo (Inhalation-Rabbit) 40 mg/m^3/5 hours/30 weeks-intermittent: Sense Organs and Special Senses (Eye): conjunctive irritation

SUSPECTED CANCER AGENT: The components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, and IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This gas mixture is irritating to the eyes, and may be irritating to the skin.

SENSITIZATION OF PRODUCT: The components of this gas mixture are not known to be skin or respiratory sensitizers.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this gas mixture on the human reproductive system.

Mutagenicity: The components of this gas mixture are not reported to cause mutagenic effects in humans.

REPRODUCTIVE TOXICITY INFORMATION (continued):

Embryotoxicity: This gas mixture contains components that may cause embryotoxic effects in humans; however, due to the small total amount of the components, embryotoxic effects are not expected to occur.

Teratogenicity: This gas mixture is not expected to cause teratogenic effects in humans due to the small cylinder size and small total amount of all components. The Carbon Monoxide component of this gas mixture which exists up to 1%, can cause teratogenic effects in humans. Severe exposure to Carbon Monoxide during pregnancy has caused adverse effects and the death of the fetus. In general, maternal symptoms are an indicator of the potential risk to the fetus since Carbon Monoxide is toxic to the mother before it is toxic to the fetus.

Reproductive Toxicity: The components of this gas mixture are not reported to cause adverse reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generation lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES (BEIs): Biological Exposure Indices (BEIs) have been determined for components of this gas mixture, as follows:

CHEMICAL DETERMINANT	SAMPLING TIME	BEI
CARBON MONOXIDE • Carboxyhemoglobin in blood • Carbon monoxide in end-exhaled air	 • End of shift • End of shift	 • 3.5% of hemoglobin • 20 ppm

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY: The gas will be dissipated rapidly in well-ventilated areas. The following environmental data are applicable to the components of this gas mixture.

CARBON MONOXIDE:

Atmospheric Fate: A photochemical model was used to quantify the sensitivity of the tropospheric oxidants ozone (O_3) and OH to changes in methane (CH_4), Carbon Monoxide (CO), and NO emissions and to perturbations in climate and stratospheric chemistry. In most cases, increased CH_4 and CO emissions will suppress OH (negative coefficients) in increased O_3 (positive coefficients) except in areas where NO and O_3 influenced by pollution are sufficient to increased OH. In most regions, NO, CO, and CH_4 emission increased will suppress OH and increased O_3, but these trends may be opposed by stratospheric O3 depletion and climate change.

HYDROGEN SULFIDE:

Water Solubility = 1 g/242 mL at 20°C.

Plant toxicity: Continuous fumigation of plants with 300 or 3000 ppb Hydrogen Sulfide caused leaf lesions, defoliation, and reduced growth with severity of injury correlated to dose. At higher (3.25 and 5.03 ppm) Hydrogen Sulfide, significant reductions in leaf CO2 and water vapor exchanges occurred, and stomatal openings were depressed. When Hydrogen Sulfide gas was applied to 29 species of green plants for 5 hours, young, rapidly elongating tissues were more sensitive to injury than older tissues. Symptoms included scorching of young shoots and

12. ECOLOGICAL INFORMATION(continued)

leaves, basal and marginal scorching of older leaves. Mature leaves were unaffected. Seeds exposed to Hydrogen Sulfide gas showed delay in germination.

Persistence: Converts to elemental sulfur upon standing in water.

Major Species Threatened: Aquatic and animal life plants may be injured if exposed to 5 ppm in air over 24 hours.

Biodegradation: Microorganisms in soil and water are involved in oxidation-reduction reactions that oxidize hydrogen sulfide to elemental sulfur. Members of the genera Beggiatoa, Thioploca, and Thiotrix function in transition zones between aerobic and anaerobic conditions where both molecular oxygen and hydrogen sulfide are found. Also, some photosynthetic bacteria oxidize hydrogen sulfide to elemental sulfur. Members of the families Chlorobiaceae and Chromatiaceae (purple sulfur bacteria) are obligate aerobes and are phototropic, and are found in waters with high H_2S concentrations. The interactions of these organisms form part of the global sulfur cycle.

Bioconcentration: Does not have bioaccumulation or food chain contamination potential.

NITROGEN: Water Solubility = 2.4 volumes Nitrogen/100 volumes water at 0°C; 1.6 volumes Nitrogen/100 volumes water at 20°C.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: No evidence is currently available on this gas mixture's effects on plant and animal life. Hydrogen Sulfide and Carbon Monoxide, components of this gas mixture, can be deadly to exposed animal life, producing symptoms similar to those experienced by humans. This gas mixture may also be harmful to plant life.

EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on this gas mixture's effects on aquatic life. The presence of more than a trace of the Carbon Monoxide component of this gas mixture is a hazard to fish. The following aquatic toxicity data are available for the Hydrogen Sulfide component of this gas mixture:

HYDROGEN SULFIDE:

LC_{50} (*Asellus* arthropods) 96 hours = 0.111 mg/L

LC_{50} (*Crangon* arthropods) 96 hours = 1.07 mg/L

LC_{50} (*Gammarus* arthropods) 96 hours = 0.84 mg/L

LC_{50} (Ephemera) 96 hours = 0.316 mg/L

LC_{50} (Inhalation-Flies) > 960 minutes = 380 mg/m^3

LC_{50} (Inhalation-Flies) 7 minutes = 1,500 mg/m^3

LC_{50},F (bluegill, eggs) 72 hours = 0.0190 mg/L

HYDROGEN SULFIDE (continued):

LC_{50},F (bluegill, 35-day-old fry) 96 hours = 0.0131 mg/L

LC_{50},F (bluegill, juveniles) 96 hours = 0.0478 mg/L

LC_{50},F (bluegill, adults) 96 hours = 0.0448 mg/L

LC_{50},F (fathead minnows) 96 hours = 0.0071-0.55 mg/L

LC_{50},F (bluegill) 96 hours = 0.0090-0.0140 mg/L

LC_{50},F (brook trout) 96 hours = 0.0216-0.0308 mg/L

Toxic (goldfish) = 100 mg/L

HYDROGEN SULFIDE (continued):

Lethal (goldfish) 96 hours = 10 mg/L

Toxic (carp) 24 hours = 3.3 mg/L

Toxic (goldfish) 24 hours = 4.3 mg/L

Toxic (sunfish) 1 hour = 4.9 to 5.3 mg/L

Toxic (goldfish) 200 hours = 5 mg/L

Toxic (minnows) 24 hours = 5-6 mg/L

Toxic (carp) 24 hours = 6-25 mg/L

Toxic (trout) 15 minutes = 10 mg/L

Toxic (goldfish) 24 hours = 25 mg/L

Toxic (tench) 3 hours = 100 mg/L

MATC,F (fathead minnows) 0.0037 mg/L

MATC,F (bluegill) 0.0004 mg/L

MATC,F (brook trout) 0.055 mg/L

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information, refer to Section 16 (Other Information).

14. TRANSPORTATION INFORMATION

THIS GAS MIXTURE IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Compressed gases, n.o.s. (*Oxygen, Nitrogen)*or the gas component with the next highest concentration next to Nitrogen.

HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)

UN IDENTIFICATION NUMBER: UN 1956

PACKING GROUP: Not Applicable

DOT LABEL(S) REQUIRED: Non-Flammable Gas

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 126

U.S. DEPARTMENT OF TRANSPORTATION INFORMATION (continued):

MARINE POLLUTANT: The components of this gas mixture are not classified by the DOT as Marine Pollutants (as defined by 49 CFR 172.101, Appendix B).

SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

Note: DOT 39 Cylinders ship in a strong outer carton (overpack). Pertinent shipping information goes on the outside of the overpack. DOT 39 Cylinders do not have transportation information on the cylinder itself.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This gas mixture is considered as Dangerous Goods, per regulations of Transport Canada.

PROPER SHIPPING NAME: Compressed gases, n.o.s. (*Oxygen, Nitrogen)*or the gas component with the next highest concentration next to Nitrogen.

HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)

UN IDENTIFICATION NUMBER: UN 1956

PACKING GROUP: Not Applicable

HAZARD LABEL: Class 2.2 (Non-Flammable Gas)

SPECIAL PROVISIONS: None

EXPLOSIVE LIMIT AND LIMITED QUANTITY INDEX: 0.12

ERAP INDEX: 3000

PASSENGER CARRYING SHIP INDEX: Forbidden

PASSENGER CARRYING ROAD VEHICLE OR PASSENGER CARRYING RAILWAY VEHICLE INDEX: Forbidden

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 126

NOTE: Shipment of compressed gas cylinders via Public Passenger Road Vehicle is a violation of Canadian law (Transport Canada Transportation of Dangerous Goods Act, 1992).

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: This gas mixture is subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Hydrogen Sulfide	YES	YES	YES

U.S. SARA THRESHOLD PLANNING QUANTITY: Hydrogen Sulfide = 500 lb (227 kg)

U.S. TSCA INVENTORY STATUS: The components of this gas mixture are listed on the TSCA Inventory.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Hydrogen Sulfide = 100 lb (45 kg)

OTHER U.S. FEDERAL REGULATIONS:

- Hydrogen Sulfide and Carbon Monoxide are subject to the reporting requirements of CFR 29 1910.1000.
- Hydrogen Sulfide and Methane are subject to the reporting requirements of Section 112(r) of the Clean Air Act. The Threshold Quantity for each of these gases is 10,000 pounds and so this mixture will not be affected by the regulation.
- Depending on specific operations involving the use of this gas mixture, the regulations of the Process Safety Management of Highly Hazardous Chemicals may be applicable (29 CFR 1910.119). Hydrogen Sulfide is listed in Appendix A of this regulation. The Threshold Quantity for Hydrogen Sulfide under this regulation is 1500 lbs (and so one cylinder of this gas mixture will not be affected by this regulation).
- This gas mixture does not contain any Class I or Class II ozone depleting chemicals (40 CFR part 82).
- Nitrogen and Oxygen are not listed Regulated Substances, per 40 CFR, Part 68, of the Risk Management for Chemical Releases. Hydrogen Sulfide is listed under this regulation in Table 1 as a Regulated Substance (Toxic Substance), in quantities of 10,000 lbs (4,553 kg) or greater.

15. REGULATORY INFORMATION(continued)

Carbon Monoxide and Methane are listed under this regulation in Table 3, as Regulated Substances (Flammable), in quantities of 10,000 lbs (4,553 kg) or greater, and so this mixture will not be affected by the regulation.

U.S. STATE REGULATORY INFORMATION: The components of this gas mixture are covered under the following specific State regulations:

Alaska - Designated Toxic and Hazardous Substances: Carbon Monoxide, Hydrogen Sulfide, Methane.

California - Permissible Exposure Limits for Chemical Contaminants: Carbon Monoxide, Nitrogen, Hydrogen Sulfide, Methane.

Florida - Substance List: Oxygen, Carbon Monoxide, Hydrogen Sulfide

Illinois - Toxic Substance List: Carbon Monoxide, Methane, Hydrogen Sulfide.

Kansas - Section 302/313 List: No.

Massachusetts - Substance List: Oxygen, Carbon Monoxide, Hydrogen Sulfide, Methane.

Michigan - Critical Materials Register: No.

Minnesota - List of Hazardous Substances: Carbon Monoxide, Hydrogen Sulfide, Methane.

Missouri - Employer Information/Toxic Substance List t: Hydrogen Sulfide, Methane.

New Jersey - Right to Know Hazardous Substance List: Oxygen, Carbon Monoxide, Nitrogen, Methane.

North Dakota - List of Hazardous Chemicals, Reportable Quantities: Hydrogen Sulfide.

Pennsylvania - Hazardous Substance List: Oxygen, Carbon Monoxide, Nitrogen, Hydrogen Sulfide, Methane.

Rhode Island - Hazardous Substance List: Oxygen, Carbon Monoxide, Nitrogen, Hydrogen Sulfide, Methane.

Texas - Hazardous Substance List: Hydrogen Sulfide.

West Virginia - Hazardous Substance List: Hydrogen Sulfide.

Wisconsin - Toxic and Hazardous Substances: Hydrogen Sulfide

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): The Carbon Monoxide component of this gas mixture is on the California Proposition 65 lists. WARNING! This gas mixture contains a compound known to the State of California to cause birth defects or other reproductive harm.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this gas mixture are listed on the DSL Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The components of this gas mixture are not on the CEPA Priorities Substances Lists.

CANADIAN WHMIS CLASSIFICATION: This gas mixture is categorized as a Controlled Product, Hazard Classes A and D2A, as per the Controlled Product Regulations.

16. OTHER INFORMATION

INFORMATION ABOUT DOT-39 NRC (Non-Refillable Cylinder) PRODUCTS

DOT 39 cylinders ship as hazardous materials when full. Once the cylinders are relieved of pressure (empty) they are not considered hazardous material or waste. Residual gas in this type of cylinder is not an issue because toxic gas mixtures are prohibited. Calibration gas mixtures typically packaged in these cylinders are Nonflammable n.o.s., UN 1956. A small percentage of calibration gases packaged in DOT 39 cylinders are flammable or oxidizing gas mixtures.

For disposal of used DOT-39 cylinders, it is acceptable to place them in a landfill if local laws permit. Their disposal is no different than that employed with other DOT containers such as spray paint cans, household aerosols, or disposable cylinders of propane (for camping, torch etc.). When feasible, we recommended recycling for scrap metal content. CALGAZ will do this for any customer that wishes to return cylinders to us prepaid. All that is required is a phone call to make arrangements so we may anticipate arrival. Scrapping cylinders involves some preparation before the metal dealer may accept them. We perform this operation as a service to valued customers who want to participate.

MIXTURES: When two or more gases or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

Further information about the handling of compressed gases can be found in the following pamphlets published by: Compressed Gas Association Inc. (CGA), 1725 Jefferson Davis Highway, Suite 1004, Arlington, VA 22202-4102. Telephone: (703) 412-0900.

P-1 *"Safe Handling of Compressed Gases in Containers"*

AV-1 *"Safe Handling and Storage of Compressed Gases"*

"Handbook of Compressed Gases"

PREPARED BY: CHEMICAL SAFETY ASSOCIATES, Inc.
PO Box 3519, La Mesa, CA 91944-3519
619/670-0609

Fax on Demand: 1-800/231-1366

AIR LIQUIDE™

This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of CALGAZ knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

SAFETY DATA SHEET

Helium

Section 1. Identification

GHS product identifier : Helium

Chemical name : Helium

Other means of identification : helium (dot); Helium-4; He; o-Helium; UN 1046

Product use : Synthetic/Analytical chemistry.

Synonym : helium (dot); Helium-4; He; o-Helium; UN 1046

SDS # : 001025

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

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Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : Helium

Other means of identification : helium (dot); Helium-4; He; o-Helium; UN 1046

CAS number/other identifiers

CAS number : 7440-59-7

Product code : 001025

Ingredient name	%	CAS number
Helium	100	7440-59-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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Section 4. First aid measures

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Helium	Oxygen Depletion [Asphyxiant]

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

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Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Compressed gas.]

Color : Colorless.

Molecular weight : 4 g/mole

Molecular formula : He

Boiling/condensation point : -268.9°C (-452°F)

Melting/freezing point : -272.2°C (-458°F)

Critical temperature : -267.9°C (-450.2°F)

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Flash point : [Product does not sustain combustion.]

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : 0.14 (Air = 1) Liquid Density@BP: 7.8 lb/ft3 (125 kg/m3)

Specific Volume (ft ^{3}/lb) : 96.1538

Gas Density (lb/ft ^{3}) : 0.0104

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : 0.28

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

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Section 9. Physical and chemical properties

SADT : Not available.

Viscosity : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

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Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Helium	0.28	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1046	UN1046	UN1046	UN1046	UN1046
UN proper shipping name	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED
Transport hazard class(es)	2.2 	2.2 	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg	**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75	-	-	**Passenger and Cargo Aircraft**Quantity limitation: 75 kg **Cargo Aircraft Only** Quantity limitation: 150 kg

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

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Section 14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Helium	100	No.	Yes.	No.	No.	No.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

Canada inventory : This material is listed or exempted.

International regulations

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Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory: Not determined.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

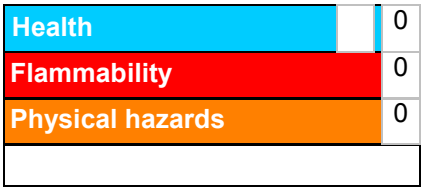
WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

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Version : 0.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations
CPR – Controlled Products Regulations
DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Powered by IHS

MATERIAL SAFETY DATA SHEET
HORIBA INSTRUMENTS, INC.
17671 Armstrong Avenue, Irvine, CA 92614
(949) 250-4811

REVISION DATE MAY 2003

SECTION I: MATERIAL IDENTIFICATION

IDENTITY: Potassium hydrogen phthalate
P/N 350623, 527033, 696138-1, 9003001600, 100-4

CHEMICAL FORMULA: $C_6H_4(COOK)(COOH)$ ~1% in water

GENERIC NAME: pH 4 Buffer Solution

CHEMICAL FAMILY: Salt solution

OTHER DESIGNATION: pH 4 Standard Solution, Autocal solution, 100-4

IN CASE OF EMERGENCY CONTACT YOUR REGIONAL PLANT MANAGER

SECTION II: HAZARDOUS INGREDIENTS

Irritant: Eyes, nose and throat, skin.

This product contains the following toxic chemical(s) subject to Section 313 Title III reporting requirements (40 CFR Part 372): NONE

SECTION III: PHYSICAL DATA

MELTING POINT (*): 295-300°C

SPECIFIC GRAVITY (H_2O = 1): 1.636

VAPOR PRESSURE: N/A

PERCENT, VOLATILE BY VOLUME (%): None

SOLUBILITY IN WATER v/v @°C: 1.2% (cool water) CAS #: 877-24-7

APPEARANCE AND ODOR: Colorless liquid

SECTION IV:PHYSICAL DATA

FLASH POINT AND METHOD: N/A

FLAMMABLE LIMITS: None

EXTINGUISHING MEDIA: Determine based on surrounding combustibles.

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V: REACTIVITY DATA

STABILITY: Stable at normal temperature

INCOMPATIBILITY (MATERIALS TO AVOID): None

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION: None

SECTION VI: HEALTH HAZARD DATA

EMERGENCY AND FIRST AID PROCEDURES:

Eyes:	Wash eyes with clean water flowing for 10-15 minutes. Call doctor immediately.
Skin:	Take off contaminated clothing and wash skin with water.
Inhaled:	Move the patient into clear air. Keep patient warm and stable. Loosen clothing and use artificial respiration if necessary. Call doctor immediately.
Swallowed:	Give patient plenty of warm water/milk. Induce vomiting. Call doctor immediately. If patient is unconscious, do not give water/milk, but call doctor immediately.

SECTION VII: SPILL OR LEAK PROCEDURES

Highway or railway spills call Chemtrec (800) 424-9300

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Collect as much material as possible. The place of leakage should be washed with plenty of water.

WASTE DISPOSAL METHOD:
Dispose as chemical waste.

SECTION VIII: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE):	Not normally required.
VENTILATION:	Not normally required.
OTHER PROTECTIVE EQUIPMENT:	Optional - eye mask, gloves and long-sleeve working clothes.

SECTION IX:SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
After working, wash hands thoroughly.

OTHER PRECAUTIONS: None.

For the following RAE Part Numbers:

600-0001-000, 600-0002-000

600-0002-001, 600-0026-000

600-0027-000, 600-0069-000

AIR LIQUIDE

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

1. PRODUCT IDENTIFICATION

CHEMICAL NAME; CLASS: NONFLAMMABLE GAS MIXTURE

Containing One or More of the Following Components in a Nitrogen Balance Gas: Oxygen 0-23.5%; Isobutylene, 0.0005-0.9%

SYNONYMS: Not Applicable
CHEMICAL FAMILY NAME: Not Applicable
FORMULA: Not Applicable
Document Number: 50054

Note: The Material Safety Data Sheet is for this gas mixture supplied in cylinders with 33 cubic feet (935 liters) or less gas capacity (DOT - 39 cylinders). This MSDS has been developed for various gas mixtures with the composition of components within the ranges listed in Section 2 (Composition and Information on Ingredients). Refer to the product label for information on the actual composition of the product.

PRODUCT USE:	Calibration of Monitoring and Research Equipment
SUPPLIER/MANUFACTURER'S NAME:	CALGAZ
ADDRESS:	821 Chesapeake Drive Cambridge, MD 21613
EMERGENCY PHONE:	CHEMTREC: 1-800-424-9300
BUSINESS PHONE:	1-410-228-6400
General MSDS Information:	1-713/868-0440
Fax on Demand:	1-800/231-1366

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSHA-PEL		NIOSH	OTHER
			TWA ppm	STEL ppm	TWA ppm	STEL ppm	IDLH ppm	ppm
Isobutylene	115-11-7	0.0005-0.9%	There are no specific exposure limits for Isobutylene.					
Oxygen	7782-44-7	0-23.5%	There are no specific exposure limits for Oxygen.					
Nitrogen	7727-37-9	Balance	There are no specific exposure limits for Nitrogen. Nitrogen is a simple asphyxiant (SA). Oxygen levels should be maintained above 19.5%.					

NE = Not Established. See Section 16 for Definitions of Terms Used.

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This gas mixture has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This is a colorless, odorless gas mixture. Releases of this gas mixture may produce oxygen-deficient atmospheres (especially in confined spaces or other poorly-ventilated environments); individuals in such atmospheres may be asphyxiated. Isobutylene, a component of this gas mixture, may cause drowsiness and other central nervous system effects in high concentrations; however, due to its low concentration in this gas mixture, this is unlikely to occur.

SYMPTOMS OF OVER-EXPOSURE BY ROUTE OF EXPOSURE: The most significant route of over-exposure for this gas mixture is by inhalation.

INHALATION: Due to the small size of an individual cylinder of this gas mixture, no unusual health effects from over-exposure to the product are anticipated under routine circumstances of use. The chief health hazard associated with this gas mixture is when this gas mixture contains less than 19.5% Oxygen and is released in a small, poorly-ventilated area (i.e. an enclosed or confined space). Under this circumstance, an oxygen-deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Under some circumstances of over-exposure, death may occur. The effects associated with various levels of oxygen are as follows:

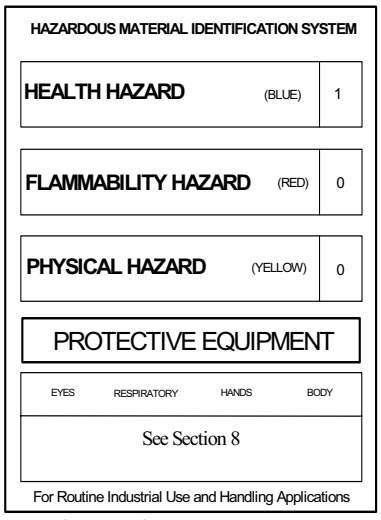
CONCENTRATION OF OXYGEN	OBSERVED EFFECT
12-16% Oxygen:	Breathing and pulse rate increase, muscular coordination slightly disturbed.
10-14% Oxygen:	Emotional upset, abnormal fatigue, disturbed respiration.
6-10% Oxygen:	Nausea, vomiting, collapse, or loss of consciousness.
Below 6%:	Convulsive movements, possible respiratory collapse, and death.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in Lay Terms. Over-exposure to this gas mixture may cause the following health effects:

ACUTE: Due to the small size of the individual cylinder of this gas mixture, no unusual health effects from exposure to the product are anticipated under routine circumstances of use. The most significant hazard associated with this gas mixture when it contains less than 19.5% oxygen is the potential for exposure to oxygen-deficient atmospheres. Symptoms of oxygen deficiency include respiratory difficulty, ringing in ears, headaches, shortness of breath, wheezing, headache, dizziness, indigestion, nausea, unconsciousness, and death. The skin of a victim of over-exposure may have a blue color. Additionally, Isobutylene, a component of this gas mixture, may cause drowsiness or central nervous system effects in high concentrations; however, due to its low concentration in this gas mixture, this is unlikely to occur.

CHRONIC: Chronic exposure to oxygen-deficient atmospheres (below 18% oxygen in air) may affect the heart and nervous system.

TARGET ORGANS: ACUTE: Respiratory system, eyes. CHRONIC: Heart, cardiovascular system, central nervous system.



4. FIRST-AID MEASURES

RESCUERS SHOULD NOT ATTEMPT TO RETRIEVE VICTIMS OF EXPOSURE TO THIS GAS MIXTURE WITHOUT ADEQUATE PERSONAL PROTECTIVE EQUIPMENT. At a minimum, Self-Contained Breathing Apparatus must be worn.

No unusual health effects are anticipated after exposure to this gas mixture, due to the small cylinder size. If any adverse symptom develops after over-exposure to this gas mixture, remove victim(s) to fresh air as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation if necessary. Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Acute or chronic respiratory conditions may be aggravated by over-exposure to this gas mixture.

RECOMMENDATIONS TO PHYSICIANS: Administer oxygen, if necessary; treat symptoms and eliminate exposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable.

AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

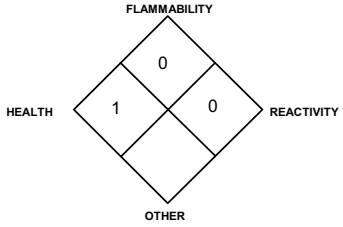
FIRE EXTINGUISHING MATERIALS: Non-flammable gas mixture. Use extinguishing media appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This gas mixture is not flammable; however, containers, when involved in fire, may rupture or burst in the heat of the fire.

Explosion Sensitivity to Mechanical Impact: Not sensitive.
Explosion Sensitivity to Static Discharge: Not sensitive.

SPECIAL FIRE-FIGHTING PROCEDURES: Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment.

NFPA RATING



6. ACCIDENTAL RELEASE MEASURES

LEAK RESPONSE: Due to the small size and content of the cylinder, an accidental release of this gas mixture presents significantly less risk of an oxygen deficient environment and other safety hazards than a similar release from a larger cylinder. However, as with any chemical release, extreme caution must be used during emergency response procedures. In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Such releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel.

Allow the gas mixture to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for oxygen. Oxygen levels must be above 19.5% before non-emergency personnel are allowed to re-enter area.

If leaking incidentally from the cylinder, contact your supplier.

7. HANDLING and USE

WORK PRACTICES AND HYGIENE PRACTICES: Be aware of any signs of dizziness or fatigue; exposures to fatal concentrations of this gas mixture could occur without any significant warning symptoms, due to oxygen deficiency. Do not attempt to repair, adjust, or in any other way modify the cylinders containing this gas mixture. If there is a malfunction or another type of operational problem, contact nearest distributor immediately.

STORAGE AND HANDLING PRACTICES: Cylinders should be firmly secured to prevent falling or being knocked-over. Cylinders must be protected from the environment, and preferably kept at room temperature (approximately 21°C [70°F]). Cylinders should be stored in dry, well-ventilated areas, away from sources of heat, ignition, and direct sunlight. Protect cylinders against physical damage. Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time. These cylinders are not refillable. **WARNING! Do not refill DOT 39 cylinders. To do so may cause personal injury or property damage.**

SPECIAL PRECAUTIONS FOR HANDLING GAS CYLINDERS: WARNING! Compressed gases can present significant safety hazards. During cylinder use, use equipment designed for these specific cylinders. Ensure all lines and equipment are rated for proper service pressure.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely. Always use product in areas where adequate ventilation is provided.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: No special ventilation systems or engineering controls are needed under normal circumstances of use. As with all chemicals, use this gas mixture in well-ventilated areas. If this gas mixture is used in a poorly-ventilated area, install automatic monitoring equipment to detect the levels of Nitrous Oxide and Oxygen.

RESPIRATORY PROTECTION: No special respiratory protection is required under normal circumstances of use. Maintain oxygen levels above 19.5% in the workplace. Use supplied air respiratory protection when oxygen levels are below 19.5%, or during emergency response to a release of this gas mixture. During an emergency situation, before entering the area, check the concentration of Methane and Oxygen. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the Canadian CSA Standard Z94.4-93 and applicable standards of Canadian Provinces. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

EYE PROTECTION: Safety glasses. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

HAND PROTECTION: Wear leather gloves when handling cylinders. Chemically resistant gloves should be worn when using this gas mixture. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

BODY PROTECTION: No special protection is needed under normal circumstances of use. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

The following information is for Nitrogen, a main component of this gas mixture.

GAS DENSITY @ 32°F (0°C) and 1 atm: 0.072 lbs/ ft^3 (1.153 kg/m^3)

BOILING POINT: -195.8°C (-320.4°F)
FREEZING/MELTING POINT @ 10 psig: -210°C (-345.8°F)
SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C): 0.906
pH: Not applicable.
SOLUBILITY IN WATER vol/vol @ 32°F (0°C) and 1 atm: 0.023
MOLECULAR WEIGHT: 28.01
EVAPORATION RATE (nBuAc = 1): Not applicable.
EXPANSION RATIO: Not applicable.
ODOR THRESHOLD: Not applicable.
SPECIFIC VOLUME (ft^3/lb): 13.8
VAPOR PRESSURE @ 70°F (21.1°C) psig: Not applicable.
COEFFICIENT WATER/OIL DISTRIBUTION: Not applicable.

The following information is for Oxygen, a main component of this gas mixture.

GAS DENSITY @ 32°F (0°C) and 1 atm: 0.083 lb/cu ft (1.326 kg/m^3)

FREEZING/MELTING POINT @ 10 psig: -218.8°C (-361.8°F)
BOILING POINT: -183.0°C (-297.4°F)
SPECIFIC GRAVITY (air = 1) @ 70°F (21.1°C): 1.105
pH: Not applicable.
SOLUBILITY IN WATER vol/vol at 32°F (0°C) and 1 atm: 0.04.91
MOLECULAR WEIGHT: 32.00
EVAPORATION RATE (nBuAc = 1): Not applicable.
EXPANSION RATIO: Not applicable.
ODOR THRESHOLD: Not applicable.
VOLUME (ft^3/lb): 12.1
VAPOR PRESSURE @ 70°F (21.1°C) psig: Not applicable.
COEFFICIENT WATER/OIL DISTRIBUTION: Not applicable.

The following information is for the gas mixture.

APPEARANCE AND COLOR: This is a colorless, odorless gas mixture.

HOW TO DETECT THIS SUBSTANCE (warning properties): There are no unusual warning properties associated with a release of this gas mixture. In terms of leak detection, fittings and joints can be painted with a soap solution to detect leaks, which will be indicated by a bubble formation.

10. STABILITY and REACTIVITY

STABILITY: Normally stable in gaseous state.
DECOMPOSITION PRODUCTS: The thermal decomposition products of Isobutylene include carbon oxides. The other components of this gas mixture do not decompose, per se, but can react with other compounds in the heat of a fire.
MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Titanium will burn in the Nitrogen component of this gas mixture. Lithium reacts slowly with Nitrogen at ambient temperatures. The Isobutylene component of this gas mixture is also incompatible with strong oxidizers (i.e. chlorine, bromine pentafluoride, oxygen difluoride, and nitrogen trifluoride).
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Contact with incompatible materials. Cylinders exposed to high temperatures or direct flame can rupture or burst.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The following toxicology data are available for the components of this gas mixture:
ISOBUTYLENE:
LC_{50} (inhalation, rat) = 620,000 mg/kg/4 hours
LC_{50} (inhalation, mouse) = 415,000 mg/kg
NITROGEN:
There are no specific toxicology data for Nitrogen. Nitrogen is a simple asphyxiant, which acts to displace oxygen in the environment.
SUSPECTED CANCER AGENT: The components of this gas mixture are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, and IARC; therefore, they are not considered to be, nor suspected to be, cancer-causing agents by these agencies.
IRRITANCY OF PRODUCT: Contact with rapidly expanding gases can be irritating to exposed skin and eyes.
SENSITIZATION TO THE PRODUCT: The components of this gas mixture are not known to cause human skin or respiratory sensitization.
REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this gas mixture and its components on the human reproductive system.
Mutagenicity: No mutagenicity effects have been described for the components in this gas mixture.
Embryotoxcity: No embryotoxic effects have been described for the components in this gas mixture.
Teratogenicity: No teratogenicity effects have been described for the components in this gas mixture.
Reproductive Toxicity: No reproductive toxicity effects have been described for the components in gas mixture.
A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generation lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.
BIOLOGICAL EXPOSURE INDICES (BEIs): Currently, Biological Exposure Indices (BEIs) are not applicable for the components of this gas mixture.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY: The components of this gas mixture occur naturally in the atmosphere. The gas will be dissipated rapidly in well-ventilated areas. The following environmental data are applicable to the components of this gas mixture.
OXYGEN: Water Solubility = 1 volume Oxygen/32 volumes water at 20°C. Log K_{ow} = -0.65
NITROGEN: Water Solubility = 2.4 volumes Nitrogen/100 volumes water at 0°C. 1.6 volumes Nitrogen/100 volumes water at 20°C.
EFFECT OF MATERIAL ON PLANTS or ANIMALS: No evidence is currently available on the effects of this gas mixture on plant and animal life.
EFFECT OF CHEMICAL ON AQUATIC LIFE: No evidence is currently available on the effects of this gas mixture on aquatic life.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information, refer to Section 16 (Other Information).

14. TRANSPORTATION INFORMATION

THIS GAS MIXTURE IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.
PROPER SHIPPING NAME: Compressed gases, n.o.s. (*Oxygen, Nitrogen)*or the gas component with the next highest concentration next to Nitrogen.
HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)
UN IDENTIFICATION NUMBER: UN 1956
PACKING GROUP: Not applicable.
DOT LABEL(S) REQUIRED: Class 2.2 (Non-Flammable Gas)
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 126
MARINE POLLUTANT: The components of this gas mixture are not classified by the DOT as Marine Pollutants (as defined by 49 CFR 172.101, Appendix B).
SPECIAL SHIPPING INFORMATION: Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.
Note: DOT 39 Cylinders ship in a strong outer carton (overpack). Pertinent shipping information goes on the outside of the overpack. DOT 39 Cylinders do not have transportation information on the cylinder itself.
TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This gas is considered as Dangerous Goods, per regulations of Transport Canada.
PROPER SHIPPING NAME: Compressed gases, n.o.s. (*Oxygen, Nitrogen)*or the gas component with the next highest concentration next to Nitrogen.
HAZARD CLASS NUMBER and DESCRIPTION: 2.2 (Non-Flammable Gas)
UN IDENTIFICATION NUMBER: UN 1956
PACKING GROUP: Not Applicable
HAZARD LABEL: Class 2.2 (Non-Flammable Gas)
SPECIAL PROVISIONS: None
EXPLOSIVE LIMIT AND LIMITED QUANTITY INDEX: 0.12
ERAP INDEX: None
PASSENGER CARRYING SHIP INDEX: None
PASSENGER CARRYING ROAD VEHICLE OR PASSENGER CARRYING RAILWAY VEHICLE INDEX: 75
NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): 126
NOTE: Shipment of compressed gas cylinders via Public Passenger Road Vehicle is a violation of Canadian law (Transport Canada Transportation of Dangerous Goods Act, 1992).

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:
U.S. SARA REPORTING REQUIREMENTS: The components of this gas mixture are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.
U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for this gas mixture. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.
U.S. TSCA INVENTORY STATUS: The components of this gas mixture are listed on the TSCA Inventory.
U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.
OTHER U.S. FEDERAL REGULATIONS:
- No component of this gas mixture is subject to the requirements of CFR 29 1910.1000 (under the 1989 PELs).
- Isobutylene is subject to the reporting requirements of Section 112(r) of the Clean Air Act. The Threshold Quantity for this gas is 10,000 pounds.
- The regulations of the Process Safety Management of Highly Hazardous Chemicals are not applicable (29 CFR 1910.119).
- This gas mixture does not contain any Class I or Class II ozone depleting chemicals (40 CFR Part 82).

15. REGULATORY INFORMATION (continued)

- Nitrogen and Oxygen are not listed as Regulated Substances, per 40 CFR, Part 68, of the Risk Management for Chemical Releases. Isobutylene is listed under this regulation in Table 3 as Regulated Substances (Flammable Substances), in quantities of 10,000 lbs (4,554 kg) or greater.

U.S. STATE REGULATORY INFORMATION: The components of this gas mixture are covered under the following specific State regulations:

Alaska - Designated Toxic and Hazardous Substances: No.
California - Permissible Exposure Limits for Chemical Contaminants: Nitrogen.
Florida - Substance List: Oxygen, Isobutylene.
Illinois - Toxic Substance List: No.
Kansas - Section 302/313 List: No.
Massachusetts - Substance List: Oxygen, Isobutylene.
Michigan - Critical Materials Register: No.
Minnesota - List of Hazardous Substances: No.
Missouri - Employer Information/Toxic Substance List: No.
New Jersey - Right to Know Hazardous Substance List: Oxygen, Nitrogen, Isobutylene.
North Dakota - List of Hazardous Chemicals, Reportable Quantities: No.
Pennsylvania - Hazardous Substance List: Oxygen, Nitrogen, Isobutylene.
Rhode Island - Hazardous Substance List: Oxygen, Nitrogen.
Texas - Hazardous Substance List: No.
West Virginia - Hazardous Substance List: No.
Wisconsin - Toxic and Hazardous Substances: : No.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this gas mixture is on the California Proposition 65 lists.

ADDITIONAL CANADIAN REGULATIONS:
CANADIAN DSL/NDSL INVENTORY STATUS: The components of this gas mixture are listed on the DSL Inventory.
CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The components of this gas mixture are not on the CEPA Priorities Substances Lists.
CANADIAN WHMIS REGULATIONS: This gas mixture is categorized as a Controlled Product, Hazard Class A, as per the Controlled Product Regulations.

16. OTHER INFORMATION

INFORMATION ABOUT DOT-39 NRC (Non-Refillable Cylinder) PRODUCTS

DOT 39 cylinders ship as hazardous materials when full. Once the cylinders are relieved of pressure (empty) they are not considered hazardous material or waste. Residual gas in this type of cylinder is not an issue because toxic gas mixtures are prohibited. Calibration gas mixtures typically packaged in these cylinders are Nonflammable n.o.s., UN 1956. A small percentage of calibration gases packaged in DOT 39 cylinders are flammable or oxidizing gas mixtures.

For disposal of used DOT-39 cylinders, it is acceptable to place them in a landfill if local laws permit. Their disposal is no different than that employed with other DOT containers such as spray paint cans, household aerosols, or disposable cylinders of propane (for camping, torch etc.). When feasible, we recommended recycling for scrap metal content. CALGAZ will do this for any customer that wishes to return cylinders to us prepaid. All that is required is a phone call to make arrangements so we may anticipate arrival. Scrapping cylinders involves some preparation before the metal dealer may accept them. We perform this operation as a service to valued customers who want to participate.

MIXTURES: When two or more gases or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

Further information about the handling of compressed gases can be found in the following pamphlets published by: Compressed Gas Association Inc. (CGA), 1725 Jefferson Davis Highway, Suite 1004, Arlington, VA 22202-4102. Telephone: (703) 412-0900.

P-1 *"Safe Handling of Compressed Gases in Containers"*
AV-1 *"Safe Handling and Storage of Compressed Gases"*
"Handbook of Compressed Gases"

PREPARED BY:
CHEMICAL SAFETY ASSOCIATES, Inc.
PO Box 3519, La Mesa, CA 91944-3519
619/670-0609
Fax on Demand: 1-800/231-1366

AIR LIQUIDE

This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of CALGAZ knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

SAFETY DATA SHEET

Creation Date 08-Nov-2010 **Revision Date** 18-Jun-2015 **Revision Number** 2

1. Identification

Product Name **Fluoranthene**

Cat No. : **AC119170000; AC119170250; AC119171000; AC119175000**

Synonyms Benzo[j,k]fluorene

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 4

Label Elements

Signal Word
Warning

Hazard Statements
Harmful if swallowed



Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

Component	CAS-No	Weight %
Fluoranthene	206-44-0	>95

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion Do not induce vomiting. Get medical attention.

Most important symptoms/effects No information available.

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Water spray. Carbon dioxide (CO_2). Dry chemical. alcohol-resistant foam.

Unsuitable Extinguishing Media No information available

Flash Point 100 °C / 212 °F

Method - No information available

Autoignition Temperature No information available

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO_2)

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
2	0	0	N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment.

Environmental Precautions See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal.

7. Handling and storage

Handling Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin and eyes. Do not breathe dust. Do not breathe vapors or spray mist. Avoid dust formation.

Storage Keep in a dry, cool and well-ventilated place. Keep container tightly closed.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Powder Solid
Appearance	Light green
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	109 - 111 °C / 228.2 - 231.8 °F
Boiling Point/Range	384 - 34 °C / 723.2 - 93.2 °F
Flash Point	100 °C / 212 °F
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Relative Density	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C16 H10
Molecular Weight	202.25

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Fluoranthene	2 g/kg (Rat)	3180 mg/kg (Rabbit)	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Fluoranthene	206-44-0	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Fluoranthene	Not listed	Oncorhynchus mykiss: LC50=0.0077 mg/L 96h	Not listed	EC50: 0.78 mg/L 20h

Persistence and Degradability No information available
Bioaccumulation/ Accumulation No information available.

Mobility .

Component	log Pow
Fluoranthene	5.33

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Fluoranthene - 206-44-0	U120	-

14. Transport information

DOT
- **UN-No** UN3077
- **Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID, N.O.S.
- **Proper technical name** (Fluoranthene)
- **Hazard Class** 9
- **Packing Group** III

TDG
- **UN-No** UN3077
- **Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID, N.O.S.
- **Hazard Class** 9
- **Packing Group** III

IATA
- **UN-No** UN3077
- **Proper Shipping Name** Environmentally hazardous substance, solid, n.o.s
- **Hazard Class** 9
- **Packing Group** III

IMDG/IMO
- **UN-No** UN3077
- **Proper Shipping Name** Environmentally hazardous substance, solid, n.o.s
- **Hazard Class** 9
- **Packing Group** III

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Fluoranthene	X	-	X	205-912-4	-		-	X	X	X	-

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Fluoranthene	206-44-0	>95	1.0 0.1

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Fluoranthene	-	-	X	X

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Fluoranthene	100 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Fluoranthene	X	X	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D1B Toxic materials



16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 08-Nov-2010
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Print Date 18-Jun-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS

Safety Data Sheet

Material Name: Fuel Oil No. 2

SDS No. 0088
EU/CLP GHS

Synonyms: #2 Heating Oil; 2 Oil; Off-road Diesel Fuel

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquids - Category 3
Acute Toxicity, Inhalation - Category 4
Skin Corrosion/Irritation – Category 2
Eye Damage/Irritation – Category 2
Carcinogenicity - Category 2
Specific Target Organ Toxicity (Single Exposure) – Category 3 (respiratory irritation, narcosis)
Aspiration Hazard – Category 1
Hazardous to the Aquatic Environment, Acute Hazard – Category 3

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

DANGER

Hazard Statements

Flammable liquid and vapor.
Harmful if inhaled.
Causes skin irritation.
Causes eye irritation.
Suspected of causing cancer.
Suspected of causing genetic defects.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing fume/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid release to the environment.

Response

In case of fire: Use water spray, fog or foam.
If on skin (or hair): Wash with plenty of soap and water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If exposed or concerned: Get medical advice/attention.
If swallowed: Immediately all a poison center or doctor/physician if you feel unwell. Do NOT induce vomiting.

Storage

Store in a well ventilated place.
Keep cool. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
68476-30-2	Fuel oil No. 2	100
91-20-3	Naphthalene	<0.1

A complex combination of hydrocarbons with carbon numbers in the range C9 and higher produced from the distillation of petroleum crude oil.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when this product is loaded into tanks previously containing low flash point products (such as gasoline) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep containers closed and clearly labeled. Use approved vented storage containers. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Keep away from strong oxidizers; Fluorel ®

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Fuel oil No. 2 (270-671-4)

ACGIH: 100 mg/m3 TWA (inhalable fraction and vapor, as total hydrocarbons, listed under Diesel fuel)
Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Diesel fuel)

Belgium: 100 mg/m3 TWA (as total hydrocarbon, aerosol and vapor)
Skin (listed under Gas oil)

Portugal: 100 mg/m3 TWA [VLE-MP] (aerosol and vapor, as total Hydrocarbons, listed under Fuel diesel)

Naphthalene (202-049-5)

ACGIH: 15 ppm STEL
10 ppm TWA
Skin - potential significant contribution to overall exposure by the cutaneous route

Austria: 10 ppm TWA [TMW]; 50 mg/m3 TWA [TMW]
skin notation

Belgium: 15 ppm STEL; 80 mg/m3 STEL
10 ppm TWA; 53 mg/m3 TWA
Skin

Denmark: 10 ppm TWA; 50 mg/m3 TWA

Finland: 2 ppm STEL; 10 mg/m3 STEL
1 ppm TWA; 5 mg/m3 TWA

France: 10 ppm TWA [VME]; 50 mg/m3 TWA [VME]

Germany: 0.1 ppm TWA AGW (The risk of damage to the embryo or fetus can be excluded when MAK and BAT values are observed, inhalable fraction, exposure factor 1); 0.5 mg/m3 TWA AGW (The risk of damage to the embryo or fetus can be excluded when MAK and BAT values are observed, inhalable fraction, exposure factor 1)

Greece: 10 ppm TWA; 50 mg/m3 TWA

Ireland: 15 ppm STEL; 75 mg/m3 STEL
10 ppm TWA; 50 mg/m3 TWA

Netherlands: 80 mg/m3 STEL
50 mg/m3 TWA

Portugal: 10 ppm TWA [VLE-MP]

Spain: 15 ppm STEL [VLA-EC]; 80 mg/m3 STEL [VLA-EC]
10 ppm TWA [VLA-ED]; 53 mg/m3 TWA [VLA-ED]
skin - potential for cutaneous exposure

Sweden: 10 ppm LLV; 50 mg/m3 LLV
15 ppm STV; 80 mg/m3 STV

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Red or reddish/orange colored (dyed)	**Odor:**	Mild, petroleum distillate odor
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	0.009 psia @ 70 °F (21 °C)	**Vapor Density:**	>1.0
Boiling Point:	340 to 700 °F (171 to 371 °C)	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	AP 0.823-0871
Evaporation Rate:	Slow; varies with conditions	**VOC:**	ND
Octanol/H2O Coeff.:	ND	**Flash Point:**	100 °F (38 °C) minimum
Flash Point Method:	PMCC	**Upper Flammability Limit (UFL):**	7.5
Lower Flammability Limit (LFL):	0.6	**Burning Rate:**	ND
Auto Ignition:	494°F (257°C)		

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers; Fluorel ®

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Fuel oil No. 2 (68476-30-2)

Oral LD50 Rat 12 g/kg; Dermal LD50 Rabbit 4720 µL/kg; Dermal LD50 Rabbit >2000 mg/kg; Inhalation LC50 Rat 4.6 mg/L 4 h

Naphthalene (91-20-3)

Inhalation LC50 Rat >340 mg/m3 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Product Mixture

Oral LD50 Rat 14.5 ml/kg; Dermal LD50 Rabbit >5 mL/kg; Guinea Pig Sensitization: negative; Primary dermal irritation: moderately irritating (Draize mean irritation score - 3.98 rabbits); Draize eye irritation: mildly irritating (Draize score, 48 hours, unwashed - 2.0 rabbits)

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause mild irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects. Material of similar composition has been positive in a mutagenicity study.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

Dermal carcinogenicity: positive - mice

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

This product is similar to Diesel Fuel. IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A) and NIOSH regards it as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

B: Component Carcinogenicity

Fuel oil No. 2 (68476-30-2)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Very toxic to aquatic life with long lasting effects. Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Fuel oil No. 2 (68476-30-2)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	35 mg/L [flow-through]	

Naphthalene (91-20-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]	

96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]
96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability
No information available.

Bioaccumulation
No information available.

Mobility in Soil
No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions
See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging
Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

IATA Information
Shipping Name: Heating oil, light
UN #: 1202 **Hazard Class:** 3 **Packing Group:** III

ICAO Information
Shipping Name: Heating oil, light
UN #: 1202 **Hazard Class:** 3 **Packing Group:** III

IMDG Information
Shipping Name: Heating oil, light
UN #: 1202 **Hazard Class:** 3 **Packing Group:** III

* * * Section 15 - Regulatory Information * * *

Regulatory Information

Component Analysis – Inventory

Component/CAS	EC #	EEC	CAN	TSCA
Fuel oil No. 2 68476-30-2	270-671-4	EINECS	DSL	Yes
Naphthalene 91-20-3	202-049-5	EINECS	DSL	Yes

* * * Section 16 - Other Information * * *

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

SAFETY DATA SHEET

SDS ID NO.: 0127MAR019
Revision Date: 06/01/2016

1. IDENTIFICATION

Product Name: Marathon Petroleum Gasoline - All Grades

Synonym: Gasoline; Regular Unleaded Gasoline; Conventional Regular Unleaded Gasoline; Mid Grade Unleaded Gasoline; Conventional Mid Grade Unleaded Gasoline; Premium Unleaded Gasoline; Conventional Premium Unleaded Gasoline; Sub-Octane Gasoline; Regular RBOB; Super RBOB; Premium RBOB; RBOB; Reformulated Blend Stock For Oxygenated Blending; 84 Octane Gasoline; CBOB; Premium CBOB; Conventional Blend Stock for Oxygenate Blending; Recreational Gasoline; Recreational Gasoline; Recreational Unleaded Gasoline; 89 Recreational Gasoline; Brand 89 Recreational Gasoline; 7.0 Max RVP 89 Recreational Gasoline; BR 7.0 Max RVP 89 Recreational Gasoline; 90 Recreational Gasoline; 90 Marina Gasoline; Brand 91 Recreational Gasoline; 91 Recreational Gasoline; 91 Marina Gasoline; 90 Octane Midgrade Gasoline with No Ethanol; 0125MAR019; 0126MAR019; 0134MAR019; 0313MAR019; 0314MAR019

Chemical Family: Complex Hydrocarbon Substance

Recommended Use: Fuel.
Restrictions on Use: All others.

Manufacturer, Importer, or Responsible Party Name and Address:

MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information: 1-419-421-3070

Emergency Telephone: 1-877-627-5463

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 1
Skin corrosion/irritation	Category 2
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Aspiration toxicity	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

Hazards Not Otherwise Classified (HNOC)

Static accumulating flammable liquid

Label elements

EMERGENCY OVERVIEW

Danger

EXTREMELY FLAMMABLE LIQUID AND VAPOR
May accumulate electrostatic charge and ignite or explode
May be fatal if swallowed and enters airways
Causes skin irritation
May cause respiratory irritation
May cause drowsiness or dizziness
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
Toxic to aquatic life with long lasting effects



Appearance Clear yellow liquid **Physical State** Liquid **Odor** Hydrocarbon

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Use only non-sparking tools.
Take precautionary measures against static discharge
Avoid breathing mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear protective gloves/protective clothing/eye protection/face protection
Wash hands and any possibly exposed skin thoroughly after handling
Avoid release to the environment

Precautionary Statements - Response
IF exposed or concerned: Get medical attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
If skin irritation occurs: Get medical attention
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor if you feel unwell
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting
In case of fire: Use water spray, fog or regular foam for extinction
Collect spillage

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Keep cool
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Gasoline is a complex combination of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons having molecular chains ranging in length from four to ten carbons. May contain small amounts of dye and other additives (>0.02%) which are not considered hazardous at the concentrations used.

Composition Information:

Name	CAS Number	% Concentration
Gasoline	86290-81-5	100
Heptane (mixed isomers)	142-82-5	2.5-26
Pentane (mixed isomers)	78-78-4	6.5-19
Butane (mixed isomers)	106-97-8	0.5-14
Hexane Isomers (other than n-Hexane)	107-83-5	2-12
Toluene	108-88-3	3-9.5
Xylene (mixed isomers)	1330-20-7	3.5-9.5
n-Hexane	110-54-3	0.1-4.5
Cumene	98-82-8	0-4
1,2,4 Trimethylbenzene	95-63-6	1-4
Ethylbenzene	100-41-4	0.5-2.5
Benzene	71-43-2	0.1-1.5
Cyclohexane	110-82-7	0-1.5
Octane	111-65-9	0-1.5
1,2,3-trimethylbenzene	526-73-8	0-1
Naphthalene	91-20-3	0.1-0.5

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First Aid Measures

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation: Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. If symptoms occur get medical attention.

Skin Contact: Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. May be absorbed through the skin in harmful amounts. Get medical attention if irritation persists. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties. Destroy contaminated, non-chemical resistant footwear.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

Ingestion: Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Indication of any immediate medical attention and special treatment needed

Notes To Physician: INHALATION: This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES.

INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media
Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical
This product has been determined to be an extremely flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 128.

Hazardous combustion products
Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data
Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge Yes.

Special protective equipment and precautions for firefighters
Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.

Additional firefighting tactics
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after the fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles: if this is impossible, withdraw from area and let fire burn.

EVACUATION: Consider initial downwind evacuation for at least 1000 feet. If tank, rail car or tank truck is involved in a fire, ISOLATE for 5280 feet (1 mile) in all directions; also, consider initial evacuation of 5280 feet (1 mile) in all directions.

NFPA	Health 1	Flammability 3	Instability 0	Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.
Protective equipment:	Use personal protection measures as recommended in Section 8.
Emergency procedures:	Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
Environmental precautions:	Avoid release to the environment. Avoid subsoil penetration. Ethanol in gasoline phase seperates in contact with water. Monitor downstream for dissolved ethanol or other appropriate indicators.
Methods and materials for containment:	Contain liquid with sand or soil. Prevent spilled material from entering storm drains, sewers, and open waterways.
Methods and materials for cleaning up:	Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools.

7. HANDLING AND STORAGE

Safe Handling Precautions:

NEVER SIPHON THIS PRODUCT BY MOUTH. Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Vapors may travel along the ground or be moved by ventilation. Flashback may occur along vapor trails. No smoking. Use only non-sparking tools. Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapors. Use only with adequate ventilation. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition of vapors or mists without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

Portable containers should never be filled while in or on a motor vehicle or marine craft. Containers should be placed on the ground. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers.

A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling.

Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES (See First Aid Section 4).

Storage Conditions:

Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Do not store near an open flame, heat or other sources of ignition.

Incompatible Materials

Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELS:	OSHA - Vacated PELs	NIOSH IDLH
Gasoline 86290-81-5	300 ppm TWA 500 ppm STEL	-	300 ppm TWA 900 mg/m^3 TWA 500 ppm STEL 1500 mg/m^3 STEL	-

Heptane (mixed isomers) 142-82-5	400 ppm TWA 500 ppm STEL	TWA: 500 ppm TWA: 2000 mg/m³	400 ppm TWA 1600 mg/m³ TWA 500 ppm STEL 2000 mg/m³ STEL	750 ppm
Pentane (mixed isomers) 78-78-4	1000 ppm TWA	-	-	-
Butane (mixed isomers) 106-97-8	1000 ppm STEL	-	800 ppm TWA 1900 mg/m³ TWA	-
Hexane Isomers (other than n-Hexane) 107-83-5	500 ppm TWA 1000 ppm STEL	-	500 ppm TWA 1800 mg/m³ TWA 1000 ppm STEL 3600 mg/m³ STEL	-
Toluene 108-88-3	20 ppm TWA	TWA: 200 ppm Ceiling: 300 ppm	100 ppm TWA 375 mg/m³ TWA 150 ppm STEL 560 mg/m³ STEL	500 ppm
Xylene (mixed isomers) 1330-20-7	100 ppm TWA 150 ppm STEL	TWA: 100 ppm TWA: 435 mg/m³	100 ppm TWA 435 mg/m³ TWA 150 ppm STEL 655 mg/m³ STEL	900 ppm
n-Hexane 110-54-3	50 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 500 ppm TWA: 1800 mg/m³	50 ppm TWA 180 mg/m³ TWA	1100 ppm
Cumene 98-82-8	50 ppm TWA	TWA: 50 ppm TWA: 245 mg/m³ Skin	50 ppm TWA 245 mg/m³ TWA Limit applies to skin	900 ppm
1,2,4 Trimethylbenzene 95-63-6	25 ppm TWA	-	25 ppm TWA 125 mg/m³ TWA	-
Ethylbenzene 100-41-4	20 ppm TWA	TWA: 100 ppm TWA: 435 mg/m³	100 ppm TWA 435 mg/m³ TWA 125 ppm STEL 545 mg/m³ STEL	800 ppm
Benzene 71-43-2	0.5 ppm TWA 2.5 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm (applies to industry segments exempt from the benzene standard) TWA: 1 ppm STEL: 5 ppm (see 29 CFR 1910.1028)	25 ppm Ceiling 1 ppm TWA 5 ppm STEL	500 ppm
Cyclohexane 110-82-7	100 ppm TWA	TWA: 300 ppm TWA: 1050 mg/m³	300 ppm TWA 1050 mg/m³ TWA	1300 ppm
Octane 111-65-9	300 ppm TWA	TWA: 500 ppm TWA: 2350 mg/m³	300 ppm TWA 1450 mg/m³ TWA 375 ppm STEL 1800 mg/m³ STEL	1000 ppm
1,2,3-trimethylbenzene 526-73-8	25 ppm TWA	-	25 ppm TWA 125 mg/m³ TWA	-
Naphthalene 91-20-3	10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route	TWA: 10 ppm TWA: 50 mg/m³	10 ppm TWA 50 mg/m³ TWA 15 ppm STEL 75 mg/m³ STEL	250 ppm

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Use nitrile rubber, Viton® or PVA gloves for repeated or prolonged skin exposure. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection: Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear yellow liquid
Color	Yellow
Odor	Hydrocarbon
Odor Threshold	No data available.

Property	**Values (Method)**
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	24-210 °C / 75-410 °F (ASTM D86)
Flash Point	-43 °C / -45 °F
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	7.6
Lower Flammability Limit:	1.4
Explosion limits:	No data available.
Vapor Pressure	5.5-15 psi (ASTM D4814)
Vapor Density	3-4
Specific Gravity / Relative Density	0.70-0.76
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	2.13-4.5
Decomposition temperature	No data available.
pH:	Not applicable
Autoignition Temperature	280 °C / 536 °F
Kinematic Viscosity	No data available.
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	100%
Density	No data available.
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

Reactivity The product is non-reactive under normal conditions.

Chemical stability The material is stable at 70°F, 760 mmHg pressure.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid Excessive heat, sources of ignition, open flame.

Incompatible Materials Strong oxidizing agents.

Hazardous decomposition products None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation May cause irritation of respiratory tract. May cause drowsiness or dizziness. Breathing high concentrations of this material in a confined space or by intentional abuse can cause irregular heartbeats which can cause death.

Eye contact Exposure to vapor or contact with liquid may cause mild eye irritation, including tearing, stinging, and redness.

Skin contact Causes skin irritation. Effects may become more serious with repeated or prolonged contact. May be absorbed through the skin in harmful amounts.

Ingestion May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Gasoline 86290-81-5	14000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
Heptane (mixed isomers) 142-82-5	-	3000 mg/kg (Rabbit)	103 g/m³ (Rat) 4 h
Pentane (mixed isomers) 78-78-4	-	-	450 mg/L (Mouse) 2 h
Butane (mixed isomers) 106-97-8	-	-	658 mg/L (Rat) 4 h
Hexane Isomers (other than n-Hexane) 107-83-5	> 5000 mg/kg (Rat)	-	-
Toluene 108-88-3	> 2000 mg/kg (Rat)	8390 mg/kg (Rabbit)	12.5 mg/L (Rat) 4 h
Xylene (mixed isomers) 1330-20-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.04 mg/L (Rat) 4 h
n-Hexane 110-54-3	15000 mg/kg (Rat)	3000 mg/kg (Rabbit)	48000 ppm (Rat) 4 h
Cumene 98-82-8	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 20 mg/L (Rat) 6 h
1,2,4 Trimethylbenzene 95-63-6	3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	18,000 mg/m³ (Rat) 4 h
Ethylbenzene 100-41-4	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	17.2 mg/L (Rat) 4 h
Benzene 71-43-2	> 2000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 20 mg/l (Rat) 4 h
Cyclohexane 110-82-7	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	13.9 mg/L (Rat) 4 h
Octane 111-65-9	-	-	118 g/m³ (Rat) 4 h
1,2,3-trimethylbenzene 526-73-8	-	-	-
Naphthalene 91-20-3	490 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 340 mg/m³ (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

NAPHTHAS: In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30-year latency period. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffer's Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

C9 AROMATIC HYDROCARBONS: A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm.

PENTANES: Studies of pentane isomers in laboratory animals indicate exposure to extremely high levels (roughly 10 vol.%) may induce cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

BUTANES: Studies in laboratory animals indicate exposure to extremely high levels of butanes (1-10 or higher vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

TOLUENE: Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Abuse of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system, and can cause CNS depression, cardiac arrhythmias, and death. Studies of workers indicate longterm exposure may be related to impaired color vision and hearing. Some studies of workers suggest longterm exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest longterm exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals have been largely negative. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposure may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Adverse effects on the liver, kidney, thymus and nervous system were observed in animal studies following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

XYLENES, ALL ISOMERS: Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, nervous system damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross overexposure. Effects from Prolonged or Repeated Exposure: Impaired neurological function was reported

in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure with evidence of maternal toxicity. The relevance of these observations to humans is not clear at this time. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

1,2,4-TRIMETHYLBENZENE: The following information pertains to a mixture of C9 aromatic hydrocarbons, over 40% of which was composed of 1,2,4-trimethylbenzene. A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm. Embryotoxicity has been reported in studies of laboratory animals. Adverse effects included increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate.<n><n>

N-HEXANE: Long-term or repeated exposure to n-hexane can cause peripheral nerve damage. Initial symptoms are numbness of the fingers and toes. Also, motor weakness can occur in the digits, but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. Testicular atrophy and partial to full loss of the germ cell line were observed in sub-chronic high-dose inhalation studies of laboratory rodents. These effects appeared irreversible. Rodent reproduction studies have shown evidence of reduced fetal weight but no frank malformations.

CUMENE: Overexposure to cumene may cause upper respiratory tract irritation and CNS depression. Studies in laboratory animals indicate evidence of respiratory tract hyperplasia, and adverse effects on the liver, kidney and adrenal glands following high level exposure. The relevance of these findings to humans is not clear at this time. Findings from lifetime laboratory rodent inhalation studies were as follows: In F344/N rats: an increased incidence of renal carcinomas and adenomas, respiratory epithelial adenomas, and interstitial cell adenomas of the testes. In B6C3F1 mice: an increased incidence of carcinomas and adenomas of the bronchi and lung, liver neoplasms, hemangiosarcomas of the spleen, and adenomas of the thyroid.

ETHYLBENZENE: Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). The incidence of tumors was also elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure with evidence of maternal toxicity. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals have demonstrated evidence of ototoxicity (hearing loss) following exposure levels as low as 300 ppm for 5 days. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

BENZENE: Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer and other diseases of the blood forming organs including Acute

Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a case control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC. The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

CARBON MONOXIDE: is a chemical asphyxiant with no warning properties (such as odor). At 400-500 ppm for 1 hour headache and dyspnea may occur. If activity is increased, symptoms of overexposure may include nausea, irritability, increased respiration, tinnitus, sweating, chest pain, confusion, impaired judgement, dizziness, weakness, drowsiness, ataxia, irregular heart beat, cyanosis and pallor. Levels in excess of 1000 ppm can result in collapse, loss of conciousness, respiratory failure and death. Extremely high concentrations (12,800 ppm) can cause immediate unconsciousness and death in 1-3 minutes. Repeated anoxia can lead to central nervous system damage and peripheral neuropathy, with loss of sensation in the fingers, amnesia, and mental deterioration and possible congestive heart failure. Damage may also occur to the fetus, lung, liver, kidney, spleen, cardiovascular system and other organs.

WHOLLY-VAPORIZED UNLEADED GASOLINE: Lifetime exposure to wholly vaporized unleaded gasoline produced an increased incidence of liver tumors in female mice exposed to the highest exposure concentration (2056 ppm) and α-2 urinary globulin-mediated kidney tumors in male rats. No exposure-related tumors were observed in male mice or female rats. The male-specific rat kidney tumors are not considered relevant to human health. Mice receiving lifetime repeated skin application of various petroleum naphthas exhibited an irritation-dependent increased incidence of skin tumors. Additional studies suggest that these tumors occur through a mechanism that may not be relevant to human health. Epidemiological data from over 18,000 petroleum marketing and distribution workers

showed no increased risk of leukemia, multiple myeloma, or kidney cancer resulting from gasoline exposure. Unleaded gasoline has been identified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

COMBUSTION ENGINE EXHAUST: Chronic inhalation studies of gasoline engine exhaust in mice, rats and hamsters did not produce any carcinogenic effects. Condensates/extracts of gasoline engine exhaust produced an increase in tumors compared to controls when testing by skin painting, subcutaneous injection, intratracheal instillation or implantation into the lungs. Gasoline exhaust has been classified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and Symptoms Irritating to the skin and mucous membranes. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects May cause genetic defects.

Carcinogenicity May cause cancer.

Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Gasoline 86290-81-5	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Heptane (mixed isomers) 142-82-5	Not Listed	Not Listed	Not Listed	Not Listed
Pentane (mixed isomers) 78-78-4	Not Listed	Not Listed	Not Listed	Not Listed
Butane (mixed isomers) 106-97-8	Not Listed	Not Listed	Not Listed	Not Listed
Hexane Isomers (other than n-Hexane) 107-83-5	Not Listed	Not Listed	Not Listed	Not Listed
Toluene 108-88-3	Not Classifiable (A4)	Not Classifiable (3)	Not Listed	Not Listed
Xylene (mixed isomers) 1330-20-7	Not classifiable (A4)	Not classifiable (3)	Not Listed	Not Listed
n-Hexane 110-54-3	Not Listed	Not Listed	Not Listed	Not Listed
Cumene 98-82-8	Not listed	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not listed
1,2,4 Trimethylbenzene 95-63-6	Not Listed	Not Listed	Not Listed	Not Listed
Ethylbenzene 100-41-4	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Not Listed	Not Listed
Benzene 71-43-2	Confirmed human carcinogen (A1)	Carcinogenic to humans (1)	Known to be human carcinogen	Known carcinogen
Cyclohexane 110-82-7	Not Listed	Not Listed	Not Listed	Not Listed
Octane 111-65-9	Not Listed	Not Listed	Not Listed	Not Listed
1,2,3-trimethylbenzene 526-73-8	Not Listed	Not Listed	Not Listed	Not Listed
Naphthalene 91-20-3	Confirmed animal carcinogen (A3)	Possible human carcinogen (2B)	Reasonably anticipated to be a human carcinogen	Not Listed

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (STOT) - single exposure Respiratory system. Central nervous system.

Specific Target Organ Toxicity (STOT) - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Gasoline 86290-81-5	72-hr EC50 = 56 mg/l Algae	96-hr LC50 = 11 mg/l Rainbow trout (static)	-	48-hr LC50 = 7.6 mg/l Daphnia magna
Heptane (mixed isomers) 142-82-5	-	96-hr LC50 = 375 mg/L Tilapia	-	-
Pentane (mixed isomers) 78-78-4	-	96-hr LC50 = 3.1 mg/L Rainbow trout	-	48-hr EC50 = >1 - <10 mg/L Daphnia magna
Butane (mixed isomers) 106-97-8	-	-	-	-
Hexane Isomers (other than n-Hexane) 107-83-5	-	-	-	-
Toluene 108-88-3	72-hr EC50 = 12.5 mg/l Algae	96-hr LC50 <= 10 mg/l Rainbow trout	-	48-hr EC50 = 5.46-9.83 mg/l Daphnia magna 48-hr EC50 = 11.5 mg/l Daphnia magna (Static)
Xylene (mixed isomers) 1330-20-7	72-hr EC50 = 11 mg/l Algae	96-hr LC50 = 8 mg/l Rainbow trout	-	48-hr LC50 = 3.82 mg/l Daphnia magna
n-Hexane 110-54-3	-	96-hr LC50 = 2.5 mg/l Fathead minnow	-	-
Cumene 98-82-8	72-hr EC50 = 2.6 mg/l Algae	96-hr LC50 = 6.04-6.61 mg/l Fathead minnow (Flow-through) 96-hr LC50 = 2.7 mg/l Rainbow trout (semi-static)	-	48-hr EC50 = 7.9-14.1 mg/l Daphnia magna (static)
1,2,4 Trimethylbenzene 95-63-6	-	96-hr LC50 = 7.19-8.28 mg/l Fathead minnow (flow-through)	-	48-hr EC50 = 6.14 mg/L Daphnia magna
Ethylbenzene 100-41-4	72-hr EC50 = 1.7-7.6 mg/l Algae	96-hr LC50 = 4 mg/L Rainbow trout	-	48-hr EC50 = 1-4 mg/L Daphnia magna
Benzene 71-43-2	72-hr EC50 = 29 mg/l Algae	96-hr LC50 = 5.3 mg/l Rainbow trout (flow-through)	-	48-hr EC50 = 8.76-15.6 mg/l Daphnia magna (Static)
Cyclohexane 110-82-7	72-hr EC50 = 500 mg/l Algae	96-hr LC50 = 3.96-5.18 mg/l Fathead minnow	-	48-hr EC50 = 1.7-3.5 mg/L Bay shrimp
Octane 111-65-9	-	-	-	48-hr LC50 = 0.38 mg/l Daphnia magna
1,2,3-trimethylbenzene 526-73-8	-	96-hr LC50 = 7.72 mg/l Fathead Minnow (flow-through)	-	-
Naphthalene 91-20-3	-	96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static)	-	48-hr LC50 = 1.6 mg/l Daphnia magna

Persistence and degradability Expected to be inherently biodegradable. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater, resulting in elongated plumes of these constituents.

Bioaccumulation Has the potential to bioaccumulate.

Mobility in soil May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues
This material may be a flammable liquid waste.

Safe Handling of Wastes
Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of Wastes / Methods of Disposal
The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal
Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper Shipping Name:	Gasoline
UN/Identification No:	UN 1203
Transport Hazard Class(es):	3
Packing Group:	II

TDG (Canada):

UN Proper Shipping Name:	Gasoline
UN/Identification No:	UN 1203
Transport Hazard Class(es):	3
Packing Group:	II

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Gasoline	NA
Heptane (mixed isomers)	NA
Pentane (mixed isomers)	NA
Butane (mixed isomers)	NA
Hexane Isomers (other than n-Hexane)	NA
Toluene	NA
Xylene (mixed isomers)	NA

n-Hexane	NA
Cumene	NA
1,2,4 Trimethylbenzene	NA
Ethylbenzene	NA
Benzene	NA
Cyclohexane	NA
Octane	NA
1,2,3-trimethylbenzene	NA
Naphthalene	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Gasoline	NA
Heptane (mixed isomers)	NA
Pentane (mixed isomers)	NA
Butane (mixed isomers)	NA
Hexane Isomers (other than n-Hexane)	NA
Toluene	1000 lb final RQ 454 kg final RQ
Xylene (mixed isomers)	100 lb final RQ 45.4 kg final RQ
n-Hexane	5000 lb final RQ 2270 kg final RQ
Cumene	5000 lb final RQ 2270 kg final RQ
1,2,4 Trimethylbenzene	NA
Ethylbenzene	1000 lb final RQ 454 kg final RQ
Benzene	10 lb final RQ 4.54 kg final RQ
Cyclohexane	1000 lb final RQ 454 kg final RQ
Octane	NA
1,2,3-trimethylbenzene	NA
Naphthalene	100 lb final RQ 45.4 kg final RQ

SARA: The following EPA hazard categories apply to this product:

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Gasoline	None
Heptane (mixed isomers)	None
Pentane (mixed isomers)	None
Butane (mixed isomers)	None
Hexane Isomers (other than n-Hexane)	None
Toluene	1.0 % de minimis concentration
Xylene (mixed isomers)	1.0 % de minimis concentration
n-Hexane	1.0 % de minimis concentration
Cumene	1.0 % de minimis concentration

1,2,4 Trimethylbenzene	1.0 % de minimis concentration
Ethylbenzene	0.1 % de minimis concentration
Benzene	0.1 % de minimis concentration
Cyclohexane	1.0 % de minimis concentration
Octane	None
1,2,3-trimethylbenzene	None
Naphthalene	0.1 % de minimis concentration

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Gasoline

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0957
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen; Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0957 TPQ: 10000 lb (Under N.J.A.C. 7:1G, environmental hazardous substances in mixtures such as gasoline or new and used petroleum oil may be reported under these categories)
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Heptane (mixed isomers)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1339
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Pentane (mixed isomers)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1064
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed

California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 1064 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Butane (mixed isomers)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0273
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - fourth degree
New Jersey - Environmental Hazardous Substances List:	SN 0273 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Hexane Isomers (other than n-Hexane)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1285
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Toluene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Developmental toxicity, initial date 1/1/91 Female reproductive toxicity, initial date 8/7/09
New Jersey Right-To-Know:	SN 1866
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed

New Jersey - Special Hazardous Substances:	Flammable - third degree; Teratogen
New Jersey - Environmental Hazardous Substances List:	SN 1866 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)

Xylene (mixed isomers)

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 2014
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold all isomers
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 2014 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)

n-Hexane

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1340
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 1340 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1 lb RQ (air); 1 lb RQ (land/water)

Cumene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 4/6/10
New Jersey Right-To-Know:	SN 0542
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin)
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0542 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present

New York - Reporting of Releases Part 597 - List of Hazardous Substances:	5000 lb RQ (air); 1 lb RQ (land/water)

1,2,4 Trimethylbenzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1929
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Ethylbenzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 6/11/04
New Jersey Right-To-Know:	SN 0851
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen; flammable - Third degree
New Jersey - Environmental Hazardous Substances List:	SN 0851 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)

Benzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 2/27/87 Developmental toxicity, initial date 12/26/97 Male reproductive toxicity, initial date 12/26/97
New Jersey Right-To-Know:	SN 0197
Pennsylvania Right-To-Know:	Environmental hazard; Special hazardous substance
Massachusetts Right-To Know:	Carcinogen; Extraordinarily hazardous
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic (skin); Flammable (skin); Carcinogen (skin)
Michigan Critical Materials Register List:	100 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:	Carcinogen; Extraordinarily hazardous
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Present
New Jersey - Special Hazardous Substances:	Carcinogen; Flammable - third degree; Mutagen
New Jersey - Environmental Hazardous Substances List:	SN 0197 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	10 lb RQ (air); 1 lb RQ (land/water)

Cyclohexane

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 0565
Pennsylvania Right-To-Know:	Environmental hazard
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	SN 0565 TPQ: 500 lb
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	1000 lb RQ (air); 1 lb RQ (land/water)

Octane

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1434
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Flammable - third degree
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

1,2,3-trimethylbenzene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	SN 1929
Pennsylvania Right-To-Know:	Present
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Naphthalene

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Carcinogen, initial date 4/19/02
New Jersey Right-To-Know:	SN 1322 SN 3758

Pennsylvania Right-To-Know:	Environmental hazard Present (particulate)
Massachusetts Right-To Know:	Present
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen
New Jersey - Environmental Hazardous Substances List:	SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%)
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	100 lb RQ (air); 1 lb RQ (land/water)

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Gasoline	B2,D2A,D2B	0.1%
Heptane (mixed isomers)	B2,D2B	1%
Pentane (mixed isomers)	B2	1%
Butane (mixed isomers)	A,B1	1%
Hexane Isomers (other than n-Hexane)	B2	1%
Toluene	B2,D2A,D2B	0.1%
Xylene (mixed isomers)	B2,D2A,D2B	m-, o-isomers 1.0%; p-isomer 0.1%
n-Hexane	B2,D2A,D2B	1%
Cumene	B2,D2A	0.1%
1,2,4 Trimethylbenzene	B3,D2B	1%
Ethylbenzene	B2,D2A,D2B	0.1%
Benzene	B2,D2A,D2B	0.1%
Cyclohexane	B2,D2B	1%
Octane	B2,D2B	1%
1,2,3-trimethylbenzene	B3	1%
Naphthalene	B4,D2A	0.1%



Note: Not applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety

Revision Date: 06/01/2016

Revision Note:

Revised Sections

The following sections (§) have been updated:
1. IDENTIFICATION
2. HAZARD IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
6. ACCIDENTAL RELEASE MEASURES
7. HANDLING AND STORAGE
8. EXPOSURE CONTROLS/PERSONAL PROTECTION
9. PHYSICAL AND CHEMICAL PROPERTIES
11. TOXICOLOGICAL INFORMATION
12. ECOLOGICAL INFORMATION
15. REGULATORY INFORMATION

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

Helium

Section 1. Identification

GHS product identifier : Helium

Chemical name : Helium

Other means of identification : helium (dot); Helium-4; He; o-Helium; UN 1046

Product use : Synthetic/Analytical chemistry.

Synonym : helium (dot); Helium-4; He; o-Helium; UN 1046

SDS # : 001025

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : GASES UNDER PRESSURE - Compressed gas

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction.

Prevention : Use and store only outdoors or in a well ventilated place.

Response : Not applicable.

Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

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Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : Helium

Other means of identification : helium (dot); Helium-4; He; o-Helium; UN 1046

CAS number/other identifiers

CAS number : 7440-59-7

Product code : 001025

Ingredient name	%	CAS number
Helium	100	7440-59-7

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

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Section 4. First aid measures

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Helium	Oxygen Depletion [Asphyxiant]

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

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Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Compressed gas.]

Color : Colorless.

Molecular weight : 4 g/mole

Molecular formula : He

Boiling/condensation point : -268.9°C (-452°F)

Melting/freezing point : -272.2°C (-458°F)

Critical temperature : -267.9°C (-450.2°F)

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Flash point : [Product does not sustain combustion.]

Burning time : Not applicable.

Burning rate : Not applicable.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : 0.14 (Air = 1) Liquid Density@BP: 7.8 lb/ft3 (125 kg/m3)

Specific Volume (ft ^{3}/lb) : 96.1538

Gas Density (lb/ft ^{3}) : 0.0104

Relative density : Not applicable.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : 0.28

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

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Section 9. Physical and chemical properties

SADT : Not available.

Viscosity : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

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Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation : No known significant effects or critical hazards.

Skin contact : Contact with rapidly expanding gas may cause burns or frostbite.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

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Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Helium	0.28	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1046	UN1046	UN1046	UN1046	UN1046
UN proper shipping name	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED	HELIUM, COMPRESSED
Transport hazard class(es)	2.2 	2.2 	2.2 	2.2 	2.2 
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 75 kg **Cargo aircraft** Quantity limitation: 150 kg	**Explosive Limit and Limited Quantity Index** 0.125 **Passenger Carrying Road or Rail Index** 75	-	-	**Passenger and Cargo Aircraft**Quantity limitation: 75 kg **Cargo Aircraft Only** Quantity limitation: 150 kg

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

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Section 14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Helium	100	No.	Yes.	No.	No.	No.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

Canada inventory : This material is listed or exempted.

International regulations

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Section 15. Regulatory information

International lists : **Australia inventory (AICS)**: This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory: Not determined.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

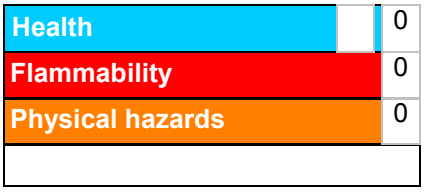
WHMIS (Canada) : Class A: Compressed gas.

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is not listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

Hazardous Material Information System (U.S.A.)



Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)



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Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 10/15/2014.

Date of issue/Date of revision : 10/15/2014.

Date of previous issue : 10/2/2014.

Version : 0.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations
CPR – Controlled Products Regulations
DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Safety data for indeno[1,2,3-cd]pyrene

Glossary of terms on this data sheet.

The information on this web page is provided to help you to work safely, but it is intended to be an overview of hazards, not a replacement for a full Material Safety Data Sheet (MSDS). MSDS forms can be downloaded from the web sites of many chemical suppliers.

General

Synonyms: 1,10-(1,2-phenylene)pyrene, 1,10-(o-phenylene)pyrene, o-phenylenepyrene, 2,3-phenylenepyrene, 2,3,o-phenylenepyrene, IP
Use:
Molecular formula: $C_{22}H_{12}$
CAS No: 193-39-5
EINECS No: 205-893-2

Physical data

Appearance: solid
Melting point: 161 - 163 C
Boiling point: 536 C
Vapour density:
Vapour pressure:
Density (g cm^{-3}):
Flash point:
Explosion limits:
Autoignition temperature:
Water solubility:

Stability

Stable. Incompatible with strong oxidizing agents.

Toxicology

Limited evidence that this material may be carcinogenic.

Toxicity data

(The meaning of any toxicological abbreviations which appear in this section is given here.)

Risk phrases

(The meaning of any risk phrases which appear in this section is given here.)
R40.

Transport information

(The meaning of any UN hazard codes which appear in this section is given here.)
Non-hazardous for air, sea and road freight.

Personal protection

Treat as potentially hazardous - many multi-ring aromatic compounds are suspected carcinogens.

Safety phrases

(The meaning of any safety phrases which appear in this section is given here.)
S36 S37 S45.

[Return to Physical & Theoretical Chemistry Lab. Safety home page.]

This information was last updated on May 10, 2005. We have tried to make it as accurate and useful as possible, but can take no responsibility for its use, misuse, or accuracy. We have not verified this information, and cannot guarantee that it is up-to-date.

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SAFETY DATA SHEET

Version 4.7
Revision Date 12/29/2015
Print Date 02/07/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Lead

Product Number : 391352
Brand : Aldrich

CAS-No. : 7439-92-1

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, Oral (Category 4), H302
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 2), H361
Specific target organ toxicity - repeated exposure (Category 2), H373
Acute aquatic toxicity (Category 1), H400
Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Warning

Hazard statement(s)
H302 Harmful if swallowed.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and

	understood.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	Pb
Molecular weight	:	207.20 g/mol
CAS-No.	:	7439-92-1
EC-No.	:	231-100-4

Hazardous components

Component	Classification	Concentration
Lead		
	Acute Tox. 4; Carc. 2; Repr. 2; STOT RE 2; Aquatic Acute 1; Aquatic Chronic 1; H302, H351, H361, H373, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Lead oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
	Remarks	See 1910.1025		
Lead	7439-92-1	TWA	0.05 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Confirmed animal carcinogen with unknown relevance to humans		
		TWA	0.05 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Hematologic effects Peripheral Nervous System impairment Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Confirmed animal carcinogen with unknown relevance to humans		

		TWA	0.05 mg/m3	USA. NIOSH Recommended Exposure Limits
		See Appendix C		

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Lead	7439-92-1	Lead	30µg/ 100 ml	In blood	ACGIH - Biological Exposure Indices (BEI)
	Remarks	Not critical			
		Lead	30µg/ 100 ml	In blood	ACGIH - Biological Exposure Indices (BEI)
		Not critical			

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: powder
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: 327.4 °C (621.3 °F) - lit.
f)	Initial boiling point and boiling range	1,740 °C (3,164 °F) - lit.
g)	Flash point	Not applicable
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	No data available
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong acids

10.6 Hazardous decomposition products

Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
No data available

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity

Rat
Cytogenetic analysis

Carcinogenicity

Limited evidence of carcinogenicity in animal studies

IARC:	2B - Group 2B: Possibly carcinogenic to humans (Lead)
NTP:	Reasonably anticipated to be a human carcinogen (Lead)
	Reasonably anticipated to be a human carcinogenThe reference note has been added by TD based on the background information of the NTP. (Lead)
OSHA:	1910.1025 (Lead)
	OSHA specifically regulated carcinogen (Lead)

Reproductive toxicity
Suspected human reproductive toxicant

Reproductive toxicity - Rat - Inhalation
Effects on Newborn: Biochemical and metabolic.

Reproductive toxicity - Rat - Oral
Effects on Newborn: Behavioral.

Reproductive toxicity - Mouse - Oral
Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).

Developmental Toxicity - Rat - Inhalation
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow).

Developmental Toxicity - Rat - Oral
Specific Developmental Abnormalities: Blood and lymphatic system (including spleen and marrow). Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Developmental Toxicity - Rat - Oral
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Developmental Toxicity - Mouse - Oral
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

Additional Information
RTECS: OF7525000

anemia

Stomach - Irregularities - Based on Human Evidence
Stomach - Irregularities - Based on Human Evidence

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	mortality LOEC - Oncorhynchus mykiss (rainbow trout) - 1.19 mg/l - 96.0 h
	LC50 - Micropterus dolomieui - 2.2 mg/l - 96.0 h
	mortality NOEC - Salvelinus fontinalis - 1.7 mg/l - 10.0 d
Toxicity to daphnia and other aquatic invertebrates	mortality LOEC - Daphnia (water flea) - 0.17 mg/l - 24 h
	mortality NOEC - Daphnia (water flea) - 0.099 mg/l - 24 h
Toxicity to algae	mortality EC50 - Skeletonema costatum - 7.94 mg/l - 10 d

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
Bioaccumulation: Oncorhynchus kisutch - 2 Weeks - 150 µg/l

Bioconcentration factor (BCF): 12

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Lead)
Reportable Quantity (RQ): 10 lbs

Poison Inhalation Hazard: No

IMDG
UN number: 3077 Class: 9 Packing group: III EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Lead)
Marine pollutant:yes
IATA
UN number: 3077 Class: 9 Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Lead)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Lead	7439-92-1	1994-04-01

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Lead	7439-92-1	1994-04-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Lead	7439-92-1	1994-04-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Lead	7439-92-1	1994-04-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer. Lead	CAS-No. 7439-92-1	Revision Date 1989-07-10
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Lead	CAS-No. 7439-92-1	Revision Date 1989-07-10

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
H302	Harmful if swallowed.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

HMIS Rating

Health hazard:	1
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	1
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.7 Revision Date: 12/29/2015 Print Date: 02/07/2016

SAFETY DATA SHEET

Version 6.5
Revision Date 02/07/2023
Print Date 02/07/2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Mercury

Product Number : 215457
Brand : SIGALD
Index-No. : 080-001-00-0
CAS-No. : 7439-97-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Scientific research and development, Reagent for analysis

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Inhalation (Category 2), H330
Reproductive toxicity (Category 1B), H360
Specific target organ toxicity - repeated exposure (Category 1), H372
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word Danger

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operates as MilliporeSigma in the US and Canada

Hazard statement(s)

H330	Fatal if inhaled.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284	Wear respiratory protection.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	:	Hg
Molecular weight	:	200.59 g/mol
CAS-No.	:	7439-97-6
EC-No.	:	231-106-7
Index-No.	:	080-001-00-0

Component	Classification	Concentration
mercury		
	Acute Tox. 2; Repr. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H330, H360, H372, H400, H410 M-Factor - Aquatic Acute: 1 - Aquatic Chronic: 100	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

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SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
Mercury/mercury oxides.
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. In some instances, a mercury spill kit may be used. Please consult with your site EHS representative to determine the most appropriate clean up method.Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store under inert gas.

Storage class
Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

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Component	CAS-No.	Value	Control parameters	Basis
mercury	7439-97-6	C	0.1 mg/m3	USA. NIOSH Recommended Exposure Limits
	Remarks	Potential for dermal absorption		
		CEIL	1.0mg/10m3	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		TWA	0.05 mg/m3	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
		Skin notation		
		TWA	0.025 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen Danger of cutaneous absorption		
		TWA	0.05 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		

8.2 Exposure controls

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

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operates as MilliporeSigma in the US and Canada

Body Protection
protective clothing

Respiratory protection
required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid Color: silver, white
b)	Odor	odorless
c)	Odor Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: -38.87 °C (-37.97 °F) - lit.
f)	Initial boiling point and boiling range	356.6 °C 673.9 °F - lit.
g)	Flash point	()Not applicable
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	The product is not flammable.
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	< 0.01 hPa at 20 °C (68 °F) 1 hPa at 126 °C(259 °F)
l)	Vapor density	6.93 - (Air = 1.0)
m)	Density	13.55 g/cm3 at 25 °C (77 °F)
	Relative density	No data available
n)	Water solubility	0.00006 g/l at 25 °C (77 °F)
o)	Partition coefficient: n-octanol/water	Not applicable for inorganic substances
p)	Autoignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available

The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

s) Explosive properties No data available

t) Oxidizing properties none

9.2 Other safety information

Relative vapor density	6.93 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Risk of explosion with:
Acetylene
Alkali metals
Aluminum
Amines
Ammonia
chlorine dioxide
Potassium
sodium
oxalic acid
perchlorates
Risk of ignition or formation of inflammable gases or vapours with:
Chlorine
silanes
Oxygen
Generates dangerous gases or fumes in contact with:
Nitric acid
Exothermic reaction with:
Bromine
Metals
acetylidene
Oxygen

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
Aluminum, Lead, Copper, silver, Zinc, zinc alloys, Tin

10.6 Hazardous decomposition products
In the event of fire: see section 5

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
Oral: No data available
LC50 Inhalation - Rat - male - 2 h - < 27 mg/m3 - vapor

Dermal: No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
Presumed human reproductive toxicant

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard
No data available

11.2 Additional Information

RTECS: OV4550000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

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SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	mortality LC50 - Cyprinus carpio (Carp) - 0.160 mg/l - 96 h
Toxicity to fish(Chronic toxicity)	Remarks: No data available (mercury)

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Bioaccumulation	Carassius auratus (goldfish) - 1,789 d - 0.25 µg/l(mercury)
	Bioconcentration factor (BCF): 155,986

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

DOT (US)

UN number: 2809 Class: 8 (6.1) Packing group: III
Proper shipping name: Mercury
Reportable Quantity (RQ): 1 lbs
Reportable Quantity (RQ): 1 lbs
Poison Inhalation Hazard: No

IMDG

UN number: 2809 Class: 8 (6.1) Packing group: III EMS-No: F-A, S-B
Proper shipping name: MERCURY
Marine pollutant : yes

IATA

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UN number: 2809 Class: 8 (6.1) Packing group: III
Proper shipping name: Mercury

SECTION 15: Regulatory information

SARA 302 Components
This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
mercury	7439-97-6	2015-11-23

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Reportable Quantity : D009 lbs

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
mercury	7439-97-6	2015-11-23

California Prop. 65 Components

	CAS-No.	Revision Date
, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.mercury	7439-97-6	2013-12-20

SECTION 16: Other information

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Creation Date 27-Jan-2010 **Revision Date** 02-Oct-2015 **Revision Number** 2

1. Identification

Product Name **Methylene chloride**

Cat No. : **D37-1; D37-4; D37-20; D37-200; D37-200LC; D37-500; D37FB-19; D37FB-50; D37FB-115; D37FB-200; D37POP-19; D37POPB-50; D37POPB-200; D37RB-19; D37RB-50; D37RB-115; D37RB-200; D37RS-19; D37RS-28; D37RS-50; D37RS-115; D37RS-200; D37SK-4; D37SK-4LC; D37SS-28; D37SS-50; D37SS-115; D37SS-200; D37SS-1350**

Synonyms Dichloromethane; DCM

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS), Respiratory system.	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Liver, Kidney, Blood.	

Label Elements

Signal Word
Danger

Hazard Statements
Causes skin irritation
Causes serious eye irritation

May cause respiratory irritation
May cause drowsiness or dizziness
May cause cancer
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Response
IF exposed or concerned: Get medical attention/advice
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Skin
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)

WARNING! This product contains a chemical known in the State of California to cause cancer, birth defects or other reproductive harm.

3. Composition / information on ingredients

Component	CAS-No	Weight %
Methylene chloride	75-09-2	>99.5
Methyl alcohol	67-56-1	0 - 0.4
Cyclohexene	110-83-8	0 - 0.01
2-Methyl-2-butene	513-35-9	0 - 0.01

4. First-aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects Breathing difficulties. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available

Flash Point No information available
Method - No information available

Autoignition Temperature 556 °C / 1032.8 °F

Explosion Limits
Upper 23 vol %
Lower 13 vol %
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Carbon monoxide (CO) Carbon dioxide (CO_2) Hydrogen chloride gas Phosgene
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

6. Accidental release measures

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak.

Environmental Precautions Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Use only under a chemical fume hood.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methylene chloride	TWA: 50 ppm	(Vacated) TWA: 500 ppm (Vacated) STEL: 2000 ppm (Vacated) Ceiling: 1000 ppm TWA: 25 ppm STEL: 125 ppm	IDLH: 2300 ppm
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m³ (Vacated) STEL: 250 ppm (Vacated) STEL: 325 mg/m³ Skin TWA: 200 ppm TWA: 260 mg/m³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m³ STEL: 250 ppm STEL: 325 mg/m³
Cyclohexene	TWA: 300 ppm	(Vacated) TWA: 300 ppm (Vacated) TWA: 1015 mg/m³ TWA: 300 ppm TWA: 1015 mg/m³	IDLH: 2000 ppm TWA: 300 ppm TWA: 1015 mg/m³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Methylene chloride	TWA: 50 ppm TWA: 174 mg/m³	TWA: 100 ppm TWA: 330 mg/m³ STEL: 500 ppm STEL: 1740 mg/m³	TWA: 50 ppm
Methyl alcohol	TWA: 200 ppm TWA: 262 mg/m³ STEL: 250 ppm STEL: 328 mg/m³ Skin	TWA: 200 ppm TWA: 260 mg/m³ STEL: 250 ppm STEL: 310 mg/m³	TWA: 200 ppm STEL: 250 ppm Skin
Cyclohexene	TWA: 300 ppm TWA: 1010 mg/m³	TWA: 300 ppm TWA: 1015 mg/m³	TWA: 300 ppm

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	sweet
Odor Threshold	No information available
pH	Not applicable
Melting Point/Range	-97 °C / -142.6 °F
Boiling Point/Range	39 °C / 102.2 °F
Flash Point	No information available

Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	23 vol %
Lower	13 vol %
Vapor Pressure	20 mmHg @ 3502°C
Vapor Density	2.93 (Air = 1.0)
Specific Gravity	1.33
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	556 °C / 1032.8 °F
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C H2 Cl2
Molecular Weight	84.93

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Excess heat.

Incompatible Materials Strong oxidizing agents, Strong acids, Amines

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2), Hydrogen chloride gas, Phosgene

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methylene chloride	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	53 mg/L (Rat) 6 h 76000 mg/m³ (Rat) 4 h
Methyl alcohol	LD50 = 6200 mg/kg (Rat)	LD50 = 15800 mg/kg (Rabbit)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h
Cyclohexene	LD50 = 2400 µL/kg (Rat)	>200 mg/kg (Rat)	>21.6 mg/L/4h (rat)
2-Methyl-2-butene	700-2600 mg/kg (Rat)	>2000 mg/kg (Rat)	LC50 > 61000 ppm (Rat) 4 h

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes and skin

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Methylene chloride	75-09-2	Group 2A	Reasonably Anticipated	A3	X	A3
Methyl alcohol	67-56-1	Not listed	Not listed	Not listed	Not listed	Not listed

Cyclohexene	110-83-8	Not listed	Not listed	Not listed	Not listed	Not listed
2-Methyl-2-butene	513-35-9	Not listed	Not listed	Not listed	Not listed	Not listed

IARC: (International Agency for Research on Cancer)

IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans

NTP: (National Toxicity Program)

NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
ACGIH: (American Conference of Governmental Industrial Hygienists)

Mexico - Occupational Exposure Limits - Carcinogens

Mexico - Occupational Exposure Limits - Carcinogens
A1 - Confirmed Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Confirmed Animal Carcinogen
A4 - Not Classifiable as a Human Carcinogen
A5 - Not Suspected as a Human Carcinogen

Mutagenic Effects Mutagenic effects have occured in microorganisms.

Reproductive Effects Experiments have shown reproductive toxicity effects on laboratory animals.

Developmental Effects Developmental effects have occurred in experimental animals.

Teratogenicity No information available.

STOT - single exposure Central nervous system (CNS) Respiratory system
STOT - repeated exposure Liver Kidney Blood

Aspiration hazard No information available

Symptoms / effects,both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Endocrine Disruptor Information No information available

Other Adverse Effects Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Methylene chloride	EC50:>660 mg/L/96h	Pimephales promelas: LC50:193 mg/L/96h	EC50: 1 mg/L/24 h EC50: 2.88 mg/L/15 min	EC50: 140 mg/L/48h
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h
Cyclohexene	Not listed	Poecillia reticulata: 7.1 mg/L/96h	Not listed	Daphnia: EC50: 5.3 mg/L/48h
2-Methyl-2-butene	Not listed	Not listed	Not listed	EC50: = 3 mg/L, 48h (Daphnia magna)

Persistence and Degradability Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

Component	log Pow
Methylene chloride	1.25
Methyl alcohol	-0.74

Cyclohexene	3.27

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methylene chloride - 75-09-2	U080	-
Methyl alcohol - 67-56-1	U154	-

14. Transport information

DOT

UN-No UN1593
Proper Shipping Name DICHLOROMETHANE
Hazard Class 6.1
Packing Group III

TDG

UN-No UN1593
Proper Shipping Name DICHLOROMETHANE
Hazard Class 6.1
Packing Group III

IATA

UN-No UN1593
Proper Shipping Name Dichloromethane
Hazard Class 6.1
Packing Group III

IMDG/IMO

UN-No UN1593
Proper Shipping Name Dichloromethane
Hazard Class 6.1
Packing Group III

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Methylene chloride	X	X	-	200-838-9	-		X	X	X	X	X
Methyl alcohol	X	X	-	200-659-6	-		X	X	X	X	X
Cyclohexene	X	X	-	203-807-8	-		X	X	X	X	X
2-Methyl-2-butene	X	X	-	208-156-3	-		X	X	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Methylene chloride	75-09-2	>99.5	0.1
Methyl alcohol	67-56-1	0 - 0.4	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Methylene chloride	-	-	X	X

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methylene chloride	X		-
Methyl alcohol	X		-

OSHA Occupational Safety and Health Administration

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Methylene chloride	125 ppm STEL 12.5 ppm Action Level 25 ppm TWA	-

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methylene chloride	1000 lb 1 lb	-
Methyl alcohol	5000 lb	-

California Proposition 65 This product contains the following proposition 65 chemicals

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Methylene chloride	75-09-2	Carcinogen	200 µg/day 50 µg/day	Carcinogen
Methyl alcohol	67-56-1	Developmental	-	Developmental

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Methylene chloride	X	X	X	X	X
Methyl alcohol	X	X	X	X	X
Cyclohexene	X	X	X	-	X
2-Methyl-2-butene	X	X	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ):	Y
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D1B Toxic materials
D2A Very toxic materials



16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 27-Jan-2010
Revision Date 02-Oct-2015
Print Date 02-Oct-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS

SAFETY DATA SHEET

Creation Date 01-May-2012 **Revision Date** 11-Aug-2014 **Revision Number** 1

1. Identification

Product Name **Phenanthrene**

Cat No. : **AC130090000; AC130090050; AC130090500; AC130095000**

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 4

Label Elements

Signal Word
Warning

Hazard Statements
Harmful if swallowed



Precautionary Statements
Prevention
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

Component	CAS-No	Weight %
Phenanthrene	85-01-8	>95

4. First-aid measures

General Advice If symptoms persist, call a physician.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Obtain medical attention. Wash off immediately with plenty of water for at least 15 minutes.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

Most important symptoms/effects None reasonably foreseeable.
Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available

Flash Point No information available
Method - No information available

Autoignition Temperature Not applicable
Explosion Limits
Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products
Carbon monoxide (CO) Carbon dioxide (CO_2)
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	Flammability	Instability	Physical hazards
1	1	0	N/A

6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.

Environmental Precautions Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

Methods for Containment and Clean Up Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

- **Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- **Skin and body protection** Long sleeved clothing.
- **Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- **Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Beige
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	95 - 101 °C / 203 - 213.8 °F
Boiling Point/Range	336 °C / 636.8 °F
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	1 mmHg @ 116 °C
Vapor Density	Not applicable
Relative Density	1.063
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	Not applicable
Decomposition temperature	No information available
Viscosity	Not applicable
Molecular Formula	C14 H10
Molecular Weight	178.23

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Excess heat. Avoid dust formation.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Phenanthrene	1.8 g/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Phenanthrene	85-01-8	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea

Phenanthrene	Not listed	LC50 = 3.2 mg/L 96h	Not listed	LC50 = 0.35 mg/L 48h

Persistence and Degradability Insoluble in water May persist

Bioaccumulation/ Accumulation No information available.

Mobility . Is not likely mobile in the environment due its low water solubility.

Component	log Pow
Phenanthrene	4.46

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN3077
Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID, N.O.S.
Hazard Class 9
Packing Group III

TDG

UN-No UN3077
Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE,SOLID, N.O.S.
Hazard Class 9
Packing Group III

IATA

UN-No UN3077
Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.*
Hazard Class 9
Packing Group III

IMDG/IMO

UN-No UN3077
Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard Class 9
Packing Group III

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Phenanthrene	X	X	-	201-581-5	-		X	X	X	X	X

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Phenanthrene	85-01-8	>95	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Phenanthrene	-	-	X	X

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Phenanthrene	5000 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Phenanthrene	X	X	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class Non-controlled

16. Other information

Prepared By Regulatory Affairs

Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date	01-May-2012
Revision Date	11-Aug-2014
Print Date	11-Aug-2014
Revision Summary	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS

SAFETY DATA SHEET

Creation Date 01-Jul-2010 **Revision Date** 10-Feb-2015 **Revision Number** 1

1. Identification

Product Name **Pyrene**

Cat No. : **AC180830000; AC180830250; AC180831000; AC180835000**

Synonyms Benzo[def]phenanthrene

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11
Emergency Number **US:**001-201-796-7100 / **Europe:** +32 14 57 52 99
CHEMTREC Tel. No.**US:**001-800-424-9300 / **Europe:**001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Liver.	

Label Elements

Signal Word
Warning

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements
Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not get in eyes, on skin, or on clothing
Response
Get medical attention/advice if you feel unwell
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Skin
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation occurs: Get medical advice/attention
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up
Disposal
Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)
Very toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

Component	CAS-No	Weight %
Pyrene	129-00-0	>95

4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion Do not induce vomiting. Obtain medical attention.

Most important symptoms/effects No information available.
Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media No information available

Flash Point	210 °C / 410 °F
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products
Carbon monoxide (CO) Carbon dioxide (CO_2)
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

6. Accidental release measures

Personal Precautions	Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.
Methods for Containment and Clean Up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling	Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid ingestion and inhalation.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering Measures	Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	Yellow
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	148 - 152 °C / 298 - 306 °F
Boiling Point/Range	393 °C / 739.4 °F @ 760 mmHg
Flash Point	210 °C / 410 °F
Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Relative Density	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available
Molecular Formula	C16 H10
Molecular Weight	202.25

10. Stability and reactivity

Reactive Hazard None known, based on information available

Stability Stable under normal conditions.

Conditions to Avoid Incompatible products. Excess heat. Avoid dust formation.

Incompatible Materials Strong oxidizing agents

Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO_2)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Pyrene	2700 mg/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes and skin

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Pyrene	129-00-0	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Central nervous system (CNS)
STOT - repeated exposure Liver

Aspiration hazard No information available

Symptoms / effects,both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects Tumorigenic effects have been reported in experimental animals. The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Do not empty into drains. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Pyrene	Not listed	Oncorhynchus mykiss: LC50 > 2mg/L 96h	Not listed	EC50 48h 1.8 mg/L EC50 48h 0.002-0.003 mg/L

Persistence and Degradability No information available
Bioaccumulation/ Accumulation No information available.

Mobility .

Component	log Pow
Pyrene	4.88

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s
Proper technical name Pyrene
Hazard Class 9
Packing Group III

TDG

UN-No UN3077
Proper Shipping Name Environmentally hazardous substance, solid, n.o.s.
Hazard Class 9
Packing Group III

IATA

UN-No	UN3077
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s
Hazard Class	9
Packing Group	III

IMDG/IMO

UN-No	UN3077
Proper Shipping Name	Environmentally hazardous substance, solid, n.o.s
Hazard Class	9
Packing Group	III

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Pyrene	X	X	-	204-927-3	-		X	X	X	X	-

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Pyrene	-	-	X	X

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Pyrene	5000 lb	5000 lb

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Pyrene	X	X	X	X	-

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

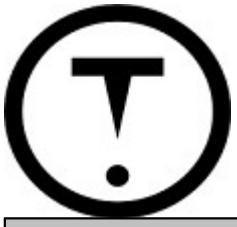
U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class D2B Toxic materials



16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 01-Jul-2010
Revision Date 10-Feb-2015
Print Date 10-Feb-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of SDS

SAFETY DATA SHEET

Version 8.6
Revision Date 02/07/2023
Print Date 02/15/2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Tetrachloroethylene

Product Number : 371696
Brand : Sigma-Aldrich
Index-No. : 602-028-00-4
CAS-No. : 127-18-4

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Skin sensitization (Category 1), H317
Carcinogenicity (Category 2), H351
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Short-term (acute) aquatic hazard (Category 2), H401
Long-term (chronic) aquatic hazard (Category 2), H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

Pictogram	
Signal Word	Warning

Hazard statement(s)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing mist or vapors.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing must not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	:	Perchloroethylene PCE
Formula	:	C_2Cl_4
Molecular weight	:	165.83 g/mol
CAS-No.	:	127-18-4
EC-No.	:	204-825-9
Index-No.	:	602-028-00-4

The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

Component	Classification	Concentration
Tetrachlorethylene		
	Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Carc. 2; STOT SE 3; Aquatic Acute 2; Aquatic Chronic 2; H315, H319, H317, H351, H336, H401, H411 Concentration limits: >= 20 %: STOT SE 3, H336;	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

The life science business of Merck KGaA, Darmstadt, Germany
operates as MilliporeSigma in the US and Canada

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Hydrogen chloride gas
Combustible.
Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage class
Storage class (TRGS 510): 6.1C: Combustible, acute toxic Cat.3 / toxic compounds or compounds which causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Tetrachlorethylene	127-18-4	TWA	25 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Confirmed animal carcinogen with unknown relevance to humans		
		STEL	100 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Confirmed animal carcinogen with unknown relevance to humans		
		Potential Occupational Carcinogen		
		TWA	100 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		CEIL	200 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Peak	300 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		TWA	25 ppm 170 mg/m3	USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
		PEL	25 ppm 170 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		STEL	100 ppm 685 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		C	300 ppm	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Tetrachlorethylene	127-18-4	Tetrachloroethylene	3parts per million	In end-exhaled air	ACGIH - Biological Exposure Indices (BEI)
	Remarks	Prior to shift (16 hours after exposure ceases)			
		Tetrachloroethylene	0.5 mg/l	In blood	ACGIH - Biological Exposure Indices (BEI)
		Prior to shift (16 hours after exposure ceases)			

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8.2 Exposure controls

Appropriate engineering controls
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Viton®
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.4 mm
Break through time: 240 min
Material tested:Camatril® (KCL 730 / Aldrich Z677442, Size M)

Body Protection
protective clothing

Respiratory protection
required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid, clear Color: colorless
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	pH	No data available

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e)	Melting point/freezing point	Melting point/range: -22 °C (-8 °F) - lit.
f)	Initial boiling point and boiling range	121 °C 250 °F - lit.
g)	Flash point	()No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	25.3 hPa at 25.0 °C (77.0 °F) 17.3 hPa at 20.0 °C(68.0 °F)
l)	Vapor density	No data available
m)	Density	1.623 g/cm3 at 25 °C (77 °F) - lit.
	Relative density	No data available
n)	Water solubility	0.15 g/l at 25 °C (77 °F)
o)	Partition coefficient: n-octanol/water	log Pow: 2.53 at 23 °C (73 °F) - Bioaccumulation is not expected.
p)	Autoignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

Surface tension	32.1 mN/m at 20 °C (68 °F)

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of explosion with:
Alkali metals
Aluminum
sodium amide
Barium
nitrogen dioxide
Oxygen

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with
alkali hydroxides
Exothermic reaction with:
strong alkalis
Alkaline earth metals
strong alkalis
Light metals
Powdered metals
Oxidizing agents
Strong acids
Strong bases
nitrous gases
Risk of ignition or formation of inflammable gases or vapours with:
zinc oxide
with
Aluminum

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
various plastics

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male and female - 3,420 mg/kg
(OECD Test Guideline 401)
Remarks: (ECHA)
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Skin irritation - 4 h
(OECD Test Guideline 404)
Remarks: (ECHA)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Mild eye irritation - 24 h
(Draize Test)
Remarks: (RTECS)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: May cause sensitization by skin contact.
(OECD Test Guideline 429)
Remarks: (ECHA)

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Germ cell mutagenicity
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
Remarks: (ECHA)
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Remarks: (ECHA)

Test Type: Micronucleus test
Species: Mouse

Application Route: Intraperitoneal
Method: OECD Test Guideline 474
Result: negative
Remarks: (ECHA)

Carcinogenicity
Suspected of causing cancer.

IARC:	2A - Group 2A: Probably carcinogenic to humans (Tetrachlorethylene)
NTP:	RAHC - Reasonably anticipated to be a human carcinogen (Tetrachlorethylene)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

Repeated dose toxicity - Mouse - female - Oral - LOAEL (Lowest observed adverse effect level) - 390 mg/kg

RTECS: KX3850000
narcosis, Liver injury may occur., Kidney injury may occur.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 5 mg/l - 96 h

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Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 7.50 mg/l - 48 h
Toxicity to algae	ErC50 - Chlamydomonas reinhardtii (green algae) - 3.64 mg/l - 72 h Remarks: (ECHA)
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Jordanella floridae - 1.99 mg/l - 10 d Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - 0.51 mg/l - 28 d Remarks: (ECHA)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 11 % - Not readily biodegradable. (OECD Test Guideline 301C)

12.3 Bioaccumulative potential

Bioaccumulation	Lepomis macrochirus (Bluegill) - 21 d - 0.00343 mg/l(Tetrachlorethylene) Bioconcentration factor (BCF): 49

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

DOT (US)

UN number: 1897 Class: 6.1 Packing group: III

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Proper shipping name: Tetrachloroethylene
Reportable Quantity (RQ): 100 lbs
Reportable Quantity (RQ): 100 lbs
Reportable Quantity (RQ): 10 lbs
Reportable Quantity (RQ): 10 lbs
Poison Inhalation Hazard: No

IMDG
UN number: 1897 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TETRACHLOROETHYLENE
Marine pollutant : yes

IATA
UN number: 1897 Class: 6.1 Packing group: III
Proper shipping name: Tetrachloroethylene

SECTION 15: Regulatory information

SARA 302 Components
This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Tetrachlorethylene	127-18-4	2020-07-14

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Reportable Quantity : D039 lbs

F001 lbs

F002 lbs

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Tetrachlorethylene	127-18-4	2020-07-14

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Tetrachlorethylene	127-18-4	2020-07-14

California Prop. 65 Components

, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.Tetrachlorethylene	CAS-No. 127-18-4	Revision Date 2017-04-11

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SECTION 16: Other information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Version: 8.6 Revision Date: 02/07/2023 Print Date: 02/15/2023

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Safety Data Sheets (SDS)

SECTION 1-IDENTIFICATION

Product name: Toluene

Other names:-

Proper shipping name: Toluene

Recommended use of the chemical and restrictions on use:
The major use of toluene is as a mixture added to gasoline to improve octane ratings. Used as a solvent for paint, resins, lacquers inks & adhesives. Component of solvent blends and thinners. Used in the manufacture of chemicals, dyes, explosives, benzoic acid. Some grades of toluene may contain traces of xylene and benzene.
The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.
WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.

Manufacturer/Supplier Name: Taiwan SM Corp., Kaohsiung plant
Address: NO.7, Industrial 1st Rd, Lin-Yuan Kaohsiung County 83203, Taiwan, R.O.C.
Phone No.: 886-7-6414511

Emergency phone No./Fax No.: 886-7-6414511 Ext. 221 (on duty), 886-7-6414517 (off duty)/886-7-6423828

SECTION 2-HAZARDS IDENTIFICATION

GHS Classification:

Flammable Liquid Category 2
Acute Toxicity (Oral) Category 4
Skin Corrosion/ Irritation Category 2
Serious Eye Damage/ Eye Irritation Category 2
Specific Target Organ Toxicity Repeated Exposure Category 2
Hazardous To The Aquatic Environment (Acute) Category 3
Aspiration Hazard Category 1

GHS Label elements:

Hazard symbols



Signal word

Danger

Hazard statements

Highly flammable liquid and vapor
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause damage to organs through prolonged or repeated exposure.
May cause long lasting harmful effects to aquatic life.
May be fatal if swallowed and enters airways.

Precautionary statements

Use only in well ventilated area.
Control of exposure by mechanical ventilation in an unventilated or confined space.
Avoid breathing vapors and contact with skin and eyes.
Wear breathing apparatus/protective gloves/face protection.
Store in well-ventilated place.
Disposal must be in accordance with applicable federal, state, or local regulations.

Other hazards: —

SECTION 3-COMPOSITION/INFORMATION ON INGREDIENTS

CAS No.	Chemical Name	wt% by weight	EINECS No.
00108-88-3	Toluene	97.0 min.	203-625-9
Synonyms	**Methylbenzol; Methylbenzene; Toluol; Phenylmethane**		

SECTION 4-FIRST AID MEASURES

Description of necessary first aid measures

Eye:

1. Flush immediately with warm water for at least 20 minutes.
2. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
3. If pain persists or recurs seek medical attention.
4. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin:

1. Removing contaminated clothing, shoes, and leathery wearings, cleaning procedure is available before reused or waste treatment.
2. Washing affected area thoroughly with soap and water for at least 20 minutes.
3. Call a Physician if irritation develops or persists.

Ingestion:

1. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomits.
2. If victim is conscious and alert, give 2～4 cupfuls of milk/water to dilute the substance in stomach.
3. Never give anything by mouth to an unconscious person.
4. Don't induce vomiting unless directed to do so by medical person.
5. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
6. Then seek for medical attention.

Inhalation:

1. Remove from further exposure and flush thoroughly with air.
2. Lay patient down. Keep warm and rested.
3. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
4. If respiratory irritation, seek immediate medical assistance and call a physician.

Most important symptoms/effects, acute and delayed

Headache, fatigue, drowsiness, insomnia, anorexia and pain in limbs, nervousness, impairment of memory.

Indication of immediate medical attention and special treatment needed, if necessary

For acute or short term repeated exposures to toluene:

Inhalation:

1. Inhalation overexposure can produce toxic effects. Monitor for respiratory distress.
2. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation, as required.
3. This material (or a component) sensitizes the heart to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material.
4. Administration of sympathomimetic drugs should be avoided.

Ingestion:

1. If ingested, this material presents a significant aspiration and chemical pneumonitis hazard.
2. Induction of emesis is not recommended.
3. Consider activated charcoal and/or gastric lavage.
4. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

SECTION 5-FIRE FIGHTING MEASURES

Extinguishing media

Foam、CO_2、Dry chemical、Water fog.

Specific hazards arising from the chemical

1. Liquid and vapor are highly flammable.
2. Severe fire hazard when exposed to heat, flame and/or oxidizers.
3. Vapor may travel a considerable distance to source of ignition.
4. Heating may cause expansion or decomposition leading to violent rupture of containers.
5. On combustion, may emit toxic fumes of carbon monoxide (CO).

Special protective equipment and precautions for fire-fighters

1. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.
2. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles.
3. Cover pooling liquid with foam.
4. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out.
5. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines.
6. Be aware that burning liquid will float on water.
7. Notify appropriate authorities of potential fire and explosion hazard if liquid enter sewers or waterways

SECTION 6-ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedure

1. Personal protective equipment (specified in Section 8)
   Eyes : Chemical safety goggles are recommended, and a face shield is added when needed.
   Skin : Wear appropriate protective gloves to avoid skin contact.
   Clothing: When direct contact is likely, use rubberized clothings, apron and boots.
   Respiratory : When limits are exceeded, wear a respirator approved by NIOSH/MSHA for protection against organic dust, mists and vapors.
2. Remove all sources of ignition. No smoking, naked lights or ignition sources. Ventilate area of leak or spill.
3. Keep unnecessary and unprotected personnel from entering. Evacuate personnel from the danger area. Consult with an expert about the emergency procedures.

Environmental precautions

1. Prevent spillage from entering drains, surface, and groundwater.
2. Contain and recover liquid when possible. Use non-sparking tools and equipment.
3. Collect liquid in an appropriate container or absorb with an inert material (e.g. vermiculite, dry sand, earth), and place in a chemical waste container.
4. Report the accidental spill/release to Local/State government.

Methods and materials for containment and cleaning up

Minor spill:

1. Remove all ignition sources.
2. Clean up all spills immediately.
3. Avoid breathing vapors and contact with skin and eyes.
4. Control personal contact by using protective equipment.
5. Contain and absorb small quantities with vermiculite or other absorbent material.
6. Wipe up.
7. Collect residues in a flammable waste container.

Major spill

1. Clear area of personnel and move upwind.
2. Alert emergency responders and tell them location and nature of hazard.
3. May be violently or explosively reactive.
4. Wear breathing apparatus plus protective gloves.
5. Prevent spillage from entering drains or water course.
6. No smoking, naked lights or ignition sources. Increase ventilation.
7. Stop leak if safe to do so.
8. Water spray or fog may be used to disperse/absorb vapor.
9. Contain spill with sand, earth or vermiculite.
10. Use only spark-free shovels and explosion proof equipment.
11. Collect recoverable product into labeled containers for recycling..
12. Absorb remaining product with sand, earth or vermiculite.
13. Collect solid residues and seal in labeled drums for disposal.
14. Wash area and prevent runoff into drains.
15. If contamination of drains or waterways occurs, advise emergency services.

SECTION 7-HANDLING AND STORAGE

Precautions for safe handling

1. Wash thoroughly after handling.
2. Use only in well ventilated area.
3. Ground and bond containers when transferring.
4. Use spark-free tools and explosion proof equipment.
5. Empty containers retain product residue (liquid/vapor), and can be dangerous.
6. Do not pressurize, cut, weld, braze, solder, drill, or expose empty containers to heat, sparks or open flames.

Conditions for safe storage, including any incompatibilities

1. Store in original containers in approved flame-proof area.
2. No smoking, naked lights, heat or ignition sources.
3. DO NOT store in pits, depressions, basements or areas where vapors may be trapped.
4. Keep containers securely sealed.
5. Store away from incompatible materials in a cool, dry well ventilated area.
6. Protect containers against physical damage and check regularly for leaks.
7. Keep containers tightly closed and store in a cool, dry, well-ventilated place, plainly labeled, and out of closed vehicles.
8. Ground all equipment containing this material.
9. Observe manufacturer's storing and handling recommendations.
10. Containers should be able to withstand pressures expected from warming and cooling in storage. This flammable liquid should be stored in a separate safety cabinet or room. A refrigerated room is preferable for materials with a flash point temperature lower than 70°F (21°C).

SECTION 8-EXPOSURE CONTROLS, PERSONAL PROTECTION

OSHA - Final PELs : 200 ppm TWA.
OSHA Ceiling : 300ppm.
ACGIH : 50 ppm, skin -potential forcutaneous absorption.
NIOSH : 100 ppm TWA; 375 mg/m^3 TWA; 500 ppm IDLH.
Taiwan TWA : 100 ppm (skin).
Taiwan STEL : 125 ppm (skin).
Taiwan Ceiling : -------.
Taiwan BEI : 1 mg/l (before on duty).

Engineering control

1. Process should be located at least 17 meter (50 feet) away from open flames and all high temperature operations likely to cause ignition of the styrene monomer vapor.
2. In venting styrene monomer vapors, consideration should be given to possible halogenation of the vapors by low concentrations of free chlorine and bromine with the resultant formation of lacrimations.
3. Process should be designed so that the operator is not exposed to direct contact with Toluene or the vapor. The technical problems of designing equipment, providing adequate ventilation and operating procedures which promise maximum security and economy, can best be handled by competent engineers.
4. It is essential for safety that equipment be used and maintained as recommended by the manufacturer.
5. Tanks used to store or process Toluene should be closed vessels vented to a safe point of discharge in the outside atmosphere away from operating stations, roadways, and at least 17 meter (50 feet) from possible sources of ignitions. All sparks, flames, heated surface, or other sources of ignition should be kept away from all vents. It is advisable, to provide suction on vessels when inspection or observation openings are made, to minimize or eliminate escape of vapors.

Personal protective equipment

Eye Protection:
Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.

Skin protection:
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Clothing:
Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discard contaminated leather goods.

Respirators:
For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134). For airborne vapor concentrations that exceed the recommended protection factors for organic vapor respirators, use a full-face, positive-pressure, supplied air respirator. Due to fire and explosion hazards, do not enter atmospheres containing concentrations greater than 10% of the lower flammable limit of this product.

SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Transparent liquid	Upper/lower explosive limits : 1.2%～7.1%
Odour : pleasant aromatic petroleum odour	Vapor Pressure : 22 mmHg @20℃/68℉
Odour threshold : 0.16～37 ppm (detect) 1.9～69 ppm (recognition)	Vapor Density : 3.1 (air=1)
PH : Not available	Relative density : 0.86 (water=1)
Melting/Freezing Point : －95 ℃	Solubility in water : 54～58 mg/100 ml
Initial boiling point/boiling range : 110.6 ℃	Partition coefficient : 2.73 (n-octanol/water)
Flash point : 4.4 ℃ (closed cup)	Auto-ignition temperature : 480℃
Evaporation Rate : 2.24 (BuAc=1)	Decomposition temperature : Not available
Flammability (solid/gas) : Not available	Viscosity : 0.6 mPa.s max @20℃
Molecular Formula : $C_6H_5CH_3$	Molecular Weight : 92.056

SECTION 10-STABILITY AND REACTIVITY

Reactivity
Vapor is explosive when exposed to heat or flame

Chemical stability
Stable at room temperature in closed containers under normal storage and handling conditions.

Possibility of hazardous reaction
Has not been reported.

Condition to avoid
Product is highly flammable – Keep away from sources of ignition. Avoid the higher temperatures. Keep away from open fire, heating elements and heat radiating surface and prevent from forming of the vapours mixtures with air in explosion limits.

Incompatible materials
Heat, flame, strong oxidizers, nitric and sulfuric acids, chlorine, nitrogen tetraoxide; will attack some forms of plastics, rubber, coatings.

Hazardous decomposition products
Carbon monoxide, carbon dioxide, hydrocarbons.

SECTION 11-TOXICOLOGICAL INFORMATION

Routes of exposure
Eye, Skin, inhalation, Ingestion.

Symptoms (treatments as indicated in Section 4)
Eye: The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated. There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain. There may be damage to the cornea. Unless treatment is prompt and adequate there may be permanent loss of vision. Conjunctivitis can occur following repeated exposure.

Skin: Contact with the material may damage the health of the individual; systemic effects may result following absorption. The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterized by redness, swelling and blistering. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

Ingestion: Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733). Considered an unlikely route of entry in commercial/industrial environments. The liquid may produce gastrointestinal discomfort and may be harmful if swallowed. Ingestion may result in nausea, pain and vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.

Inhalation: Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual. There is some evidence to suggest that the material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. If exposure to highly concentrated solvent atmosphere is prolonged this may lead to narcosis, unconsciousness, even coma and possible death. The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.

Chronic exposure: There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Toxicity
LD50: <870 mg/kg (rat, oral)
LC50: 6000 ppm/6h (rat, inhalation)

Chronic effect
Carcinogenicity:
ACGIH : A4-Not classifiable as a Human Carcinogen.
OSHA : Possible select carcinogen.
IARC : Group 3 carcinogen.

Epide miology: Not available.

Teratogenicity: Teratogenic effects have occurred in experimental animals.

Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.

Neurotoxicity: Not available.

Mutagenicity: Not available.

SECTION 12-ECOLOGICAL INFORMATION

Ecotoxicity
LC_{50} (96 hr.) Fish: 7.3～22.8 mg/l
EC_{50} (48 hr.) Water flea: —
Biocencentration factor (BCF): 1.67～380

Persistence and degradability
1. The material are expected to form a slick on the surface of waters after release in calm sea conditions. This is expected to evaporate and enter the atmosphere where it will be degraded through reaction with hydroxyl radicals.
2. Some of the material will become associated with benthic sediments, and it is likely to be spread over a fairly wide area of sea floor. Marine sediments may be either aerobic or anaerobic. The material, in probability, is biodegradable, under aerobic conditions. Evidence also suggests that the hydrocarbons may be degradable under anaerobic conditions although such degradation in benthic sediments may be a relatively slow process.
3. Under aerobic conditions the material will degrade to water and carbon dioxide, while under aerobic processes it will produce water, methane, carbon dioxide and carbon dioxide.
4. Based on test results, as well as theoretical considerations, the potential for bioaccumulation may be high. Toxic effects are often observed in species such as blue mussel, daphnia, freshwater green algae, marine copepods and amphipods.

Half-life (Air): 10～104 hr
Half-life (Surface water): 96～528 hr
Half-life (Ground water): 168～672 hr
Half-life (Soil): 96～528 hr

Bioaccumulative potential
This material is not expected to significantly bioaccumulate.

Mobility in soil: —

Other adverse effects: —

SECTION 13-DISPOSAL CONSIDERATIONS

Residues and spilled material are hazardous waste due to ignitability. Disposal must be in accordance with applicable federal, state, or local regulations.
The container for this product can present explosion or fire hazards, even when emptied. To avoid risk of injury, do not cut, puncture, or weld on or near this container. Since the emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14-TRANSPORTATION INFORMATION

US DOT	Shipping Name	Toluene	Hazard Labels	
	Hazard Class	3		
	UN Number	1294		
	Packing Group	II		
Sea(IMO/IMDG)	Shipping Name	Toluene	Hazard Labels	
	Hazard Class	3.2		
	UN Number	1294		
	Packing Group	II		
	IMDG Code Page	3285		
	MARPOL	Not a DOT "Marine Pollutant" per 49 CFR 171.8.		
Air(ICAO/IATA)	Shipping Name	Toluene	Hazard Labels	
	Hazard Class	3.2		
	Subsidiary Class	1294		
	Packing Group	II		
RID/ ADR	No information available.			
Canadian TDG	Shipping Name	Toluene	Hazard Labels	
	Hazard Class	3		
	UN Number	1294		
	Packing Group	II		
	Subsidiary Class	9.2		

SECTION 15-REGULATORY INFORMATION

US FEDERAL

TSCA

CAS# 108-88-3 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 108-88-3: Effective Date: 10/4/82; Sunset Date: 10/4/92

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

CAS# 108-88-3 : final RQ = 1000 pounds (454 kg)

Section 302 (TPQ)

None of the chemicals in this material have a TPQ.

SARA Codes

CAS# 108-88-3 : acute, flammable.

Section 313

This material contains Toluene (CAS# 108-88-3, 99% & 100%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act

CAS# 108-88-3 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act

CAS# 108-88-3 is listed as a Hazardous Substance under the CWA.
CAS# 108-88-3 is listed as a Priority Pollutant under the Clean Water Act.
CAS# 108-88-3 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

Toluene can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

WARNING: This product contains Toluene, a chemical known to the state of California to cause birth defects or other reproductive harm.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F
Risk Phrases : R 10 Flammable.
R 20 Harmful by inhalation.
Safety Phrases : S 9 Keep container in a well-ventilated place.
S 16 Keep away from sources of ignition - No smoking.
S 25 Avoid contact with eyes.
S 29 Do not empty into drains.
S 33 Take precautionary measures against static discharges.

WGK (Water Danger/Protection)

CAS# 108-88-3: 2

United Kingdom Occupational Exposure Limits

CAS# 108-88-3: OES-United Kingdom, TWA 50 ppm TWA; 191 mg/m3 TWA.
CAS# 108-88-3: OES-United Kingdom, STEL 150 ppm STEL; 574 mg/m3 STEL.

CANADA

CAS#100-42-5 is listed on Canada's DSL/NDSL list.
This product has a WHMIS classification of B2, D2A (99%)/B3, D2A (100%).
CAS# 105-05-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

- CAS# 108-88-3: OEL-AUSTRALIA:TWA 100 ppm (375 mg/m3);STEL 150 ppm (560 mg/m3)
- OEL-BELGIUM:TWA 100 ppm (377 mg/m3);STEL 150 ppm (565 mg/m3)
- OEL-CZECHOSLOVAKIA:TWA 200 mg/m3;STEL 1000 mg/m3
- OEL-DENMARK:TWA 50 ppm (190 mg/m3);Skin
- OEL-FINLAND:TWA 100 ppm (375 mg/m3);STEL 150 ppm; Skin
- OEL-FRANCE:TWA 100 ppm (375 mg/m3);STEL 150 ppm (560 mg/m3)
- OEL-GERMANY:TWA 100 ppm (380 mg/m3)
- OEL-HUNGARY:TWA 100 mg/m3;STEL 300 mg/m3;Skin
- OEL-JAPAN:TWA 100 ppm (380 mg/m3)
- OEL-THE NETHERLANDS:TWA 100 ppm (375 mg/m3);Skin
- OEL-THE PHILIPPINES:TWA 100 ppm (375 mg/m3)
- OEL-POLAND:TWA 100 mg/m3
- OEL-RUSSIA:TWA 100 ppm; STEL 50 mg/m3
- OEL-SWEDEN:TWA 50 ppm (200 mg/m3);STEL 100 ppm (400 mg/m3);Skin
- OEL-SWITZERLAND:TWA 100 ppm (380 mg/m3);STEL 500 ppm
- OEL-THAILAND:TWA 200 ppm; STEL 300 ppm
- OEL-TURKEY:TWA 200 ppm (750 mg/m3)
- OEL-UNITED KINGDOM:TWA 100 ppm (375 mg/m3);STEL 150 ppm; Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

SECTION 16-OTHER INFORMATION

References and sources

1. CHEMINFO Data Bank, CCINFO CD, 2005-3
2. HAZARD TEXT Data Bank, TOMES PLUS CD, Vol.65, 2005
3. RETECS Data Bank, TOMES CPS CD, Vol.65, 2005
4. HSDB Data Bank, TOMES CPS CD, Vol.65, 2005
5. Hazardous Substance Data Bank, Environment Protection, Administration, Executive Yuan, ROC (Taiwan)
6. Chemwatch Data Bank, 2005-1
7. SDS, GHS in Taiwan, Council of Labor Affairs, Executive Yuan, ROC (Taiwan)

Version	Date	Remark
Version 1	06/01/1998	Original Version.
Version 2	04/20/2001	Updated 10 sections to 16 sections.
Version 3	08/01/2003	Updated “SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES”.
Version 4	01/01/2006	Updated “SECTION 14-TRANSPORTATION INFORMATION”.
Version 5	08/05/2008	Updated each section by GHS SDS.
Prepared by	Safety & Environment Protection Section, Taiwan SM Corporation Kaohsiung Plant.	

SAFETY DATA SHEET

Version 4.6
Revision Date 03/02/2015
Print Date 02/18/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Trichloroethylene

Product Number : 251402
Brand : Sigma-Aldrich
Index-No. : 602-027-00-9

CAS-No. : 79-01-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin irritation (Category 2), H315
Eye irritation (Category 2A), H319
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 1B), H350
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Acute aquatic toxicity (Category 3), H402
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear eye protection/ face protection.
P280	Wear protective gloves.
P281	Use personal protective equipment as required.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P362	Take off contaminated clothing and wash before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Synonyms	:	TCE Trichloroethene
Formula	:	C_2HCl_3
Molecular weight	:	131.39 g/mol
CAS-No.	:	79-01-6
EC-No.	:	201-167-4
Index-No.	:	602-027-00-9

Hazardous components

Component	Classification	Concentration
Trichloroethylene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
	Skin Irrit. 2; Eye Irrit. 2A; Muta. 2; Carc. 1B; STOT SE 3; Aquatic Acute 3; Aquatic Chronic 3; H315, H319, H336, H341, H350, H412	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, Hydrogen chloride gas

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive. Handle and store under inert gas.
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Trichloroethylene	79-01-6	TWA	10.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment cognitive decrement Renal toxicity Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen		
		STEL	25.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment cognitive decrement Renal toxicity Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen		
		Potential Occupational Carcinogen See Appendix C See Appendix A		
		See Table Z-2		
		TWA	100.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		CEIL	200.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		
		Peak	300.000000 ppm	USA. Occupational Exposure Limits (OSHA) - Table Z-2
		Z37.19-1967		

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Trichloroethylene	79-01-6	Trichloroacetic acid	15.0000 mg/l	Urine	ACGIH - Biological Exposure Indices (BEI)
	Remarks	End of shift at end of workweek			
		Trichloroethanol	0.5000 mg/l	In blood	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			
		Trichloroethylene		In blood	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			
		Trichloroethylene		In end-exhaled air	ACGIH - Biological Exposure Indices (BEI)
		End of shift at end of workweek			

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

Splash contact
Material: Fluorinated rubber
Minimum layer thickness: 0.7 mm
Break through time: 480 min
Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: liquid, clear Colour: colourless
b)	Odour	No data available
c)	Odour Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	Melting point/range: -84.8 °C (-120.6 °F) - lit.
f)	Initial boiling point and boiling range	86.7 °C (188.1 °F) - lit.
g)	Flash point	No data available
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Upper/lower	Upper explosion limit: 10.5 %(V)

	flammability or explosive limits	Lower explosion limit: 8 %(V)
k)	Vapour pressure	81.3 hPa (61.0 mmHg) at 20.0 °C (68.0 °F)
l)	Vapour density	No data available
m)	Relative density	1.463 g/mL at 25 °C (77 °F)
n)	Water solubility	No data available
o)	Partition coefficient: n-octanol/water	log Pow: 2.29log Pow: 5
p)	Auto-ignition temperature	410.0 °C (770.0 °F)
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information
No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
No data available

10.5 Incompatible materials
Oxidizing agents, Strong bases, Magnesium

10.6 Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 4,920 mg/kg

LC50 Inhalation - Mouse - 4 h - 8450 ppm

LD50 Dermal - Rabbit - > 20,000 mg/kg

No data available

Skin corrosion/irritation
Skin - Rabbit
Result: Severe skin irritation - 24 h

Serious eye damage/eye irritation
Eyes - Rabbit
Result: Eye irritation - 24 h

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
Laboratory experiments have shown mutagenic effects.
In vitro tests showed mutagenic effects

Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Possible human carcinogen

IARC:	1 - Group 1: Carcinogenic to humans (Trichloroethylene)
NTP:	Reasonably anticipated to be a human carcinogen (Trichloroethylene)
OSHA:	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available

No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: KX4550000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Exposure to and/or consumption of alcohol may increase toxic effects., Gastrointestinal disturbance, Kidney injury may occur., narcosis
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 41 mg/l - 96.0 h
	LOEC - other fish - 11 mg/l - 10.0 d
	NOEC - Oryzias latipes - 40 mg/l - 10.0 d
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 18.00 mg/l - 48 h
Toxicity to algae	IC50 - Pseudokirchneriella subcapitata (green algae) - 175.00 mg/l - 96 h

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
Does not bioaccumulate.

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1710 Class: 6.1 Packing group: III
Proper shipping name: Trichloroethylene
Reportable Quantity (RQ): 100 lbs

Poison Inhalation Hazard: No

IMDG
UN number: 1710 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: TRICHLOROETHYLENE

IATA
UN number: 1710 Class: 6.1 Packing group: III
Proper shipping name: Trichloroethylene

15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

New Jersey Right To Know Components

	CAS-No.	Revision Date
Trichloroethylene	79-01-6	2007-07-01

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer. Trichloroethylene	CAS-No. 79-01-6	Revision Date 2011-09-01
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.	CAS-No. 79-01-6	Revision Date 2011-09-01

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
Eye Irrit.	Eye irritation
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H402	Harmful to aquatic life.

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.6 Revision Date: 03/02/2015 Print Date: 02/18/2016

ATTACHMENT F

JOBSITE SAFETY INSPECTION CHECKLIST

Jobsite Safety Inspection Checklist

Date: _____ **Inspected By:** _____

Location: _____ **Project #:** _____

Check one of the following: **A:** Acceptable **NA**: Not Applicable **D**: Deficiency

	A	NA	D	Remark
1. HASP available onsite for inspection?				
2. Health & Safety Compliance agreement (in HASP) appropriately signed by Langan employees and contractors?				
3. Hospital route map with directions posted on site?				
4. Emergency Notification List posted on site?				
5. First Aid kit available and properly stocked?				
6. Personnel trained in CPR/First Aid on site?				
7. MSDSs readily available, and all workers knowledgeable about the specific chemicals and compounds to which they may be exposed?				
8 Appropriate PPE being worn by Langan employees and contractors?				
9. Project site safe practices ("Standing Orders") posted?				
10. Project staff have 40-hr./8-hr./Supervisor HAZWOPER training?				
11. Project staff medically cleared to work in hazardous waste sites and fit-tested to wear respirators, if needed?				
12. Respiratory protection readily available?				
13. Health & Safety Incident Report forms available?				
14. Air monitoring instruments calibrated daily, and results recorded on the Daily Instrument Calibration check sheet?				
15. Air monitoring readings recorded on the air monitoring data sheet/field logbook?				
16. Subcontract workers have received 40-hr./8-hr./Spvsr. HAZWOPER training, as appropriate?				
17. Subcontract workers medically cleared to work on site, and fit-tested for respirator wear?				
18. Subcontract workers have respirators readily available?				
19. Mark outs of underground utilities done prior to initiating any subsurface activities?				
20. Decontamination procedures being followed as outlined in HASP?				
21. Are tools in good condition and properly used?				
22. Drilling performed in areas free from underground objects including utilities?				

23. Adequate size/type fire extinguisher supplied?				
24. Equipment at least 20 feet from overhead powerlines?				
25. Evidence that drilling operator is responsible for the safety of his rig.				
26. Trench sides shored, layer back, or boxed?				
27. Underground utilities located, and authorities contacted before digging?				
28. Ladders in trench (25-foot spacing)?				
29. Excavated material placed more than 2 feet away from excavation edge?				
30. Public protected from exposure to open excavation?				
31. People entering the excavation regarding it as a permit-required confined space and following appropriate procedures?				
32. Confined space entry permit is completed and posted?				
33. All persons knowledgeable about the conditions and characteristics of the confined space?				
34. All persons engaged in confined space operations have been trained in safe entry and rescue (non-entry)?				
35. Full body harnesses, lifelines, and hoisting apparatus available for rescue needs?				
36. Attendant and/or supervisor certified in basic first aid and CPR?				
37. Confined space atmosphere checked before entry and continuously while the work is going on?				
38. Results of confined space atmosphere testing recorded?				
39. Evidence of coordination with off-site rescue services to perform entry rescue, if needed?				
40. Are extension cords rated for this work being used and are they properly maintained?				
41. Are GFCIs provided and being used?				

Unsafe Acts: _____

_____

_____

_____

Notes: _____

_____

_____

_____

ATTACHMENT G

JOB SAFETY ANALYSIS FORM

LANGAN	**Job Safety Analysis (JSA)** **Health and Safety**
JSA TITLE: **JSA NUMBER:**	**DATE CREATED:** **CREATED BY**: **REVISION DATE:** **REVISED BY:**

Langan employees must review and revise the Job Safety Analysis (JSA) as needed to address the any site-specific hazards not identified. Employees must provide their signatures on the last page of the JSA indicating they have review the JSA and are aware the potential hazards associated with this work and will follow the provided preventive or corrective measures.

PERSONAL PROTECTIVE EQUIPMENT REQUIRED: (PPE): ■ Required ☒ As Needed		
☐ Steel-toed boots	☐ Nitrile gloves	☐ Dermal Protection (Specify)
☐ Long-sleeved shirt	☐ Leather/ Cut-resistant gloves	☐ High visibility vest/clothing
☐ Safety glasses	☐ Face Shield	☐ Hard hat
ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT NEEDED (Provide specific type(s) or descriptions)		
☐ Air Monitoring:	☐ Respirators:	☐ Other:
☐ Dermal Protection:	☐ Cartridges:	☐ Other:

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE OR CORRECTIVE ACTION
1.	1. 2.	1a. 1b. 2a. 2b.
2.	1.	1
Additional items identified in the field.		
Additional Items.		

If additional items are identified during daily work activities, please notify all relevant personnel about the change and document on this JSA.

LANGAN	Job Safety Analysis (JSA) Health and Safety
JSA Title: COVID-19 Awareness – Site Work **JSA Number: JSA046-00**	
A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.	

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Boots	☐ Long Sleeves	☐ Safety Vest (Class 2)	☐ Hard Hat	☐ Hearing Protection
☐ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☐ Nitrile Gloves	☐ PVC Gloves
☐ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Alcohol-based hand sanitizer, disinfectant wipes/spray				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
1. All Activities	1. Transmittal/exposure of COVID-19	1. Ask yourself and your managers – is this work essential? Can this be done remotely? 2. Stay home if sick or showing symptoms of COVID-19 (e.g., fever, cough, etc.). 3. Carry nitrile gloves, alcohol-based hand sanitizer, face coverings and disinfectant wipes/spray during field work. 4. Check federal, state, and/or local travel restrictions **prior** to travel. Many states, counties, and cities are passing strict "shelter-in-place" or business restrictions in response to COVID-19. 5. Immediately notify Beverly Williams or Rory Johnston (Supervisor if employee chooses) if you display symptoms of COVID-19. Symptoms include fever (over 100.4 F), cough, and shortness of breath. 6. Notify Beverly Williams or Rory Johnston, Supervisor and Coronavirus Task Force if you had close contact with an individual who tested positive or displayed symptoms of COVID-19. 7. Do not touch your face, to the extent possible. 8. Wear face coverings when around other worker to minimize spread of COVID-19. (May be required in certain states or locations.)

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		9. Practice social distancing, maintaining at least 6 feet of distance between yourself and others. Avoid gatherings of more than 10 people. Limit, to the extent possible, contact with public items/objects. 10. Clean your hands frequently with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, sneezing, or using the rest room. 11. If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry. 12. Cover your mouth and nose with a tissue when you cough or sneeze or use the inside of your elbow. 13. Clean and disinfect frequently touched surfaces daily, for example, cell phones, computer equipment, headsets, tables, doorknobs, light switches, countertops, handles, desks, toilets, faucets, and sinks.
2. Travel to Jobsite	1. Transmittal/exposure of COVID-19 between passengers 2. Transmittal/exposure of COVID-19 from previous occupants (rental and fleet vehicles) 3. Transmittal/exposure of COVID-19 while refueling	1. Limit the number of occupants to each vehicle to 2 people. Employees should sit as far away from each other as possible. 2. Disinfect high “hand-traffic” areas of the vehicle: Door handles, steering wheel, turn signal and control rods, dashboard controls, seatbelts, armrests, etc. To the extent possible, do not use recycled air for heat/AC and travel with the windows open. 3. Use hand sanitizer before and after pumping gas and only return to the inside of the vehicle after refueling is complete. 4. Wear nitrile gloves if available or disinfect the keypad, pump handle, and fuel grade button prior to use. 5. Recommend face coverings are worn to minimize spread of COVID-19.
3. Conduct Tailgate Safety Meeting & Complete H&S Paperwork	1. Transmittal/exposure of COVID-19 between meeting participants	1. Practice social distancing, maintaining at least 6 feet of distance between yourself and others. 2. Recommend face coverings are worn when around other workers to minimize spread of COVID-19, 3. Hold meetings outside and keep in mind wind direction. To the extent possible, remain crosswind from other people. 4. Designate a single person to maintain sign-in sheets/permits throughout the day to limit the passing of pens/clipboards between people. 5. Each person should complete their own JSA, even if they are completing similar tasks as others in order to limit the passing of paper/pens/clipboards between people. 6. Include COVID-19 topics and prevention measures in safety meetings.
4. Conduct Site Work	1. Transmittal/exposure of COVID-19 between site workers and public.	1. Practice social distancing maintaining 6 feet of distance between yourself and others. 2. Recommend face coverings are worn when around other workers to minimize spread of COVID-19, 3. To the extent possible, do not interact with the public. If it is necessary, politely explain you are practicing social distance and request they stay at least 6 feet away and they do not attempt to pass objects to you. 4. Wear nitrile gloves during site work underneath the appropriate gloves for your task. Utilize appropriate decontamination procedures, securely bag all waste (including nitrile gloves) generated during site work and dispose of.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		5. Do not share tools. Each person should be equipped with the tools to complete their task or tasks should be divided to remove the need to share tools. If tools must be shared, surfaces should be disinfected. 6. Clean and disinfect surfaces of rental tools and equipment upon receipt. To the extent possible rent equipment from Langan's internal equipment reservation center, where cleaning/disinfecting procedures can be verified.
5. Use of Construction Trailers	1. Transmittal/exposure of COVID-19 between site workers and others.	1. Avoid use of shared trailers, if possible. Minimize trailer use to essential personnel. 2. Practice social distancing; maintaining 6 feet of distance between yourself and others in trailer. 3. Clean and disinfect areas including desks, phones, chairs, and other common areas, before and after use.
6. Purchasing Food from a Restaurant	1. Transmittal/exposure of COVID-19 from other customers, staff, surfaces.	1. To the extent possible, bring your own food. 2. If you must visit a restaurant, call ahead for take-out or "contactless delivery." Do not dine in. When picking up food, follow guidelines for Job Step #8: Purchasing Supplies at Retail/Shipping Centers. 3. Wash hands before and after eating.
7. Smoking Cigarettes	1. Transmittal/exposure of COVID-19 by touching mouth with hands	1. Cigarette smokers are at greater risk of complications arising from COVID-19. Nicotine patches/lozenges/gum, smoking cessation programs, and prescription medications may aid in "kicking the habit" if you decide to quit. 2. Wash hands thoroughly before and after smoking. 3. Discard cigarette butts properly. Do not light cigarettes from others and do not give cigarettes to others.
8. Hotel Stay	1. Transmittal/exposure of COVID-19 from previous occupants, hotel staff, common areas.	1. Verify the hotel chain/brand has modified cleaning procedures to reflect risk of COVID-19. Most hotel companies have issued statements on their websites and in email blasts reflecting these new procedures. 2. Use the front door, and not peripheral entrances. Front doors of hotels are usually automatic. 3. Request ground floor room to avoid elevator use and a room that has not be utilized in 48-72 hours. 4. If elevator use is required, do not directly touch elevator buttons with your hands. Do not ride elevators with other people, to the extent possible. 5. Bring disinfecting wipes or sanitizing spray. Upon arrival, disinfect high "hand-traffic" areas of the hotel room: Door handles, light switches, shower/sink faucet handles, TV remote, curtain/blind handles. Clean these surfaces daily. 6. Place the "Do Not Disturb" Sign on your door to prevent people (housekeeping) from entering your room. 7. Avoid common spaces and hotel sponsored events where crowds will be present. 8. Confirm hotel cleaning procedures have been modified to address COVID-19. Confirm no COVID-19 cases have occurred in hotel
9. Purchasing Supplies at Retail/Shipping Centers	1. Transmittal/exposure of COVID-19 from other customers, staff, surfaces.	1. Plan your travel to limit the need to visit retail/shipping centers. 2. Practice social distancing, maintaining at least 6 feet of distance between yourself and others. If the store is too crowded/small, consider visiting another store or returning at a different time. 3. Avoid high "hand-traffic" items/areas like door handles (i.e. use your shoulder, hip/butt, or open with a disposable napkin/paper towel), credit cards terminals (i.e. use Apple/Android pay if available), shopping carts/baskets (i.e. bring your own shopping

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		bags), counter tops (i.e. ask clerk if you can hold the items while they are scanned) and bulk/buffet items (i.e. just avoid them). 4. Disinfect your hands before and after visiting a retail/shipping center.

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: **Environmental Sampling**
JSA Number: **JSA021-01**

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☐ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☐ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☒ Fire Resistant Clothing	☐ Rubber Boots
☒ Insect/Animal Repellent	☒ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Tyvek Sleeves				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
1. Drive to sample location	1. Rough/Off Road terrain	1. Pay attention to road conditions such as road erosion, unprotected embankments, and soft road conditions.
2. Sample Collection (Walking)	1. Slip/Trips/Falls 2. Back strains 3. Wildlife (Insects, Stray animals, rodents) 4. Poisonous vegetation	1. Minimize distance to sample area/ Plan route and check surface prior to carrying heavy equipment/ Locate safest access point/ Follow good housekeeping procedures/ Mark significant below grade hazards (holes, trenches) with spray paint or cones/ Wear foot protection with ankle support and gripping soles. 2. Use proper lifting techniques/ Use wheeled transport/ Obtain assistance where and when needed/ Consider load weight when evaluating what is safe and unsafe to carry. 3. Be aware of surroundings for the presence of wildlife. Do not approach stray animals. Carry and use animal repellant when needed/ Use bug spray when needed. 4. Keep skin covered/ Identify and avoid poisonous vegetation/ Clean areas after contact with suspected vegetation.
3. Sample Collection (Water)	1. Drowning Hazards 2. Chemical burns (when adding acid preservative to sample) 3. Back Strains 4. Ergonomic issues 5. Slip/Trips/Falls	1. Use buddy system/ Wear flotation vest if water is deeper than 2 feet or swift moving/ Select working area with stable footing. Do not attempt to cross or stand in swift moving water. 2. Wear proper PPE (Nitrile gloves, Tyvek Sleeves) 3. Use proper lifting techniques/ Use wheeled transport/ Obtain assistance where and when needed/ Consider load weight when evaluating what is safe or unsafe to carry. 4. When possible, avoid bending over for long periods of time/ Use a small stool for sitting or knee pad for kneeling.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		5. Minimize distance to sample area/ Plan route and check surface prior to carrying heavy equipment/ Locate safest access point/ Follow good housekeeping procedures/ Mark significant below grade hazards (holes, trenches) with spray paint or cones/ Wear foot protection with ankle support and gripping soles/ Avoid standing water or slippery terrain.
4. All activities	1. Slips/ Trips/ Falls 2. Hand injuries, cuts, or lacerations during manual handling of materials 3. Foot injuries 4. Back injuries 5. Traffic 6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 7. High Noise levels 8. Overhead hazards 9. Heat Stress/ Cold Stress 10. Eye Injuries	1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards 2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves 3. Wear Langan approved safety shoes 4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible 5. Wear high visibility clothing & vest / Use cones or signs to designate work area 6. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed 7. Wear hearing protection 8. Wear hard hat / Avoid areas where overhead hazards exist. 9. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress 10. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: **Subsurface Investigation**
JSA Number: **JSA030-01**

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – *Stop,* what has changed?
T – *Think* about the task
E – *Evaluate* potential hazards
P – *Plan* safe approach
S - *Start* task / *Stop* & regroup

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☒ Safety Goggles	☐ Face Shield	☐ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☒ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Dielectric Overshoes, Sun Block				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
5. Transport equipment to work area	2. Back/strain 3. Slip/Trip/Falls 4. Traffic 5. Cuts/abrasions/contusions from equipment 6. Accidents due to vehicle operations	1. Use proper lifting techniques/Use wheeled transport 2. Minimize distance to work area/unobstructed path to work area/follow good housekeeping procedures 3. Wear proper PPE (high visibility vest or clothing) 4. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes) 5. Observe posted speed limits/ Wear seat belts at all times
6. Traffic	1. Hit by moving vehicle	1. Use traffic cones and signage/ Use High visibility traffic vests and clothing/ Caution tape when working near active roadways.
7. Field Work (drilling, resistivity testing, and inspection)	1. Biological Hazards: insects, rats, snakes, poisonous plants, and other animals 2. Heat stress/injuries 3. Cold Stress/injuries 4. High Energy Transmission Lines 5. Underground Utilities 6. Electrical (soil resistivity testing)	1. Inspect work area to identify biological hazards. Wear light colored long sleeve shirt and long pants/ Use insect repellant as necessary/ Beware of tall grass, bushes, woods, and other areas where ticks may live/ Avoid leaving garbage on site to prevent attracting animals/ Identify and avoid contact with poisonous plants/Beware of rats, snakes, or stray animals. 2. Wear proper clothing (light colored)/ drink plenty of water/ take regular breaks/use sun block. 3. Wear proper clothing/ dress in layers/ take regular breaks. 4. Avoid direct contact with high energy transmission lines/ position equipment at least 15 feet or as required by PSE&G from the transmission lines/ wear proper PPE (dielectric overshoes 15 kV minimum rating).

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		5. Call one-call service before performing intrusive field work/ Review utility mark-outs and available utility drawings (with respect to proposed work locations)/ Follow Underground Utility Guidelines 6. See AGI Sting R1 operating manual for specific concerns during operating instrument
8. All activities	1. Slips/ Trips/ Falls 2. Hand injuries, cuts, or lacerations during manual handling of materials 3. Foot injuries 4. Back injuries 5. Traffic 6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 7. High Noise levels 8. Overhead hazards 9. Heat Stress/ Cold Stress 10. Eye Injuries	7. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 8. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 9. Wear Langan approved safety shoes. 10. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 11. Wear high visibility clothing & vest / Use cones or signs to designate work area. 12. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 13. Wear proper hearing protection. 14. Wear hard hat / Avoid areas where overhead hazards exist. 15. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 16. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	**Sign Name**	**Date**
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: **Field Sampling**
JSA Number: **JSA022-01**

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – ***Stop,*** *what has changed?*
T – ***Think*** *about the task*
E – ***Evaluate*** *potential hazards*
P – ***Plan*** *safe approach*
S - ***Start*** *task /* ***Stop*** *& regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☐ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☒ Traffic Cones/Signs	☐ Life Vest/Jacket	
☐ Other:				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
9. Unpack/Transport equipment to work area.	7. Back Strains 8. Slip/Trips/Falls 9. Cuts/Abrasions from equipment 10. Contusions from dropped equipment	6. Use proper lifting techniques/Use wheeled transport. 7. Minimize distance to work area/Unobstructed path to work area/follow good housekeeping procedures. Mark slip/trip/fall hazards with orange safety cones. 8. Wear proper PPE (leather gloves, long sleeves). 9. Wear proper PPE (Langan approved safety shoes).
10. Initial Site Arrival-Site Assessment	5. Traffic	5. Situational awareness (be alert of your surroundings). Secure area from through traffic.
11. Surface Water Sampling	6. Contaminated media. Skin/eye contact with biological agents and/or chemicals.	6. Wear appropriate PPE (Safety glasses, appropriate gloves). Review (M)SDS for all chemicals being.
12. Sampling from bridges	1. Struck by vehicles	1. Wear appropriate PPE (Safety Vest). Use buddy system and orange safety cones.
13. Icing of Samples/ Transporting coolers/equipment from work area.	11. Back Strains 12. Slips/Trips/Falls 13. Cuts/Abrasions from equipment 14. Pinch/Crushing Hazards.	17. Drain coolers of water. Use proper lifting techniques. Use wheeled transport. 18. Have unobstructed path from work area. Aware of surroundings. 19. Wear proper PPE (Leather gloves, long sleeves) 20. Wear proper PPE (Leather gloves, long sleeves)
14. Site Departure	1. Contaminated PPE/Vehicle	1. Contaminated PPE should be disposed of on-site. Remove boots and soiled clothing for secure storage in trunk. Wash hands promptly.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
15. All activities	1. Slips/ Trips/ Falls 2. Hand injuries, cuts, or lacerations during manual handling of materials 3. Foot injuries 4. Back injuries 15. Traffic 16. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 17. High Noise levels 18. Overhead hazards 19. Heat Stress/ Cold Stress 20. Eye Injuries	1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards 2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves 3. Wear Langan approved safety shoes 4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible 21. Wear high visibility clothing & vest / Use cones or signs to designate work area. 22. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 23. Wear hearing protection 24. Wear hard hat / Avoid areas where overhead hazards exist. 25. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 26. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN	Job Safety Analysis (JSA) Health and Safety
JSA Title: Equipment Transportation and Set-up **JSA Number:** JSA012-01 **A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**	 **S** – ***Stop,*** *what has changed?* **T** – ***Think*** *about the task* **E** – ***Evaluate*** *potential hazards* **P** – ***Plan*** *safe approach* **S** - ***Start*** *task /* ***Stop*** *& regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☐ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☐ Other:				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
16. Transport equipment to work area	11. Back Strain 12. Slips/ Trips/ Falls 13. Traffic 14. Cuts/abrasions from equipment 15. Contusions from dropped equipment	1. Use proper lifting techniques / Use wheeled transport. 2. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures. 3. Wear proper PPE (high visibility vest or clothing) 4. Wear proper PPE (leather gloves, long sleeves) 5. Wear proper PPE (safety shoes)
17. Moving equipment to its planned location	6. Pinch Hazard 7. Slips/ Trips/ Falls	1. Wear proper PPE (leather gloves) 2. Be aware of potential trip hazards / Practice good housekeeping procedures / Mark significant below-grade hazards (i.e., holes, trenches) with safety cones or spray paint
18. Equipment Set-up	7. Pinch Hazard 8. Cuts/abrasions to knuckles/hands. 9. Back Strain	1. Wear proper PPE (leather gloves) 2. Wear proper PPE (leather gloves) 3. Use proper lifting techniques / Use wheeled transport
19. All activities	21. Slips/ Trips/ Falls 22. Hand injuries, cuts, or lacerations during manual handling of materials 23. Foot injuries 24. Back injuries 25. Traffic 26. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)	27. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 28. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 29. Wear Langan approved safety shoes.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
4. All activities (cont'd)	27. High Noise levels 28. Overhead hazards 29. Heat Stress/ Cold Stress 30. Eye Injuries	30. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 31. Wear high visibility clothing & vest / Use cones or signs to designate work area. 32. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 33. Wear hearing protection 34. Wear hard hat / Avoid areas where overhead hazards exist. 35. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 36. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: 55-gallon Drum Sampling
JSA Number: JSA043-01

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – Stop, *what has changed?*
T – Think *about the task*
E – Evaluate *potential hazards*
P – Plan *safe approach*
S - Start *task /* **Stop** *&* *regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☐ Hearing Protection
☒ Safety Glasses	☒ Safety Goggles	☒ Face Shield	☒ Nitrile Gloves	☒ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: All Drums are required to be labeled. Langan employees do not open or move undocumented drums or unlabeled drums without proper project manager authorization.				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
20. Unpack/Transport equipment to work area.	16. Back Strains 17. Slip/Trips/Falls 18. Cuts/Abrasions from equipment 4. Contusions from dropped equipment	10. Use proper lifting techniques/Use wheeled transport. 11. Minimize distance to work area/Unobstructed path to work area/follow good housekeeping procedures. Mark slip/trip/fall hazards with orange safety cones. 12. Wear proper PPE (leather gloves, long sleeves). 4. Wear proper PPE (Langan approved safety shoes).
21. Open Drums	1. Hand Injuries, cuts or lacerations when untightening drum locking bolt, removing drum lid strap, or removing lid. 2. Pressure from drums.	1. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. Use non-metallic mallet and non-sparking tools/wrenches. 2. Open drum slowly to relieve pressure. Wear proper PPE: face shield and goggles; correct gloves; and over garments.
22. Collecting Soil/Fluid Sample	8. Irritation to eye from vapor, soil dust, or splashing. 9. Irritation to exposed skin	6. Wear proper eye protection including safety glasses/ face shield/googles and when necessary, splash guard. If dust or vapor phase is present, wear appropriate safety breathing gear (1/2 mask or full face mask with correct filter) 7. Wear proper skin protection including nitrile gloves.
23. Closing Drums	1. Hand Injuries, cuts or lacerations when untightening drum locking bolt, removing drum lid strap, or removing lid.	7. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. Use non-metallic mallet and non-sparking tools/wrenches.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
24.Moving Drums	2. Hand Injuries, cuts or lacerations when untightening drum locking bolt, removing drum lid strap, or removing lid. 3. Back Strains	2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. Use non-metallic mallet and non-sparking tools/wrenches. 3. Use proper lifting techniques/Use wheeled transport.
25. All activities	31. Slips/ Trips/ Falls 32. Hand injuries, cuts, or lacerations during manual handling of materials 33. Foot injuries 34. Back injuries 35. Traffic 36. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 37. High Noise levels 38. Overhead hazards 39. Heat Stress/ Cold Stress 40. Eye Injuries	37. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 38. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 39. Wear Langan approved safety shoes. 40. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 41. Wear high visibility clothing & vest / Use cones or signs to designate work area. 42. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 43. Wear hearing protection 44. Wear hard hat / Avoid areas where overhead hazards exist. 45. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 46. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: Direct-Push Soil Borings
JSA Number: JSA004-01

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – Stop, *what has changed?*
T – Think *about the task*
E – Evaluate *potential hazards*
P – Plan *safe approach*
S - Start *task /* **Stop** *&* *regroup*

PERSONAL PROTECTIVE EQUIPMENT REQUIRED:				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☒ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Half-face respirator, dust cartridges, PID (if applicable)				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
26. Move equipment to work site	19. Back strain when lifting equipment. 20. Slips/ Trips/ Falls while moving equipment. 21. Traffic (if applicable) 22. Pinched fingers or running over toes during GeoProbe set-up. 23. Overturn drilling rig while transporting to loading dock on flat-bed tow truck	13. Use proper lifting technique (use legs for bending and lifting and not the back)/ Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle 14. Use proper lifting technique (use legs for bending and lifting and not the back) / Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle / Have unobstructed path to vehicle or collection point / Do not lift/walk with boxes that are heavy/difficult to lift 15. Wear high visibility safety vests or clothing / Exercise caution 16. Wear proper PPE (cut-resistant gloves) / Stay alert, be aware of geoprobe rig at all times 17. Drill rig should be parked in center of flat-bed tow truck / Emergency brake shall be used at all times during transport on the flat-bed truck/ All unnecessary personnel should stay away from the flat-bed truck during moving activities
27. Calibration of monitoring equipment	10. Skin or eye contact with calibration chemicals 11. Pinch fingers in monitoring equipment	8. Wear proper PPE (safety glasses/ goggles) 9. Wear proper PPE (leather gloves)
28. Set-up GeoProbe rig	10. Geoprobe rig movement	8. All field personnel should stay clear of the GeoProbe rig while moving / Use a spotter when backing up the GeoProbe
29. Advance GeoProbe rods below ground surface to desired depth	4. Underground utilities 5. High noise levels	4. Clean all subsurface soil borings to a minimum of 5 feet below grade. 5. Wear proper PPE (hearing protection)
30. Remove and open acetate liner.	41. Pinched fingers while removing macrocore.	1. Wear proper PPE (nitrile gloves, cut-resistant or leather gloves 2. Wear proper PPE (cut-resistant or leather gloves)

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
5. Remove and open acetate liner (cont'd)	42. Cuts/lacerations when cutting acetate liner open. 43. Exposure to hazardous vapors 44. Skin contacts with contaminated soil	3. Do not place face over acetate liner when opening / Monitor hazardous vapors in air with PID / Upgrade PPE as necessary based on levels contained in the Health and Safety Plan 4. Wear proper PPE (nitrile gloves)
31. Sample Collections a) Monitor parameters. b) Prepare sample containers and labels	1. Contact with potentially contaminated soil. 2. Lacerations from broken sample bottles 3. Back strain while transporting full coolers. 4. Internal exposure to contaminants and metals through inhalation of dust 5. Slips/ Trips/ Falls	1. Use monitoring devices / Wear proper PPE (safety glasses, nitrile gloves) 2. Do not over-tighten bottle caps / Handle bottles safely to prevent breakage. 6. Use proper lifting techniques / Do not lift heavy loads without assistance. 7. Avoid creating dust / If necessary, wear a half mask respirator with applicable dust cartridge / Inspect respirator for damage and cleanliness prior to use / Clean respirator after each use and store in a clean, secure location. 8. Be alert / Follow good housekeeping procedures
32. Remove excess soil from acetate liner and place in 55-gallon drum (IF NOT PERFORMED BY LANGAN, REMOVE!)	1. Cuts/lacerations from acetate liner 2. Pinched fingers/hand while opening/closing drum. 3. Skin contacts with contaminated soil 4. Soil debris in eyes	1. Wear proper PPE (cut-resistant or leather gloves) 2. Wear proper PPE (cut-resistant or leather gloves) 3. Wear proper PPE (nitrile gloves) 4. Wear proper PPE (safety glasses)

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
8. Transport drums to central staging location (IF NOT PERFORMED BY LANGAN, REMOVE!)	1. Back, arm or shoulder strain from moving drums. 2. Pinch fingers/hand in drum cart when moving drums. 3. Pinch fingers/hand when operating lift-gate on vehicle. 4. Contact with potentially contaminated groundwater when moving improperly sealed drums. 5. Slips when moving drums. 6. Drop drum on feet/toes	47. Use drum cart for moving drums / Use proper lifting techniques / Do not lift heavy loads without assistance. 48. Wear proper PPE (cut-resistant or leather gloves) 49. Wear proper PPE (cut-resistant or leather gloves) 50. Wear proper PPE (nitrile gloves underneath work gloves) 51. Follow good housekeeping procedures / Ensure route to move drum and storage space is free from obstructions. 52. Wear proper PPE (safety shoes) / Work in a safe manner to prevent dropped drum
9. All activities 9. All activities (cont'd)	1. Slips/ Trips/ Falls 2. Hand injuries, cuts, or lacerations during manual handling of materials 3. Foot injuries 4. Back injuries 5. Traffic 6. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 7. High Noise levels 8. Overhead hazards 9. Heat Stress/ Cold Stress 10. Eye Injuries	1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 3. Wear Langan approved safety shoes. 4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 5. Wear high visibility clothing & vest / Use cones or signs to designate work area. 6. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 7. Wear hearing protection 8. Wear hard hat / Avoid areas where overhead hazards exist. 9. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 10. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date

Prepared by:		
Reviewed by:		

LANGAN	Job Safety Analysis (JSA) Health and Safety
JSA Title: Geophysical Investigation **JSA Number:** JSA023-01 **A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**	 **S – Stop,** *what has changed?* **T – Think** *about the task* **E – Evaluate** *potential hazards* **P – Plan** *safe approach* **S - Start** *task /* **Stop** *& regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☒ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☐ Other:				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
33. Transport equipment to work area	24. Back/strain 25. Slip/Trip/Falls 26. Traffic 27. Cuts/abrasions/contusions from equipment	18. Use proper lifting techniques/Use wheeled transport 19. Minimize distance to work area/unobstructed path to work area/follow good housekeeping procedures 20. Wear proper PPE (high visibility vest or clothing) 21. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes)
34. Supervision of subcontractor and all other activities	12. Slip/Trips/Falls 13. Hand injuries 14. Foot injuries 15. Back injuries/Strains 16. Traffic 17. Wildlife a. Wildlife b. Mice/rats c. Vectors (i.e., mosquitoes, bees, etc.) 7. Heat/Cold Stress	10. Be aware of potential trip hazards/follow good housekeeping procedures/mark significant below-grade hazards (i.e., holes, trenches, wires, ropes) with safety cones or spray paint. 11. Wear proper PPE (leather gloves)/watch wear you place your hands/inspect material or equipment for jagged, rough, or slippery surfaces/ watch for pinch points/ wipe off slippery, wet, or dirty items prior to handling. 12. Wear proper PPE (Langan approved safety shoes)/ Be aware of uneven terrain) 13. Use proper lifting techniques/ Buddy system when lifting/ use wheeled transport. 14. Wear proper PPE (high-visibility shirts and vests)/ use cones if appropriate/ notify equipment operators of work area. 15. Be aware of surroundings at all times for the presence of wildlife. a. Do not approach stray animals. b. Carry animal repellant/ use if situation arises. c. Use bug spray when needed. 7. Wear proper attire for weather conditions (sunscreen, protective clothing in

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		sunlight or layer clothing in cold weather)/ drink plenty of fluids/ take regular breaks.
35. All activities	45. Slips/ Trips/ Falls 46. Hand injuries, cuts, or lacerations during manual handling of materials 47. Foot injuries 48. Back injuries 49. Traffic 50. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 51. High Noise levels 52. Overhead hazards 53. Heat Stress/ Cold Stress 54. Eye Injuries	53. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 54. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 55. Wear Langan approved safety shoes. 56. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 57. Wear high visibility clothing & vest / Use cones or signs to designate work area. 58. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 59. Wear proper hearing protection. 60. Wear hard hat / Avoid areas where overhead hazards exist. 61. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 62. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN	Job Safety Analysis (JSA) Health and Safety
JSA Title: Groundwater Sampling **JSA Number:** JSA008-01 **A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.**	 S – *Stop*, what has changed? T – *Think* about the task E – *Evaluate* potential hazards P – *Plan* safe approach S - *Start* task / *Stop* & regroup

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☒ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Tyvek sleeves, Dermal Protection, PID				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
36. Transport equipment to work area	1. Back Strain 2. Slips/ Trips/ Falls 3. Traffic 4. Cuts/abrasions from equipment 5. Contusions from dropped equipment	1. Use proper lifting techniques / Use wheeled transport. 2. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures. 3. Wear proper PPE (high visibility vest or clothing) 4. Wear proper PPE (leather gloves, long sleeves) 5. Wear proper PPE (safety shoes)
37. Remove well cover	18. Scrape knuckles/hand 19. Strain wrist/bruise palm 20. Pinch fingers or hand	3. Wear proper PPE (leather gloves) 4. Using a hammer, tap the end of the wrench to loosen grip of bolts. 5. Wear proper PPE (leather gloves)
38. Remove well cap and lock	11. Well can pops from pressure. 12. Exposure to hazardous substances through inhalation or dermal exposure 13. Scrape knuckles/hand 14. Strain write/bruise palm	5. Remove cap slowly to relieve pressure / Do not place face over well when opening / Wear proper PPE (safety glasses) 6. Use direct air monitoring/reading instrument (i.e., PID) / Be familiar with and follow actions prescribed in the HASP / Wear proper PPE (nitrile gloves) 7. Wear proper PPE (leather gloves) 8. Using hammer, tap the end of the wrench to loosen grip
39. Measure head-space vapor levels	1. Exposure to hazardous substances through inhalation	1. Do not place face over well when collecting measurement
40. Remove dedicated tubing (if necessary)	1. Exposure to hazardous substances through inhalation or dermal exposure 2. Tubing swings around after removal	1. Wear proper PPE (nitrile gloves, Tyvek sleeves) 2. Wear proper PPE (safety glasses)
41. Set-up plastic sheeting for work site around the well	1. Lacerations when cutting plastic sheeting.	1. Use scissors to cut plastic sheeting / Cut motions should always be away from body and body parts

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
42. Measure depth to water	1. Exposure to hazardous substances through inhalation or dermal exposure 2. Pinch fingers or hand in water level instrument	1. Wear proper PPE (nitrile gloves) 2. Wear proper PPE (leather gloves)
43. Calibrate monitoring equipment	1. Skin or eye contact with calibration chemicals 2. Pinch fingers or hand in monitoring equipment	1. Wear proper PPE (safety glasses, nitrile gloves) 2. Wear proper PPE (leather gloves) / Avoid pinch points
44. Install sampling pump in well	1. Hand injuries during installation of pump 2. Lacerations when cutting tubing. 3. Back strain during installation of pump 4. Physical hazards associated with manual lifting of heavy equipment. 5. Back strain from starting generator. 6. Burns from hot exhaust from generator. 7. Electrical shock from improper use of generator and pump 8. Contaminated water spray from loose connections	1. Wear proper PPE (leather gloves, nitrile gloves) 2. Use safety tubing cutter. 3. Use proper lifting techniques. 4. Use proper lifting techniques / Use wheeled transport for heavy equipment. 5. Use arm when starting generator / Do not over-strain if generator does not start. 6. Do not touch generator near exhaust / Use proper handle to carry / Allow generator to cool down before moving. 7. Properly plug in pump to generator / Do not allow the pump or generator to contact water / Check for breaks in the cord. 8. Check all tubing connections to ensure they are tight and secure

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
10. Purge water	1. Contact with potentially contaminated groundwater. 2. Back strain from lifting buckets of water 3. Tripping potential on sample discharge lines and pump electric lines	1. Wear proper PPE (safety glasses, nitrile gloves) 2. Use proper lifting techniques / Use wheeled transport. 3. Organize discharge of electric line to keep out of way as much as possible / Mark potential tripping hazards with caution tape or safety cones
11. Sample water collection	1. Contact with potentially contaminated groundwater through dermal exposure. 2. Contact with and burns from acid used for sample preservation. 3. Tripping potential on sample discharge lines and pump electric lines 4. Lacerations from broken sample bottles 5. Back strain when transporting coolers full of collected samples. 6. Slips/ Trips/ Falls	1. Wear proper PPE (safety glasses, nitrile gloves) 2. Wear proper PPE (safety glasses, nitrile gloves) / Ensure sample bottle lids are secure before use and after sample collection. 3. Organize line to keep out of the way as much as possible / Mark potential tripping hazards with caution tape or safety cones. 4. Do not over-tighten bottle caps / Handle bottles safely to prevent breakage / Wrap glass bottles in bubble wrap, if possible 5. Use proper lifting techniques / Use wheeled transport / Seek assistance if coolers weight exceeds 50lbs. / Minimize distance to vehicle. 6. Have unobstructed path to vehicle or collection point / Follow good housekeeping procedures / Do not lift/walk with coolers that are too heavy/difficult to lift
12. Remove pump and pack up equipment	1. Back strain when removing pump or lifting heavy equipment	1. Use proper lifting technique / Use wheeled transport for heavy equipment
13. Replace well cap and lock	1. Scrape fingers/hand 2. Strain wrist/bruise palm	1. Wear proper PPE (leather gloves) 2. Using hammer, tap the end of the well cap to tighten grip
14. Replace well cover	1. Scrape knuckles/hand 2. Strain write/bruise palm. 3. Pinch fingers or hand	1. Wear proper PPE (leather gloves) 2. Using hammer, tap the end of the wrench to tighten the grip of the bolts. 3. Wear proper PPE (leather gloves)
15. Transport drums to disposal staging location	1. Back, arm or shoulder strain from moving drums. 2. Pinch hazard 3. Contact with potentially contaminated groundwater when moving improperly sealed drums. 4. Slips/ Trips/ Falls when moving drum. 5. Drop drum on feet/toes	1. Use drum cart for moving drums / Use proper lifting techniques / Obtain assistance, if needed 2. Wear proper PPE (leather gloves) 3. Wear proper PPE (nitrile gloves under leather gloves) / Properly seal drum to prevent leak. 4. Ensure route to move drum to storage space is dry and free from obstructions. 5. Wear proper PPE (safety shoes)
16. Place used PPE in designated disposal drum	1. Pressure build-up inside drum 2. Pinch hazard	1. Remove cap from bung hole in drum to relieve pressure. 2. Wear proper PPE (leather gloves)
17. Decontaminate equipment	1. Splashing water/soap from decontamination 2. Contact with potentially contaminated groundwater through dermal exposure. 3. Electrical shock from broken electric cords	1. Wear proper PPE (safety glasses) 2. Wear proper PPE (safety glasses, dermal protection) 3. Properly plug in pump to generator / Do not allow the pump or generator to contact water / Check for breaks in the cord
18. All activities	55. Slips/ Trips/ Falls 56. Hand injuries, cuts, or lacerations during manual handling of materials 57. Foot injuries 58. Back injuries 59. Traffic 60. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.)	63. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 64. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 65. Wear Langan approved safety shoes.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
	61. High Noise levels 62. Overhead hazards 63. Heat Stress/ Cold Stress 64. Eye Injuries	66. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 67. Wear high visibility clothing & vest / Use cones or signs to designate work area. 68. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 69. Wear hearing protection 70. Wear hard hat / Avoid areas where overhead hazards exist. 71. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 72. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN	Job Safety Analysis (JSA) Health and Safety
JSA Title: Well Installation **JSA Number: JSA019-01**	 **S – Stop,** *what has changed?* **T – Think** *about the task* **E – Evaluate** *potential hazards* **P – Plan** *safe approach* **S - Start** *task /* **Stop** *& regroup*
A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.	

PERSONAL PROTECTIVE EQUIPMENT REQUIRED:				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: PID, Tyvek sleeves				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
45. Move equipment to work site	28. Back strain when lifting equipment. 29. Slips/ Trips/ Falls while moving equipment. 30. Traffic (if applicable) 31. Pinched fingers or running over toes during GeoProbe set-up. 32. Overturn drilling rig while transporting to loading dock on flat-bed tow truck	22. Use proper lifting technique (use legs for bending and lifting and not the back)/ Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle 23. Use proper lifting technique (use legs for bending and lifting and not the back) / Use wheeled transport for heavy equipment / Get assistance when handling loads greater than 50 lbs. / Minimize distance to vehicle / Have unobstructed path to vehicle or collection point / Do not lift/walk with boxes that are heavy/difficult to lift 24. Wear high visibility safety vests or clothing / Exercise caution 25. Wear proper PPE (cut-resistant gloves) / Stay alert, be aware of geoprobe rig at all times 26. Drill rig should be parked in center of flat-bed tow truck / Emergency brake shall be used at all times during transport on the flat-bed truck/ All unnecessary personnel should stay away from the flat-bed truck during moving activities
46. Calibration of monitoring equipment	21. Skin or eye contact with calibration chemicals 22. Pinch fingers in monitoring equipment	16. Wear proper PPE (safety glasses/ goggles) 17. Wear proper PPE (leather gloves)
18. Set-up GeoProbe rig	15. Geoprobe rig movement	9. All field personnel should stay clear of the GeoProbe rig while moving / Use a spotter when backing up the GeoProbe
19. Advance GeoProbe rods below ground surface to desired depth	6. Underground utilities 7. High noise levels	9. Clean all subsurface soil borings to a minimum of 5 feet below grade. 10. Wear proper PPE (hearing protection)

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
20. Remove and open acetate liner. 5. Remove and open acetate liner (cont'd)	65. Pinched fingers while removing macrocore. 66. Cuts/lacerations when cutting acetate liner open. 67. Exposure to hazardous vapors 68. Skin contacts with contaminated soil	5. Wear proper PPE (nitrile gloves, cut-resistant or leather gloves 6. Wear proper PPE (cut-resistant or leather gloves) 7. Do not place face over acetate liner when opening / Monitor hazardous vapors in air with PID / Upgrade PPE as necessary based on levels contained in the Health and Safety Plan 8. Wear proper PPE (nitrile gloves)
6. Remove excess soil from acetate liner and place in 55-gallon drum (IF NOT PERFORMED BY LANGAN, REMOVE!)	5. Cuts/lacerations from acetate liner 6. Pinched fingers/hand while opening/closing drum. 7. Skin contacts with contaminated soil 8. Soil debris in eyes	5. Wear proper PPE (cut-resistant or leather gloves) 6. Wear proper PPE (cut-resistant or leather gloves) 7. Wear proper PPE (nitrile gloves) 8. Wear proper PPE (safety glasses)
7. Attach hollow-stem augers to the GeoProbe rig; Advance augers and attach. additional augers until desired depth is reached	1. Strain wrist/bruise palm 2. Pinched fingers 3. Back Strain 4. Clothing entanglement 5. Carbon monoxide poisoning 6. Bruise toes/foot 7. High noise levels 8. Skin contacts with contaminated soil	1. Wear proper PPE (cut-resistant or leather gloves) 2. Wear proper PPE (cut-resistant or leather gloves) 3. Use proper lifting techniques. 4. Wear proper work attire(no loose clothing/strings) 5. Properly ventilate work area 6. Wear proper PPE (safety shoes) 7. Wear proper PPE (hearing protection) 8. Wear proper PPE (Tyvek sleeves, nitrile gloves)
8. Install monitoring well	1. Pinched fingers 2. Lacerations/abrasions 3. Back Strain	1. Wear proper PPE (cut-resistant or leather gloves) 2. Wear proper PPE (cut-resistant or leather gloves) 3. Use proper lifting techniques
9. Tremie-grout annulus space above bentonite seal	1. Back strain 2. Pinched fingers	1. Use proper lifting techniques. 2. Wear proper PPE (cut-resistant or leather gloves)
10. Install flush-mount monitoring well pad	1. Splashed concrete. 2. Pinched fingers 3. Cuts/lacerations	1. Wear proper PPE (safety glasses) 2. Wear proper PPE (cut-resistant or leather gloves) 3. Wear proper PPE (cut-resistant or leather gloves)
11. Decontaminate equipment	1. Splashing water/soap 2. Contact with potentially contaminated groundwater/soil through dermal exposure. 3. Electrical shock from broken electric cords	1. Wear proper PPE (safety glasses) 2. Wear proper PPE (safety glasses, dermal protection) 3. Properly plug in pump to generator / Do not allow the pump or generator to contact water / Check for breaks in the cord
12. Transport drums to central staging location (IF NOT PERFORMED BY LANGAN, REMOVE!)	7. Back, arm or shoulder strain from moving drums. 8. Pinch fingers/hand in drum cart when moving drums. 9. Pinch fingers/hand when operating lift-gate on vehicle. 10. Contact with potentially contaminated groundwater when moving improperly sealed drums. 11. Slips when moving drums. 12. Drop drum on feet/toes	73. Use drum cart for moving drums / Use proper lifting techniques / Do not lift heavy loads without assistance. 74. Wear proper PPE (cut-resistant or leather gloves) 75. Wear proper PPE (cut-resistant or leather gloves) 76. Wear proper PPE (nitrile gloves underneath work gloves) 77. Follow good housekeeping procedures / Ensure route to move drum and storage space is free from obstructions. 78. Wear proper PPE (safety shoes) / Work in a safe manner to prevent dropped drum

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
13. All activities 13. All activities (cont'd)	11. Slips/ Trips/ Falls 12. Hand injuries, cuts, or lacerations during manual handling of materials 13. Foot injuries 14. Back injuries 15. Traffic 16. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 17. High Noise levels 18. Overhead hazards 19. Heat Stress/ Cold Stress 20. Eye Injuries	11. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 12. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 13. Wear Langan approved safety shoes. 14. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 15. Wear high visibility clothing & vest / Use cones or signs to designate work area. 16. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 17. Wear hearing protection 18. Wear hard hat / Avoid areas where overhead hazards exist. 19. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 20. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: **Monitoring Well Development**
JSA Number: **JSA026-01**

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☐ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☒ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☒ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Tyvek Sleeves				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
47. Transport equipment to work area	33. Back Strains 34. Slips/Trips/Falls 35. Traffic 36. Cuts/Abrasions/Contusions from equipment	27. Use proper lifting techniques/ Use wheeled transport/ use buddy system when lifting equipment. 28. Minimize distance from work area/ unobstructed path to collection points and vehicle/ Follow good housekeeping procedures. 29. Wear high-visibility vest or clothing/Exercise caution/ Use traffic cones or signage if needed. 30. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes).
48. Measure depth of water	23. Exposure to hazardous substances 24. Pinched fingers	21. Wear proper PPE (Nitrile gloves, Safety glasses/Face shield). 22. Wear proper PPE (cut-resistant gloves).
49. Install Tremie pipe in the monitoring well and connect to water source.	16. Hand injuries during installation (pinched fingers/hands). 17. Back strain from holding Tremie pipe. 18. High pressure water spray.	10. Wear proper PPE (Nitrile gloves/cut-resistant gloves). 11. Use proper lifting techniques/ Use two personnel when lowering pump greater than 80 feet. 12. Ensure all those connections are tight and secure/ Use proper PPE (face shield and safety glasses).
50. Install pump in to well. a. Connect pump to sample tubing. b. Lower pump to desired depth in well. c. Connect sample tubing to flow cell. d. Connect pump to power source	8. Hand injuries during pump installation and sample tubing cutting. 9. Back strain 10. Electric shock 11. Exhaust gases from generator 12. Burns from hot equipment	11. Wear proper PPE when installing pump and cutting sample tubing (Nitrile and cut-resistant gloves)/ Use tubing cutter. 12. Proper lifting techniques/ Two personnel when installing pump at depths greater than 80 feet/ Use buddy when lifting heavy loads (pump, generator)/Use wheeled transport. 13. Ensure equipment is (LO/TO: locked out/tagged out) prior to preforming any electrical connections/ Inspect wires for frays or cuts/Ensure generator is properly grounded prior to starting.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
(generator) e. Turn on power source (generator)		14. Position generator so that exhaust is flowing away from work area. 15. Do not touch exhaust or any hot part of generator/ Allow equipment time to cool down prior to carrying/ Use proper PPE (long sleeves, leather gloves)
51. Develop monitoring well. a. Jet water into well using Tremie pipe. b. Turn pump on and adjust to desired flow rate. c. Surge pump up and down well to remove sediment from screen. d. Containerize all purge water from well.	69. Hand injuries 70. Face injuries 71. Contaminated spray from water	79. Wear proper PPE (cut-resistant gloves and nitrile gloves). 80. Wear proper PPE (face shield and safety glasses)/do not stand over well opening. 81. Wear proper PPE (Face shield and safety goggles)/Tyvek over garments/ Ensure all connections are secure and tight/ Tubing outlet is contained in an overflow container.
52. Drum staging area.	1. Back, Arm, and shoulder strain. 2. Pinch points 3. Cross contamination 4. Slip/Trips/Falls	1. Use proper lifting techniques/ Use drum carts when moving drums/ use buddy system for moving of drums if needed/Move drums shortest distance needed. 2. Keep fingers and feet away from pinch points/ Use proper PPE (cut-resistant gloves, Langan approved safety shoes) 3. Use proper PPE (Nitrile gloves, Tyvek sleeves) 4. Ensure pathway is clear prior to moving equipment/ Mark all hazards/ Use additional person as a spotter if needed.
53. Equipment pack-up	1. Back Strains 2. Slips/Trips/Falls 3. Traffic 4. Cuts/Abrasions/Contusions from equipment.	1. Use proper lifting techniques/ Use wheeled transport/ use buddy system when lifting equipment. 2. Minimize distance from work area/ Unobstructed path to collection points and vehicle/ Follow good housekeeping procedures. 3. Wear high-visibility vest or clothing/Exercise caution/ Use traffic cones or signage if needed. 82. Wear proper PPE (leather gloves, long sleeves, Langan approved safety shoes).
54. All activities	1. Slips/ Trips/ Falls 2. Hand injuries, cuts, or lacerations during manual handling of materials 3. Foot injuries 72. Back injuries 73. Traffic 74. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 75. High Noise levels 76. Overhead hazards 77. Heat Stress/ Cold Stress 78. Eye Injuries	1. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards 2. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves 3. Wear Langan approved safety shoes 4. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible 5. Wear high visibility clothing & vest / Use cones or signs to designate work area 6. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed 7. Wear hearing protection 8. Wear hard hat / Avoid areas where overhead hazards exist. 9. Wear proper attire for weather conditions (sunscreen or protective clothing

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress 10. Wear safety glasses.
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: **Groundwater/Product Purging/Sampling with Bailer**
JSA Number: **JSA053**

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – ***Stop,*** *what has changed?*

T – ***Think*** *about the task*

E – ***Evaluate*** *potential hazards*

P – ***Plan*** *safe approach*

S - ***Start*** *task /* ***Stop*** *& regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☒ Safety Goggles	☒ Face Shield	☒ Nitrile Gloves	☒ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☒ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☒ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Tyvek sleeves, Dermal Protection, PID, absorbent pads				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
55. Transport equipment to work area	6. Back Strain 7. Slips/ Trips/ Falls 8. Traffic 9. Cuts/abrasions from equipment 10. Contusions from dropped equipment	6. Use proper lifting techniques / Use wheeled transport. 7. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures. 8. Wear proper PPE (high visibility vest or clothing) 9. Wear proper PPE (leather gloves, long sleeves) 10. Wear proper PPE (safety shoes)
56. Remove well cover	25. Scrape knuckles/hand 26. Strain wrist/bruise plan 27. Pinch fingers or hand	6. Wear proper PPE (leather gloves) 7. Using a hammer, tap the end of the wrench to loosen grip of bolts. 8. Wear proper PPE (leather gloves)
57. Remove well cap and lock	19. Well can pops from pressure. 20. Exposure to hazardous substances through inhalation or dermal exposure 21. Scrape knuckles/hand 22. Pinch points 23. Strain write/bruise palm	9. Remove cap slowly to relieve pressure / Do not place face over well when opening / Wear proper PPE (safety glasses, face shield, hand protection) 10. Use direct air monitoring/reading instrument (i.e., PID) / Be familiar with and follow actions prescribed in the HASP / Wear proper PPE (nitrile gloves) 11. Wear proper PPE (leather gloves) 12. Using hammer, tap the end of the wrench to loosen grip
58. Measure head-space vapor levels	2. Exposure to hazardous substances through inhalation	2. Do not place face over well when collecting measurement
59. Set-up plastic sheeting/absorbent pads	2. Lacerations when cutting plastic sheeting/absorbent pads.	2. Use scissors to cut plastic sheeting/absorbent pads / Cut motions should always be away from body and body parts

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
for work site around the well		
60. Lower Bailer sleeve into well	7. Repetitive motion injury (pulled arm/back muscles) 8. Dehydration	7. Take breaks while lowering bailer into well/ Use a mechanical device to lower bailer into well/ Rotate employees (take turns conducting the manual labor portion) 8. Take breaks and drink water.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
7. Purge/Sample water/product collection	1. Contact with potentially contaminated groundwater or product through dermal exposure 2. Contact with and burns from acid used for sample preservation 9. Tripping potential on sampling lanyard 10. Lacerations from broken sample bottles 11. Back strain when transporting coolers full of collected samples. 12. Slips/ Trips/ Falls	1. Wear proper PPE (safety glasses, nitrile gloves, safety shield, Tyvek) 2. Ensure sample bottle lids are secure before use and after sample collection 3. Organize lanyard to keep out of the way as much as possible / Mark potential tripping hazards with caution tape or safety cones 9. Do not over-tighten bottle caps / Handle bottles safely to prevent breakage / Wrap glass bottles in bubble wrap, if possible 10. Use proper lifting techniques / Use wheeled transport / Seek assistance if coolers weight exceeds 50lbs. / Minimize distance to vehicle. 11. Have unobstructed path to vehicle or collection point / Follow good housekeeping procedures / Do not lift/walk with coolers that are too heavy/difficult to lift
8. Retrieval of bailer	9. Repetitive motion injury (pulled arm/back muscles) 10. Dehydration	9. Take breaks while retrieving bailer out of the well/ Use a mechanical device to raise bailer out of well/ Rotate employees (take turns conducting the manual labor portion) 10. Take breaks and drink water.
9. Pack-up equipment	2. Back strain when removing or lifting heavy equipment	2. Use proper lifting technique / Use wheeled transport for heavy equipment
10. Replace well cap and lock	3. Scrape fingers/hand 4. Strain wrist/bruise palm	3. Wear proper PPE (leather gloves) 4. Using hammer, tap the end of the well cap to tighten grip
11. Replace well cover	4. Scrape knuckles/hand 5. Strain write/bruise palm. 6. Pinch fingers or hand	4. Wear proper PPE (leather gloves) 5. Using hammer, tap the end of the wrench to tighten the grip of the bolts. 6. Wear proper PPE (leather gloves)
12. Place used PPE in designated disposal drum	3. Pressure build-up inside drum 4. Pinch hazard	3. Remove cap from bung hole in drum to relieve pressure. 4. Wear proper PPE (leather gloves) 5. Product drums may require additional spill protection/electrical grounding, check local regulations
13. Decontaminate equipment	4. Splashing water/soap from decontamination 5. Contact with potentially contaminated groundwater through dermal exposure.	4. Wear proper PPE (safety glasses) 5. Wear proper PPE (safety glasses, dermal protection)

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
14. All activities	79. Slips/ Trips/ Falls 80. Hand injuries, cuts, or lacerations during manual handling of materials 81. Foot injuries 82. Back injuries 83. Traffic 84. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 85. High Noise levels 86. Overhead hazards 87. Heat Stress/ Cold Stress 88. Eye Injuries	83. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 84. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 85. Wear Langan approved safety shoes. 86. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 87. Wear high visibility clothing & vest / Use cones or signs to designate work area. 88. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 89. Wear hearing protection 90. Wear hard hat / Avoid areas where overhead hazards exist. 91. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 92. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	**Sign Name**	**Date**
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: **Sub-slab soil gas temporary point installation and sampling**
JSA Number: **JSA037-01**

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – *Stop,* what has changed?
T – *Think* about the task
E – *Evaluate* potential hazards
P – *Plan* safe approach
S - *Start* task / *Stop* & regroup

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☐ Hearing Protection
☒ Safety Glasses	☒ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☒ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☒ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: Tyvek Sleeves				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
61. Transport equipment to work site	37. Back injuries 38. Slips/Trips/Falls 39. Traffic 40. Hand injuries	31. Use proper lifting techniques/ Use wheeled transport/ Get assistance when need with moving equipment/ Minimize distance from vehicle 32. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures. 33. Wear proper PPE (High Visibility vest and clothing)/ Exercise caution (stay alert-stay alive) 34. Wear proper PPE (leather gloves)/ Keep finger and hands clear of pinch points.
62.Mark area for drilling	28.Slips/Trips/Falls	23. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures
63.Drill sampling points with hammer drill	24. Eye injuries 25. Dust exposure 26. Hand injuries 27. Catch items (clothing) 28. Electric shock 29. Chemical atmosphere hazard (vapor) 30. Slips/Trips/Falls	13. Wear proper PPE (safety glasses) 14. Wear proper PPE (dust mask) 15. Wear proper PPE (leather gloves)/ Keep hands and fingers out of pinch points/ Avoid drill catching on ground and twisting wrist or hand/ Release drill grip if drill becomes caught/ Ensure drill is unplugged prior to inserting bit. 16. Tie up or tuck-in all loose clothing/ Maintain distance from drill. 17. Inspect power cable for cuts or nicks before use/ Use GFCI outlet on power cord/ Do not use in wet conditions. 18. Monitor air, vapors with Photo-ionization detector (PID)

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
		19. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures
64. Measure vapor content and depth to bottom of hole	1. Chemical atmosphere hazard (vapors)	1. Monitor air, vapors with Photo-ionization detector (PID)/ Keep face away from opening of hole while collecting measurements
65. Set-up of shroud and sampling canister system	1. Hand injuries 2. Chemical atmosphere hazard (vapors) 3. Slips/Trips/Falls	1. Wear proper PPE (leather gloves, nitrile gloves)/ Keep fingers away from pinch points when installing pump/ Do not use open blades, use tubing cutter 2. Monitor air, vapors with Photo-ionization detector (PID)/ Keep face away from opening of hole while collecting measurements 3. Minimize distance from vehicle/ Have unobstructed pathway to vehicle and collection points/ Mark tripping hazards with spray paint, cones, or caution tape/ Observe good housekeeping procedures
66. Purge soil gas	1. Chemical atmosphere hazard (vapors)	1. Monitor air, vapors with Photo-ionization detector (PID)/ Keep face away from exhaust port of pump
67. Sample collection (opening and closing valves)	1. Hand injuries	1. Wear proper PPE (leather gloves)/ Keep fingers away from pinch points
68. Sealing sampling holes	1. Back injuries 2. Concrete dust 3. Eye injuries	1. Use proper lifting techniques for lifting of cement bags 2. Wear proper PPE (dust mask) 3. Wear proper PPE (safety glasses)
69. All activities	89. Slips/ Trips/ Falls 90. Hand injuries, cuts, or lacerations during manual handling of materials 91. Foot injuries 92. Back injuries 93. Traffic 94. Wildlife: Stray animals, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 95. High Noise levels 96. Overhead hazards 97. Heat or cold injuries 98. Eye Injuries	93. Be aware of potential trip hazards/ Follow good housekeeping procedures/ Mark significant hazards. 94. Inspect for jagged/sharp edges, and rough or slippery surfaces/ Keep fingers away from pinch points/ Wipe off greasy, wet, slippery, or dirty objects before handling/ Wear leather/ cut-resistant gloves. Wear proper PPE (Langan approved safety shoes) 95. Use proper lifting techniques/ Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift/ Obtain assistance when possible. 96. Wear high visibility clothing & vest/ Use cones or signs to designate work area. 97. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray animals/ Carry and use animal repellant when needed/ Use bug spray when needed. 98. Wear hearing protection 99. Wear hard hat/ Avoid areas where overhead hazards exist. 100. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather)/ Drink plenty of fluids to avoid dehydration/ Takes breaks as necessary to avoid heat/cold stress. 101. Wear safety glasses

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: Indoor Air Sampling
JSA Number: JSA007-01

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – Stop, *what has changed?*
T – Think *about the task*
E – Evaluate *potential hazards*
P – Plan *safe approach*
S - Start *task /* **Stop** *& regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☒ Traffic Cones/Signs	☐ Life Vest/Jacket	
☒ Other: PID, Respiratory Protection (if necessary)				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
70. Building walkthrough and background contaminant removal	41. Slips / Trips/ Falls 42. Exposure to substances/vapors during removal	6. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark significant below-grade hazards (i.e., holes, trenches) with safety cones or spray paint. 7. Monitor indoor air concentrations with a PID / Wear proper PPE (nitrile gloves) / Wear proper respiratory protection if necessary
71. Transport equipment to work area	11. Back Strain 12. Slips/ Trips/ Falls 13. Traffic 14. Cuts/abrasions from equipment 15. Contusions from dropped equipment	11. Use proper lifting techniques / Use wheeled transport. 12. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures. 13. Wear proper PPE (high visibility vest or clothing) 14. Wear proper PPE (leather gloves, long sleeves) 15. Wear proper PPE (safety shoes)
72. Mark out areas for indoor air sampling	29. Slips/ Trips/ Falls	9. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark significant below-grade hazards (i.e., holes, trenches) with safety cones or spray paint
73. Set-up canisters and begin indoor air sampling	31. Dropping crates or canisters 32. Pinch hazard	13. Exercise caution when moving crates and canisters / Use proper housekeeping of materials during sample events / Do not carry too many items at one time / Perform several trips, if necessary 14. Wear proper PPE (leather gloves)
74. Sample collection	3. Dropping crates or canisters 4. Pinched fingers from opening valves	3. Exercise caution when moving crates and canisters / Use proper housekeeping of materials during sample events / Do not carry too many items at one time / Perform several trips, if necessary 4. Wear proper PPE (leather gloves) / Keep fingers away from pinch points
75. Pack up equipment	3. Back strain	3. Use proper lifting techniques / Use wheeled transport.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
	4. Slips/ Trips/ Falls 5. Traffic	4. Be aware of potential trip hazards / Follow good housekeeping procedures / Minimize distance to vehicle. 5. Wear proper PPE (safety vest)
76. All activities	99. Slips/ Trips/ Falls 100. Hand injuries, cuts, or lacerations during manual handling of materials 101. Foot injuries 102. Back injuries 103. Traffic 104. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 105. High Noise levels 106. Overhead hazards 107. Heat Stress/ Cold Stress 108. Eye Injuries	102. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 103. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 104. Wear Langan approved safety shoes. 105. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 106. Wear high visibility clothing & vest / Use cones or signs to designate work area. 107. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 108. Wear hearing protection 109. Wear hard hat / Avoid areas where overhead hazards exist. 110. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 111. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: Hammer Drill
JSA Number: JSA049

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last-Minute Risk Assessment.



S – ***Stop,*** *what has changed?*
T – ***Think*** *about the task*
E – ***Evaluate*** *potential hazards*
P – ***Plan*** *safe approach*
S - ***Start*** *task /* ***Stop*** *& regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☒ Face Shield	☒ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☒ Traffic Cones/Signs	☐ Life Vest/Jacket	
☐ Other:				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
77.Transport equipment to work area	43.Back Strain 44.Slips/ Trips/ Falls 45.Traffic 46.Cuts/abrasions from equipment 47.Contusions from dropped equipment	8. Use proper lifting techniques / Use wheeled transport. 9. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures. 10. Wear proper PPE (high visibility vest or clothing) 11. Wear proper PPE (leather gloves, long sleeves) 12. Wear proper PPE (safety shoes)
78.Electrical Connection	30.Inspect electrical cord to drill. 31.Inspect hammer drill. 32.Inspect extension cord. 33.Test GFCI	10. Check the plug, ensure all connections are in place, check cord for frayed sections. If plug or cord are worn, do not use equipment until repaired. 11. Inspect chuck for proper grasping and holding of bit, check that plastic housing is not cracked or missing pieces. Do not use if chuck does not work properly or housing is compromised. 12. Inspect extension cord, if worn or stripped pull from service and replace 13. Test GFCI, replace if GFCI fails
79.Drill Bit	1. Inspect drill bit	1. Replace if worn. 2. Wear proper PPE (leather gloves) when installing and removing drill bit. 3. Ensure equipment is unplugged from electrical power when removing and installing drill bit.
80.Use of Hammer Drill	1. Hazards associated with using hammer drill, flying objects, heavy equipment, ground level hazards and dust. 2. Slips/ Trips/ Falls 3. Hazards associated drilling into concrete slab	1. Maintain a safe distance from other site operations / Wear proper PPE (hard hat, safety glasses, safety shoes, safety vest, ear protection and leather gloves) 2. Be aware of potential trip hazards / Follow good housekeeping procedures / Mark extension cord pathway with safety cones. 3. Do not push hammer drill during use.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
81. All activities 4. All activities (cont'd)	109. Slips/ Trips/ Falls 110. Hand injuries, cuts, or lacerations during manual handling of materials 111. Foot injuries 112. Back injuries 113. Traffic 114. Wildlife: Stray dogs, Mice/rats, Vectors (i.e., mosquitoes, bees, etc.) 115. High Noise levels 116. Overhead hazards 117. Heat Stress/ Cold Stress 118. Eye Injuries	112. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards. 113. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery, or dirty objects before handling / Wear leather/ cut-resistant gloves. 114. Wear Langan approved safety shoes. 115. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible. 116. Wear high visibility clothing & vest / Use cones or signs to designate work area. 117. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed. 118. Wear hearing protection 119. Wear hard hat / Avoid areas where overhead hazards exist. 120. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 121. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	**Sign Name**	**Date**
Prepared by:		
Reviewed by:		

LANGAN

Job Safety Analysis (JSA)
Health and Safety

JSA Title: **Test Pits**
JSA Number: **JSA016-01**

A Job Safety Analysis (JSA) must identify all job steps required to complete the task, the potential hazards employees could be exposed to while performing the job step and the preventative/corrective actions required to reduce/mitigate the identified potential hazards. Employees must certify that they have either prepared the JSA or have reviewed the JSA and are aware of the potential hazards associated with this task and will follow the provided preventive/corrective actions. Prior to the start of any work "TAKE 5" and conduct a Last Minute Risk Assessment.



S – Stop, *what has changed?*
T – ***Think*** *about the task*
E – *Evaluate* *potential hazards*
P – *Plan* *safe approach*
S - *Start* *task / **Stop** & regroup*

PERSONAL PROTECTIVE EQUIPMENT (Required or to be worn as needed):				
☒ Safety Shoes	☒ Long Sleeves	☒ Safety Vest (Class 2)	☒ Hard Hat	☒ Hearing Protection
☒ Safety Glasses	☐ Safety Goggles	☐ Face Shield	☐ Nitrile Gloves	☐ PVC Gloves
☒ Leather Gloves	☐ Cut Resist. Gloves	☐ Fall Protection	☐ Fire Resistant Clothing	☐ Rubber Boots
☐ Insect/Animal Repellent	☐ Ivy Blocker/Cleaner	☐ Traffic Cones/Signs	☐ Life Vest/Jacket	
☐ Other:				

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
82. Transport equipment to work area	48. Back Strain 49. Slips/ Trips/ Falls 50. Traffic 51. Cuts/abrasions from equipment 52. Contusions from dropped equipment	13. Use proper lifting techniques / Use wheeled transport 14. Minimize distance to work area / Have unobstructed path to work area / Follow good housekeeping procedures 15. Wear proper PPE (high visibility vest or clothing) 16. Wear proper PPE (leather gloves, long sleeves) 17. Wear proper PPE (safety shoes)
83. Digging Test Pit	34. Back Strain 35. Unstable walls of excavation	14. Observe proper digging technique. Ensure spoil pile and equipment are at least 2 feet from edge of excavation. 15. Excavate test pit in a stepped manor.
84. All activities	119. Slips/ Trips/ Falls 120. Hand injuries, cuts, or lacerations during manual handling of materials 121. Foot injuries 122. Back injuries 123. Traffic 124. Wildlife: Stray dogs, Mice/rats, Vectors (i.e. mosquitoes, bees, etc.) 125. High Noise levels 126. Overhead hazards 127. Heat Stress/ Cold Stress 128. Eye Injuries	122. Be aware of potential trip hazards / Follow good housekeeping procedures/ Mark significant hazards 123. Inspect for jagged/sharp edges, and rough or slippery surfaces / Keep fingers away from pinch points / Wipe off greasy, wet, slippery or dirty objects before handling / Wear leather/ cut-resistant gloves 124. Wear Langan approved safety shoes 125. Use proper lifting techniques / Consider load location, task repetition, and load weigh when evaluating what is safe or unsafe to lift / Obtain assistance when possible 126. Wear high visibility clothing & vest / Use cones or signs to designate work area 127. Be aware of surroundings at all times, including the presence of wildlife/ Do not approach stray dogs / Carry/use dog/animal repellant / Use bug spray when needed.

JOB STEPS	POTENTIAL HAZARDS	PREVENTATIVE / CORRECTIVE ACTION
3. All activities (cont'd)		128. Wear hearing protection 129. Wear hard hat / Avoid areas where overhead hazards exist. 130. Wear proper attire for weather conditions (sunscreen or protective clothing in sunlight, layers for cold weather) / Drink plenty of fluids to avoid dehydration / Takes breaks as necessary to avoid heat/cold stress. 131. Wear safety glasses
Additional items.		
Additional Items identified while in the field. (Delete row if not needed.)		

Print Name	Sign Name	Date
Prepared by:		
Reviewed by:		

ATTACHMENT H

TAILGATE SAFETY BRIEFING FORM

LANGAN TAILGATE SAFETY BRIEFING

Date:_____ Time: _____

Leader:_____ Location:_____

Work Task:

_____

_____

SAFETY TOPICS (*provide some detail of discussion points*)

Chemical Exposure Hazards and Control:_____

_____

Physical Hazards and Control: _____

Air Monitoring: _____

PPE: _____

_____

Communications:_____

Safe Work Practices: _____

_____

Emergency Response: _____

Hospital/Medical Center Location: _____

Phone Nos.: _____

Other: _____

FOR FOLLOW-UP (the issues, responsibilities, due dates, etc.**)**

_____

_____

_____

ATTENDEES

PRINT NAME	COMPANY	SIGNATURE

APPENDIX C
Quality Assurance Project Plan

QUALITY ASSURANCE PROJECT PLAN

for

615 BROADWAY
Kingston, New York
BCP Site No. C356066

Prepared For:

615 Broadway LLC
11 Garden Street, Suite 101
Poughkeepsie, New York 12601

Prepared By:

Langan Engineering, Environmental, Surveying,
Landscape Architecture and Geology, D.P.C.
368 Ninth Avenue, 8th Floor
New York, New York 10001

LANGAN

March 11, 2025
Project No. 170803001

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Attachment D Sample Nomenclature Standard Operating Procedure
Attachment E PFAS Sampling Protocol and Laboratory SOP

1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

This Quality Assurance Project Plan (QAPP) is for the about 33,700-square-foot (0.77-acre) site located at 615 Broadway in the city of Kingston, New York. The site is comprised of Ulster County Tax Parcel ID Section 56.109, Block 3, Lot 16. Block 3 is bordered by Henry Street to the north, Broadway to the east, Cedar Street to the south, and Sterling Street to the west.

The site is irregularly shaped and includes an about 10-foot-wide by 200-foot-long accessway formerly known as Martin's Lane that extends to the southeast towards Cedar Street. The site is vacant and improved with an asphalt-paved parking lot and a landscaped area in the eastern part of the site fronting Broadway.

This QAPP specifies analytical methods to be used to ensure that data collected during the Remedial Investigation (RI) is precise, accurate, representative, comparable, complete, and meets the sensitivity requirements of the project.

1.2 PROJECT OBJECTIVES

The objective of the scope of work is to investigate and characterize the nature and extent of environmental impacts at the site and to provide sufficient information to evaluate remedial alternatives and threats to human health and the environment, as required per the BCP.

1.3 SCOPE OF WORK

The scope of work covered in this QAPP is detailed in the Remedial Investigation Work Plan (RIWP). In general, the RIWP proposes soil boring advancement and sampling, groundwater monitoring well installation and sampling, and soil vapor sampling. A dust, odor, and vapor control and monitoring plan will be implemented during ground intrusive activities. The following investigation activities will be performed as part of the RIWP:

- Advance 22 soil borings to about 10 feet bgs or approximately 5 feet into native soil, whichever is deeper. If impacts are identified during advancement, borings will be extended to a depth at which impacts are no longer observed. Soil borings to be converted to groundwater monitoring wells will be advanced to at least 5 feet below the observed groundwater interface.
- Advance 3 soil borings in the vicinity of the suspect UST to identify the extent of petroleum-related impacts to soil. Borings will be advanced to about 2 feet below the depth of the suspected UST bottom, which is assumed to be about 8 feet below grade surface (bgs).

- Advance 14 delineation soil borings in the vicinity where elevated lead concentrations were identified, assumed to be between 0 and 2 feet bgs, to vertically and horizontally delineate lead impacts to soil.
- Collect up to three soil samples from each boring location (plus quality assurance/quality control [QA/QC] samples) for laboratory analysis.
- Convert 9 soil borings into permanent monitoring wells.
- Collect one groundwater sample from each monitoring well (plus QA/QC samples) for laboratory analysis.
- Survey and gauge monitoring wells to establish groundwater elevations and evaluate flow direction.
- Develop a groundwater contour map.
- Install 10 soil vapor sampling points to 5 feet bgs.
- Collect one soil vapor sample from each soil vapor point and one ambient air sample for laboratory analysis.
- Implement a community air monitoring plan (CAMP).

A plan showing the proposed sample locations is included as Figure 7 of the RIWP.

2.0 DATA QUALITY OBJECTIVES AND PROCESS

Data Quality Objectives (DQOs) are qualitative and quantitative statements to help ensure that data of known and appropriate quality are obtained during the project. The quality of the data must be sufficient to fulfill the overall objective of the RI. The overall objective is to investigate and characterize the nature and extent of environmental impacts at and emanating from the site and to provide sufficient information to evaluate remedial alternatives, as required. The RIWP specifies the intended use of the data, the required constituents of interest, limits of detection, level of data assessment, and data deliverables. All data shall be defined as definitive data.

The DQO process is an iterative process where various options for implementing a project are explored, dissected, and recombined. The feasibility and costs of various options are estimated, and then the most advantageous option is selected and developed into project work plans that will be implemented.

DQOs for sampling activities are determined by evaluating five factors:

- Data needs and uses: The types of data required and how the data will be used after it is obtained.
- Parameters of Interest: The types of chemical or physical parameters required for the intended use.
- Level of Concern: Levels of constituents, which may require remedial actions or further investigations, based on comparison to Title 6 of the Official Compilation of New York Codes, Rules and Regulations Part 375 NYSDEC Unrestricted Use Soil Cleanup Objectives for soil samples and to the October 2006 (updated in May 2017 and February 2024) New York State Department of Health (NYSDOH) Guidance for Evaluating Soil Vapor Intrusion in the State of New York Air Guideline Values and Decision Matrices for soil vapor samples.
- Required Analytical Level: The level of data quality, data precision, and QA/QC documentation required for chemical analysis.
- Required Detection Limits: The detection limits necessary based on the above information.

The investigation will be evaluated using the DQO process on an individual, task-specific basis. DQOs and the required level of review will be determined during this process.

The quality assurance and quality control objectives for all measurement data include:

- **Precision** – an expression of the reproducibility of measurements of the same parameter under a given set of conditions. Field sampling precision will be determined by analyzing

coded duplicate samples and analytical precision will be determined by analyzing internal quality control (QC) duplicates and/or matrix spike duplicates.

- **Accuracy** – a measure of the degree of agreement of a measured value with the true or expected value of the quantity of concern. For soil and groundwater samples, accuracy will be determined through the assessment of the analytical results of field blanks and trip blanks for each sample set. Analytical accuracy will be assessed by examining the percent recoveries of surrogate compounds that are added to each sample (organic analyses only), internal standards, laboratory method blanks, instrument calibration, and the percent recoveries of matrix spike compounds added to selected samples and laboratory blanks. For soil vapor or air samples, analytical accuracy will be assessed by examining the percent recoveries that are added to each sample, internal standards, laboratory method blanks, and instrument calibration.
- **Representativeness** – expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is dependent upon the adequate design of the sampling program and will be satisfied by ensuring that the scope of work is followed and that specified sampling and analysis techniques are used. Representativeness in the laboratory is ensured by compliance to nationally-recognized analytical methods, meeting sample holding times, and maintaining sample integrity while the samples are in the laboratory's possession. This is accomplished by following all applicable methods, laboratory-issued standard operating procedures (SOP), the laboratory's Quality Assurance Manual, and this QAPP. The laboratory is required to be properly certified and accredited.
- **Completeness** – the percentage of measurements made which are judged to be valid. Completeness will be assessed through data validation. The QC objective for completeness is generation of valid data for at least 90 percent of the analyses requested.
- **Comparability** – expresses the degree of confidence with which one data set can be compared to another. The comparability of all data collected for this project will be ensured using several procedures, including standard methods for sampling and analysis as documented in the QAPP, using standard reporting units and reporting formats, and data validation.
- **Sensitivity** – the ability of the instrument or method to detect target analytes at the levels of interest. The project manager will select, with input from the laboratory and quality assurance (QA) personnel, sampling and analytical procedures that achieve the required levels of detection.

3.0 PROJECT ORGANIZATION

Lagan will arrange data analysis and reporting tasks related to the site sampling. The analytical services will be performed by an Environmental Laboratory Approval Program (ELAP)-certified laboratory. Data validation services will be performed by approved data validation contractor(s).

The required sampling will be conducted by Langan; the analytical services will be performed by Pace Analytical of Westborough, Massachusetts (NYSDOH ELAP Certification No. 11148). Data validation services will be performed by Joe Conboy of Langan.

Resumes for Langan personnel can be found in Attachment A; key contacts for this project are as follows:

615 Broadway LLC:	Lauren Lopez Rutkowski Telephone: (845) 471-1047
Langan Project Manager:	Lamees Esmail, PE Telephone: (919) 694-3345
Langan Field Team Leader:	Lexi Haley Telephone: (332) 208-2127
Langan Health & Safety Officer:	Tony Moffa, CHMM Telephone: (215) 491-6500
Langan Quality Assurance Manager:	Michael Burke, PG, CHMM Telephone: (212) 479-5413
Langan Data Validator:	Joe Conboy Telephone: (609) 282-8055
Laboratory Representative:	Pace Analytical Ben Rao Telephone: (201) 812-2633

4.0 QUALITY ASSURANCE OBJECTIVES FOR COLLECTION OF DATA

The overall quality assurance objective is to develop and implement procedures for sampling, laboratory analysis, field measurements, and reporting that will provide data of sufficient quality to evaluate the engineering controls on the site. The sample set, chemical analysis results, and interpretations must be based on data that meet or exceed quality assurance objectives established for the site. Quality assurance objectives are usually expressed in terms of precision, accuracy or bias, representativeness, completeness, comparability, and sensitivity of analysis. Variances from the quality assurance objectives at any stage of the investigation will result in the implementation of appropriate corrective measures and an assessment of the impact of corrective measures on the usability of the data.

4.1 PRECISION

Precision is a measure of the degree to which two or more measurements are in agreement. Field precision is assessed through the collection and measurement of field duplicates. Laboratory precision and sample heterogeneity also contribute to the uncertainty of field duplicate measurements. This uncertainty is taken into account during the data assessment process. The following field duplicate precision criteria will be applied:

Aqueous and Canister Air Samples

- Results greater than 5 times the laboratory reporting limit (RL) must have a relative percent difference (RPD) $\leq 30\%$.
- Results less than 5 times the RL must have an absolute difference $\leq \pm$RL.

Soil Samples

- Results greater than 5 times the laboratory RL must have a RPD $\leq 50\%$.
- Results less than 5 times the RL must have an absolute difference $\leq 2\times \pm$RL.

Soil Vapor Samples

- Results greater than 5 times the laboratory RL must have a RPD $\leq 50\%$.
- Results less than 5 times the RL must have an absolute difference $\leq 2\times \pm$RL.

RLs and method detection limits (MDL) are provided in Attachment B.

Laboratory precision is assessed through the analysis of matrix spike/matrix spike duplicates (MS/MSD), laboratory control sample/laboratory control sample duplicates (LCS/LCSD) and subsequent calculation of RPD. For outliers, if additional sample volume is present, the MS/MSD

should be reanalyzed and the RPD recomputed. If additional volume is not present, an evaluation will be performed to determine the extent of potential matrix interference.

4.2 ACCURACY

Accuracy is the measurement of the reproducibility of the sampling and analytical methodology. It should be noted that precise data may not be accurate data. For the purpose of this QAPP, bias is defined as the constant or systematic distortion of a measurement process, which manifests itself as a persistent positive or negative deviation from the known or true value. This may be due to (but not limited to) improper sample collection, sample matrix, poorly calibrated analytical or sampling equipment, or limitations or errors in analytical methods and techniques.

Accuracy in the field is assessed through the use of field and trip blanks and through compliance to all sample handling, preservation, and holding time requirements. All field and trip blanks should be non-detect when analyzed by the laboratory. Any contaminant detected in an associated field blank will be evaluated against laboratory blanks (preparation or method) and evaluated against field samples collected on the same day to determine potential for bias.

Laboratory accuracy is assessed by evaluating the percent recoveries of MS/MSD samples, LCS/LCSD, surrogate compound recoveries, internal standard area counts, initial and continuing calibrations, and the results of method, initial and continuing calibration blanks. MS/MSD, LCS/LCSD, and surrogate percent recoveries will be compared to either method-specific control limits or laboratory-derived control limits. Sample volume permitting, samples displaying outliers should be reanalyzed. All associated method blanks should be non-detect when analyzed by the laboratory.

4.3 REPRESENTATIVENESS

Representativeness expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition within a defined spatial and/or temporal boundary. Representativeness is dependent upon the adequate design of the sampling program and will be satisfied by ensuring that the scope of work is followed and that specified sampling and analysis techniques are used. This is performed by following applicable standard operating procedures (SOP) and this QAPP. All field technicians will be given copies of appropriate documents prior to sampling events and are required to read, understand, and follow each document as it pertains to the tasks at hand.

Representativeness in the laboratory is ensured by compliance with nationally-recognized analytical methods, meeting sample holding times, and maintaining sample integrity while the samples are in the laboratory's possession. This is performed by following all applicable analytical

methods, laboratory-issued SOPs, the laboratory's Quality Assurance Manual, and this QAPP. The laboratory is required to be properly certified and accredited.

4.4 COMPLETENESS

Laboratory completeness is the ratio of total number of samples analyzed and verified as acceptable compared to the number of samples submitted to the fixed-base laboratory for analysis, expressed as a percent. Three measures of completeness are defined:

- Sampling completeness, defined as the number of valid samples collected relative to the number of samples planned for collection;
- Analytical completeness, defined as the number of valid sample measurements relative to the number of valid samples collected; and
- Overall completeness, defined as the number of valid sample measurements relative to the number of samples planned for collection.

Soil, groundwater and soil vapor data will meet a 90% completeness criterion. If the criterion is not met, sample results will be evaluated for trends in rejected and unusable data. The effect of unusable data required for a determination of compliance will also be evaluated.

4.5 COMPARABILITY

Comparability is an expression of the confidence with which one data set can be compared to another. Comparability is dependent upon the proper design of the sampling program and will be satisfied by ensuring that the sampling plan is followed and that sampling is performed according to the SOPs or other project-specific procedures. Analytical data will be comparable when similar sampling and analytical methods are used as documented in the QAPP. Comparability will be controlled by requiring the use of specific nationally-recognized analytical methods and requiring consistent method performance criteria. Comparability is also dependent on similar quality assurance objectives. Previously collected data will be evaluated to determine whether they may be combined with contemporary data sets.

4.6 SENSITIVITY

Sensitivity is the ability of the instrument or method to detect target analytes at the levels of interest. The project manager will select, with input from the laboratory and quality assurance personnel, sampling and analytical procedures that achieve the required levels of detection and quality control acceptance limits that meet established performance criteria. Concurrently, the project manager will select the level of data assessment to ensure that only data meeting the project DQOs are used in decision-making.

Field equipment will be used that can achieve the required levels of detection for analytical measurements in the field. In addition, the field sampling staff will collect and submit full volumes of samples as required by the laboratory for analysis, whenever possible. Full volume aliquots will help ensure achievement of the required limits of detection and allow for reanalysis if necessary.

Analytical methods and quality assurance parameters associated with the sampling program are presented in Attachment C. The frequency of associated field blanks, trip blanks and duplicate samples will be based on the recommendations listed in DER-10, and as described in Section 5.3.

Site-specific MS and MSD samples will be prepared and analyzed by the analytical laboratory by spiking an aliquot of submitted sample volume with analytes of interest. A MS/MSD analysis will be analyzed at a rate of 1 out of every 20 samples, or one per analytical batch. MS/MSD samples are only required for soil and groundwater samples.

5.0 SAMPLE COLLECTION AND FIELD DATA ACQUISITION PROCEDURES

Soil and groundwater sampling will be conducted in accordance with the established NYSDEC protocols contained in DER-10/Technical Guidance for Site Investigation and Remediation (May 2010). Sub-slab and soil vapor sampling will be conducted in accordance with NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006, with updates May 2017 and February 2024). The following sections describe procedures to be followed for specific tasks.

5.1 FIELD DOCUMENTATION PROCEDURES

Field documentation procedures will include summarizing field data in field books and proper sample labeling. These procedures are described in the following sections.

5.1.1 Field Data and Notes

Field notebooks contain the documentary evidence regarding procedures conducted by field personnel. Hard cover, bound field notebooks will be used because of their compact size, durability, and secure page binding. The pages of the notebook will not be removed.

Entries will be made in waterproof, permanent blue or black ink. No erasures will be allowed. If an incorrect entry is made, the information will be crossed out with a single strike mark and the change initialed and dated by the team member making the change. Each entry will be dated. Entries will be legible and contain accurate and complete documentation of the individual or sampling team's activities or observations made. The level of detail will be sufficient to explain and reconstruct the activity conducted. Each entry will be signed by the person(s) making the entry.

The following types of information will be provided for each sampling task, as appropriate:

- Project name and number
- Reasons for being on-site or taking the sample(s)
- Date and time of activity
- Sample identification number(s)
- Geographical location of sampling points with references to the site, other facilities or a map coordinate system; sketches will be made in the field logbook when appropriate
- Physical location of sampling locations such as depth below ground surface
- Description of the method of sampling including procedures followed, equipment used and any departure from the specified procedures

- Description of the sample including physical characteristics, odor, etc.
- Readings obtained from health and safety equipment
- Weather conditions at the time of sampling and previous meteorological events that may affect the representative nature of a sample
- Photographic information including a brief description of what was photographed, the date and time, the compass direction of the picture and the number of the picture on the camera
- Other pertinent observations such as the presence of other persons on the site, actions by others that may affect performance of site tasks, etc.
- Names of sampling personnel and signature of persons making entries

Field records will also be collected on field data sheets including boring logs, which will be used for geologic and drilling data during soil boring activities. Field data sheets will include the project-specific number and stored in the field project files when not in use. At the completion of the field activities, the field data sheets will be maintained in the central project file.

5.1.2 Sample Labeling

Each sample collected will be assigned a unique identification number and abbreviation in accordance with the sample nomenclature guidance provided in the following table and the Standard Operating Procedure provided in Attachment D.

Sample Nomenclature Summary	
AA	Ambient Air
IA	Indoor Air
DUP	Field Duplicate
EB	Environmental Boring
LB	Langan Boring
SB	Soil Boring
FB	Field Blank
MW	Monitoring Well
SV	Soil Vapor
SSV	Sub-Slab Soil Vapor
TB	Trip Blank
(#-#)	Depth Interval
MMDDYY	Date of Sampling

Each sample container will have a sample label affixed to the outside with the date and time of sample collection and project name. In addition, the label will contain the sample identification number, analysis required and chemical preservatives added, if any. All documentation will be completed in waterproof ink.

5.2 EQUIPMENT CALIBRATION AND PREVENTATIVE MAINTENANCE

A photoionization detected (PID) will be used during the sampling activities to evaluate work zone action levels, screen soil samples, and collect monitoring well headspace readings. Field calibration and/or field checking of the PID will be the responsibility of the field team leader and the Site Health & Safety Officer, and will be accomplished by following the procedures outlined in the operating manual for the instrument. At a minimum, field calibration and/or field equipment checking will be performed once daily, prior to use. Field calibration will be documented in the field notebook. Entries made into the logbook regarding the status of field equipment will include the following information:

- Date and time of calibration
- Type of equipment serviced and identification number (such as serial number)
- Reference standard used for calibration
- Calibration and/or maintenance procedure used
- Other pertinent information

A water quality meter (Horiba U-52 or similar) will be used during purging of groundwater to measure pH, specific conductance, temperature, dissolved oxygen, turbidity and oxidation-reduction-potential (ORP), every five minutes, or, depending on pump flow rate, after at least one full volume of the water quality meter flow through cell has passed through. A portable turbidity meter (LaMotte or similar) may also be used to measure turbidity. Water-quality meters should be calibrated and the results documented before use each day using standardized field calibration procedures and calibration checks.

Equipment that fails calibration or becomes inoperable during use will be removed from service and segregated to prevent inadvertent utilization. The equipment will be properly tagged to indicate that it is out of calibration. Such equipment will be repaired and recalibrated to the manufacturer's specifications by qualified personnel. Equipment that cannot be repaired will be replaced.

Off-site calibration and maintenance of field instruments will be conducted as appropriate throughout the duration of project activities. All field instrumentation, sampling equipment and accessories will be maintained in accordance with the manufacturer's recommendations and specifications and established field equipment practice. Off-site calibration and maintenance will be performed by qualified personnel. A logbook will be kept to document that established calibration and maintenance procedures have been followed. Documentation will include both scheduled and unscheduled maintenance.

5.3 SAMPLE COLLECTION

Soil Samples

Soil samples will be visually classified and field screened using a PID to assess potential impacts from VOCs and for health and safety monitoring. Soil samples collected for analysis of VOCs will be collected using either En Core® or Terra Core® sampling equipment. For analysis of non-volatile parameters, samples will be homogenized and placed into glass jars. Samples will be collected with unused sterile sampling scoops or spoons and homogenized in unused sterile polyethylene zipper bags. After collection, all sample jars will be capped and securely tightened, and placed in iced coolers and maintained at 4°C ±2°C until they are transferred to the laboratory for analysis, in accordance with the procedures outlined in Sections 5.4 and 5.6. Analysis and/or extraction and digestion of collected soil samples will meet the holding times required for each analyte as specified in Attachment C. In addition, analysis of collected soil samples will meet all quality assurance criteria set forth by this QAPP and DER-10.

Groundwater Samples

Groundwater sampling will be conducted using low-flow sampling procedures following USEPA guidance ("Low Stress [low flow] Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells", EQASOP-GW4, dated September 19, 2017).

During purging, field parameters should be measured, including: water level drawdown, purge rate, pH, specific conductance, temperature, dissolved oxygen, turbidity and ORP, every five minutes using a water quality meter (YSI 6820 or similar) and a depth-to-water interface probe that should be decontaminated between wells. Samples should generally not be collected until the field parameters have stabilized. Field parameters will be considered stable once three sets of measurements are within ±0.1 standard units for pH, ±3% for conductivity and temperature, ±10 millivolts for ORP, and ±10% for turbidity and dissolved oxygen. Purge rates should be adjusted to keep the drawdown in the well to less than 0.3 feet, as practical. Additionally, an attempt should be made to achieve a stable turbidity reading of less than 10 Nephelometric Turbidity Units (NTU) prior to sampling. If the turbidity reading does not stabilize at reading of less than 10 NTU for a given well, then both filtered and unfiltered samples should be collected from that well. If necessary, field filtration should be performed using a 0.45 micron disposable in-line filter. Groundwater samples should be collected after parameters have stabilized as noted above or the readings are within the precision of the meter. Deviations from the stabilization and drawdown criteria, if any, should be noted on the sampling logs.

Samples should be collected directly into laboratory-supplied jars. After collection, all sample jars will be capped and securely tightened, and placed in iced coolers and maintained at 4°C ±2°C until they are transferred to the laboratory for analysis, in accordance with the procedures outlined

in Sections 5.4 and 5.6. Analysis and/or extraction and digestion of collected groundwater samples will meet the holding times required for each analyte as specified in Attachment C. In addition, analysis of collected groundwater samples will meet all quality assurance criteria set forth by this QAPP and DER-10.

Soil Vapor and Ambient Air Samples

Prior to soil vapor and ambient air sample collection, a pre-sampling inspection will be conducted to document chemicals and potential subsurface pathways at the site. The pre-sampling inspection will assess the potential for impacts from any chemical or petroleum storage within the on-site buildings. Soil vapor and ambient air samples will be collected into laboratory-supplied, batch certified-clean Summa® canisters calibrated for a sampling rate of two hours. The pressure gauges on each calibrated flow controller should be monitored throughout sample collection. Sample collection should be stopped when the pressure reading reaches -5 mmHg.

Emerging Contaminant Samples

Soil and groundwater samples collected for analysis of per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane will be collected in accordance with the specialized protocol outlined in this section and the *Sampling, Analysis, and Assessment of Per- and Polyfuoroalkyl Substances (PFAS) under NYSDEC's Part 375 Remedial Programs*, issued by the NYSDEC in April 2023. Soil and groundwater samples collected from select sample locations will be analyzed for 1,4-dioxane by EPA Method 8270 and for PFAS by EPA Method 1633 in accordance with the procedure outlined in Attachment E.

Soil samples will be homogenized and placed into glass jars. Samples will be collected with unused sterile sampling scoops or spoons. After collection, all sample jars will be capped and securely tightened, and placed in iced coolers and maintained at 4°C ±2°C until they are transferred to the laboratory for analysis.

Groundwater sampling will be performed using low-flow sampling procedures following USEPA guidance ("Low Stress [low flow] Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells", January 19, 2017). Groundwater samples will be collected using a peristaltic pump fitted with dedicated, non-Teflon high-density polyethylene (HDPE) tubing and using low-flow purging techniques to minimize drawdown. A Horiba U-52 (or similar) will be used to monitor water quality parameters (pH, conductivity, temperature, dissolved oxygen, ORP, and turbidity. Groundwater samples will be collected after the parameters stabilized within about 10 percent of consecutive values, to the extent practical, and turbidity is below 10 nephelometric turbidity units (NTU).

Food and beverages will be prohibited near the sampling equipment. Additionally, no cosmetics, moisturizers, hand cream, sun screen or clothing materials containing Gore-Tex or Tyvek will be worn during sampling. Non-disposable components of the pump will be decontaminated with Alconox and water. Field personnel will wear nitrile gloves while collecting and handing soil and groundwater samples.

Sample Field Blanks, Equipment Blanks, Trip Blanks and Duplicates

Field blanks will be collected for quality assurance purposes at a rate of one per 20 investigative samples per matrix (soil and groundwater only). Field blanks will be obtained by pouring laboratory-demonstrated analyte-free water into a laboratory-provided sample container for analysis. Field blank samples will be analyzed for the complete list of analytes on the day of sampling. To assess contamination resulting from sample transport, trip blanks will be collected at a rate of one per day for soil and groundwater if aqueous samples are analyzed for VOCs during that day.

Equipment blanks will be collected for quality assurance purposes at a rate of one per day for groundwater PFAS samples. Equipment blanks will be obtained by pouring laboratory-demonstrated PFAS-free water on or through a decontaminated sampling device following use and implementation of decontamination protocols. The water will be collected off of the sampling device into a laboratory-provided sample container for analysis.

Duplicate soil and groundwater samples will be collected and analyzed for quality assurance purposes. Duplicate samples will be collected at a frequency of 1 per 20 investigative samples per matrix and will be submitted to the laboratory as "blind" samples. If less than 20 samples are collected during a particular sampling event, one duplicate sample will be collected.

5.4 SAMPLE CONTAINERS AND HANDLING

Certified, commercially clean sample containers will be obtained from the analytical laboratory. If soil samples or groundwater are being collected, the laboratory will also prepare and supply the required trip blanks and field blank sample containers and reagent preservatives. Sample bottle containers, including the field blank containers, will be placed into plastic coolers by the laboratory. These coolers will be received by the field sampling team within 24 hours of their preparation in the laboratory. Prior to the commencement of field work, Langan field personnel will fill the plastic coolers with ice in Ziploc® bags (or equivalent) to maintain a temperature of 4°±2° C.

Soil and/or groundwater samples collected in the field for laboratory analysis will be placed directly into the laboratory-supplied sample containers. Samples will then be placed and stored on-ice in laboratory provided coolers until shipment to the laboratory. The temperature in the

on-ice in laboratory provided coolers until shipment to the laboratory. The temperature in the coolers containing samples and associated field blanks will be maintained at a temperature of 4°±2°C while on-site and during sample shipment to the analytical laboratory.

Soil and groundwater sampling for PFAS will be collected in accordance with EPA Method 1633 Field Sampling Guidelines. PFAS samples will be collected first in HDPE/polypropylene containers using sampling equipment either made with stainless steel, HDPE, or polypropylene. Food and beverages will be prohibited near the sampling equipment. Additionally, no cosmetics, moisturizers, hand cream, sun screen or clothing materials containing Gore-Tex™ or Tyvek® will be worn during sampling.

Possession of samples collected in the field will be traceable from the time of collection until they are analyzed by the analytical laboratory or are properly disposed. Chain-of-custody procedures, described in Section 5.9, will be followed to maintain and document sample possession. Samples will be packaged and shipped as described in Section 5.6.

5.5 SAMPLE PRESERVATION

Sample preservation measures will be used in an attempt to prevent sample decomposition by contamination, degradation, biological transformation, chemical interactions and other factors during the time between sample collection and analysis. Preservation will commence at the time of sample collection and will continue until analyses are performed. Should chemical preservation be required, the analytical laboratory will add the preservatives to the appropriate sample containers before shipment to the office or field. Samples will be preserved according to the requirements of the specific analytical method selected, as shown in Attachment C.

5.6 SAMPLE SHIPMENT

5.6.1 Packaging

Soil and groundwater sample containers will be placed in plastic coolers. Ice in Ziploc® bags (or equivalent) will be placed around sample containers. Cushioning material will be added around the sample containers if necessary. Chains-of-custody and other paperwork will be placed in a Ziploc® bag (or equivalent) and placed inside the cooler. The cooler will be taped closed and custody seals will be affixed to one side of the cooler at a minimum. If the samples are being shipped by an express delivery company (e.g. FedEx) then laboratory address labels will be placed on top of the cooler.

5.6.2 Shipping

Standard procedures to be followed for shipping environmental samples to the analytical laboratory are outlined below.

- All environmental samples will be transported to the laboratory by a laboratory-provided courier under the chain-of-custody protocols described in Section 5.9.
- Prior notice will be provided to the laboratory regarding when to expect shipped samples. If the number, type or date of shipment changes due to site constraints or program changes, the laboratory will be informed.

5.7 DECONTAMINATION PROCEDURES

5.7.1 Decontamination General Sample Collection

Decontamination procedures will be used for non-dedicated sampling equipment. Decontamination of field personnel is discussed in the site-specific sample Health and Safety Plan (HASP) included in Appendix B of the RIWP. Field sampling equipment that is to be reused will be decontaminated in the field in accordance with the following procedures:

1. Laboratory-grade glassware detergent and tap water scrub to remove visual contamination
2. Generous tap water rinse
3. Distilled/de-ionized water rinse

5.7.2 Decontamination for PFAS Sample Collection

In addition to general decontamination procedures are outlined in Section 5.7.1, sampling equipment will be thoroughly decontaminated before mobilization and between sample locations. Field sampling equipment, including water level indicators and other non-dedicated equipment, requires cleaning between uses. Non-dedicated equipment used for PFAS sampling will be rinsed using a three bucket rinse procedure. An about 3-gallon solution of decontamination fluid consisting of Alconox or Citranox and deionized (DI) water will be prepared in a 5-gallon bucket for the first equipment rinse. A second 5-gallon bucket will be filled with about 3 gallons of DI water for the second rinse. A third 5-gallon bucket will be filled with about 3 gallons of DI water for the final rinse. Powderless nitrile (non-latex) gloves will be donned during the handling of sampling equipment and sample containers. The Safety Data Sheets of detergents used in decontamination procedures will be reviewed to ensure fluoro-surfactants and 1,4-dioxane are not listed as ingredients. Laboratory-verified PFAS-free water will be used as the final rinse during decontamination of sampling equipment.

5.8 RESIDUALS MANAGEMENT

Debris (e.g., paper, plastic and disposable personal protective equipment) will be collected in plastic garbage bags and disposed of as non-hazardous industrial waste. Soil cuttings with no apparent staining, odors, or elevated PID readings will be used to backfill boring holes. Soil to be disposed off-site will be placed in 55-gallon, United Nations (UN)/Department of Transportation

(DOT) approved drums. Decontamination and well development/purging fluids will be placed in UN/DOT-approved fluid drums with closed tops. All drums will be properly labeled, sealed, and characterized as necessary.

If initial analytical data is insufficient to gain disposal facility acceptance, waste characterization samples will be analyzed for parameters that are typically required by disposal facilities, such as target compounds list (TCL) VOCs, semivolatile organic compounds (SVOC), Resource Conservation and Recovery Act (RCRA) metals, polychlorinated biphenyls (PCB), pesticides, herbicides, Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs, TCLP metals, ignitability, corrosivity, reactivity, and paint filter. Additional sampling and analyses may be required based on the selected disposal facility.

Samples will be collected in accordance with the selected disposal facility's requirements and will be collected to be representative of the material requiring disposal at a frequency consistent with disposal facility requirements. It is anticipated that all drummed material will be transported off-site and disposed of at a permitted facility.

5.9 CHAIN OF CUSTODY PROCEDURES

A chain-of-custody protocol has been established for collected samples that will be followed during sample handling activities in both field and laboratory operations. The primary purpose of the chain-of-custody procedures is to document the possession of the samples from collection through shipping, storage and analysis to data reporting and disposal. Chain-of-custody refers to actual possession of the samples. Samples are considered to be in custody if they are within sight of the individual responsible for their security or locked in a secure location. Each person who takes possession of the samples, except the shipping courier, is responsible for sample integrity and safe keeping. Chain-of-custody procedures are provided below:

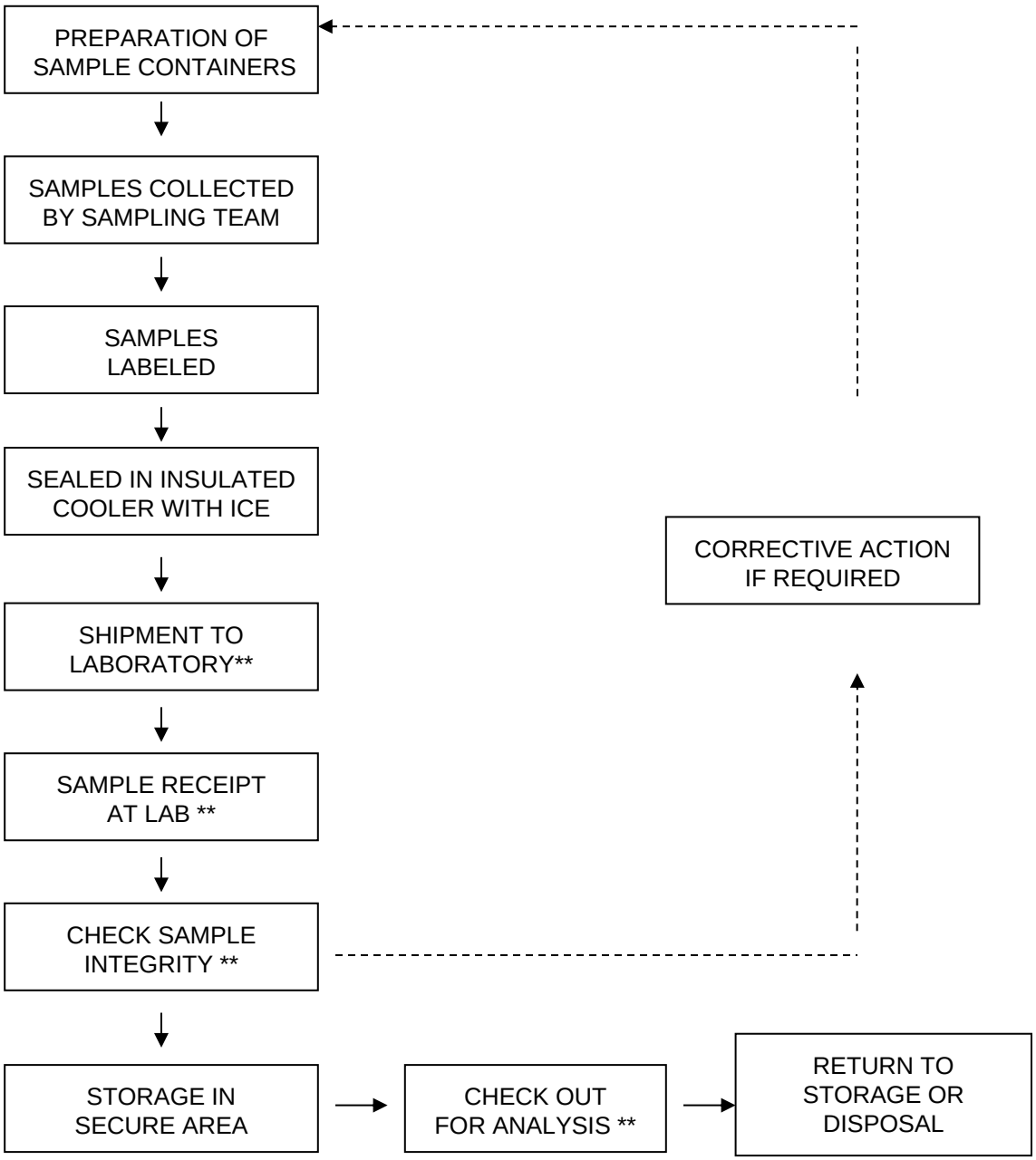
- Chain-of-custody will be initiated by the laboratory supplying the pre-cleaned and prepared sample containers. Chain-of-custody forms will accompany the sample containers.
- Following sample collection, the chain-of-custody form will be completed for the sample collected. The sample identification number, date and time of sample collection, analysis requested and other pertinent information (e.g., preservatives) will be recorded on the form. All entries will be made in waterproof, permanent blue or black ink.
- Langan field personnel will be responsible for the care and custody of the samples collected until the samples are transferred to another party, dispatched to the laboratory, or disposed. The sampling team leader will be responsible for enforcing chain-of-custody procedures during field work.
- When the form is full or when all samples have been collected that will fit in a single cooler, the sampling team leader will check the form for possible errors and sign the

chain-of-custody form. Any necessary corrections will be made to the record with a single strike mark, dated, and initialed.

When soil and groundwater samples are collected, sample coolers will be accompanied by the chain-of-custody form, sealed in a Ziploc® bag (or equivalent) and placed on top of the samples or taped to the inside of the cooler lid. If applicable, a shipping bill will be completed for each cooler and the shipping bill number recorded on the chain-of-custody form.

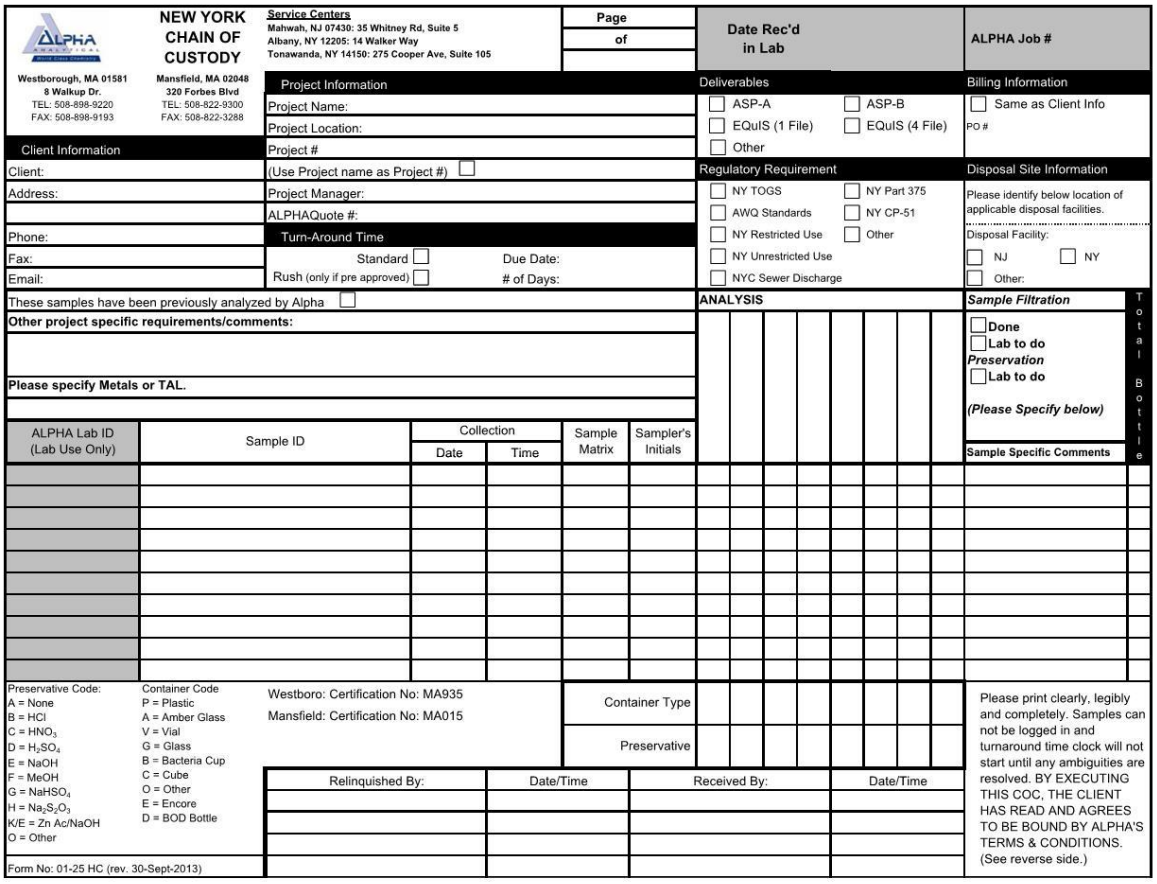
Samples will be packaged for shipment to the laboratory with the appropriate chain-of-custody form. A copy of the form will be retained by the sampling team for the project file and the original will be sent to the laboratory with the samples. Bills of lading will also be retained as part of the documentation for the chain-of-custody records, if applicable. When transferring custody of the samples, the individuals relinquishing and receiving custody of the samples will verify sample numbers and condition and will document the sample acquisition and transfer by signing and dating the chain-of-custody form. This process documents sample custody transfer from the sampler to the analytical laboratory. A flow chart showing a sample custody process is included as Figure 5.1, and an example chain-of-custody form for soil and groundwater samples is included as Figure 5.2.

Figure 5.1 Sample Custody



** REQUIRES SIGN-OFF ON CHAIN-OF-CUSTODY FORM

Figure 5.2 Sample Chain-of-Custody Form – Soil and Groundwater Samples



NEW YORK CHAIN OF CUSTODY

ALPHA Analytical Laboratories

Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193

Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page of

Date Rec'd in Lab

ALPHA Job #

Project Information
Project Name:
Project Location:
Project #
(Use Project name as Project #) ☐
Project Manager:
ALPHAQuote #:

Turn-Around Time
Standard ☐ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Billing Information
☐ Same as Client Info
PO #

Client Information
Client:
Address:
Phone:
Fax:
Email:

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ **Done**
☐ **Lab to do**
Preservation
☐ **Lab to do**
(Please Specify below)

Total Bottle

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

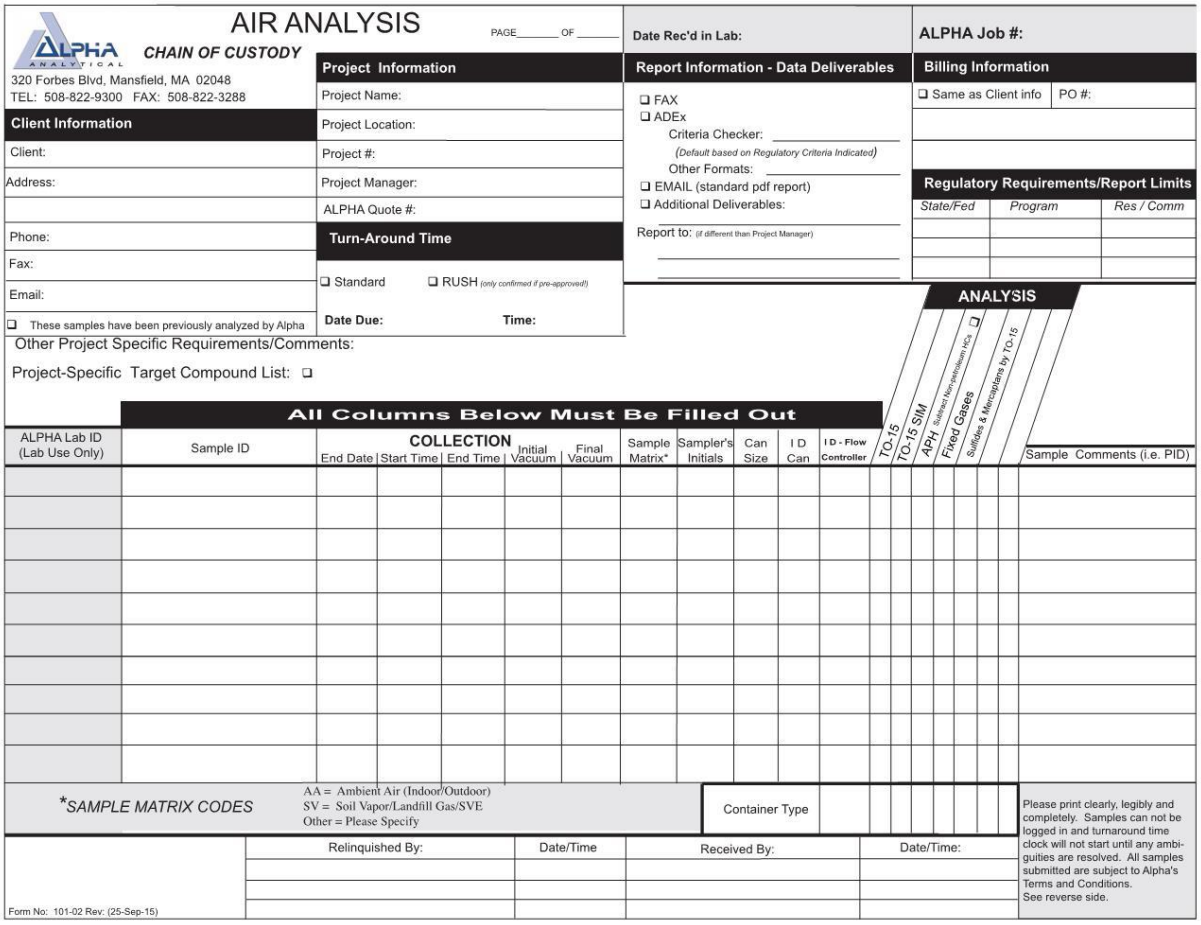
Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

Figure 5.3 Sample Chain-of-Custody Form – Soil Vapor and Ambient Air Samples



AIR ANALYSIS — CHAIN OF CUSTODY

PAGE_____ OF _____

ALPHA ANALYTICAL
320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #:

Client Information
Client:
Address:
Phone:
Fax:
Email:
❑ These samples have been previously analyzed by Alpha

Project Information
Project Name:
Project Location:
Project #:
Project Manager:
ALPHA Quote #:

Turn-Around Time
❑ Standard ❑ RUSH (only confirmed if pre-approved!)
Date Due: Time:

Report Information - Data Deliverables
❑ FAX
❑ ADEx
Criteria Checker: _____
(Default based on Regulatory Criteria Indicated)
Other Formats: _____
❑ EMAIL (standard pdf report)
❑ Additional Deliverables:
Report to: (if different than Project Manager)

Billing Information
❑ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed	Program	Res / Comm

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ❑

ANALYSIS

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION End Date	Start Time	End Time	Initial Vacuum	Final Vacuum	Sample Matrix*	Sampler's Initials	Can Size	I D Can	I D - Flow Controller	TO-15	TO-15 SIM	APH Sulfate/Non-petroleum HCs	Fixed Gases	Sulfides & Mercaptans by TO-15	❑	Sample Comments (i.e. PID)

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:	Date/Time	Received By:	Date/Time:

Form No: 101-02 Rev: (25-Sep-15)

Laboratory chain-of-custody will be maintained throughout the analytical processes as described in the laboratory's Quality Assurance Manual. The analytical laboratory will provide a copy of the chain-of-custody in the analytical data deliverable package. The chain-of-custody becomes the permanent record of sample handling and shipment.

5.10 LABORATORY SAMPLE STORAGE PROCEDURES

The subcontracted laboratory will use a laboratory information management system to track and schedule samples upon receipt by the analytical laboratories. Any sample anomalies identified during sample log-in must be evaluated on individual merit for the impact upon the results and the data quality objectives of the project. When irregularities do exist, the environmental consultant must be notified to discuss recommended courses of action and documentation of the issue must be included in the project file.

For samples requiring thermal preservation, the temperature of each cooler will be immediately recorded. Each sample and container will be assigned a unique laboratory identification number and secured within the custody room walk-in coolers designated for new samples. Samples will be, as soon as practical, disbursed in a manner that is functional for the operational team. The temperature of all coolers and freezers will be monitored and recorded using a certified temperature sensor. Any temperature excursions outside of acceptance criteria (i.e., below 2°C or above 6°C) will initiate an investigation to determine whether any samples may have been affected. Samples for VOCs will be maintained in satellite storage areas within the VOC laboratory. Following analysis, the laboratory's specific procedures for retention and disposal will be followed as specified in the laboratory's SOPs and/or Quality Assurance Manual.

5.11 SPECIAL CONSIDERATIONS FOR PFAS SAMPLE COLLECTION

Soil and groundwater samples collected for analysis of PFAS will be collected in accordance with the specialized protocol outlined in this section. Soil and groundwater samples collected from select sample locations will be analyzed for 1,4-dioxane by EPA Method 8270 SIM, and for PFAS by EPA Method 1633 in accordance with the procedure outlined in Attachment E.

The following special considerations apply to the collection of groundwater samples for PFAS analysis to prevent cross-contamination:

- Field equipment will not contain Teflon®
- All sampling material will be made from stainless steel, HDPE, acetate, silicon, or polypropylene
- No waterproof field books will be used
- No plastic clipboards, binders, or spiral hard cover notebooks will be used

- No adhesives will be used
- No sharpies or permanent markers will be used; ball point pens are acceptable
- Aluminum foil will not be used
- PFAS samples will be kept in a separate cooler from other sampling containers
- Coolers will be filled only with regular ice

PFAS compound sampling protocols and laboratory SOP are provided in Attachment E.

5.12 PFAS TARGET ANALYTE LIST

DER has developed a PFAS target analyte list. At minimum, the laboratory will report the following PFAS target compounds:

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonic acids	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluoropentanesulfonic acid	PFPeS	2706-91-4
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorononanesulfonic acid	PFNS	68259-12-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
	Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Perfluoroalkyl carboxylic acids	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUnA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTeDA	376-06-7
Per- and Polyfluoroether carboxylic acids	Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
	4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
	Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
	Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6

Fluorotelomer sulfonic acids	4:2 Fluorotelomer sulfonic acid	4:2-FTS	757124-72-4
	6:2 Fluorotelomer sulfonic acid	6:2-FTS	27619-97-2
	8:2 Fluorotelomer sulfonic acid	8:2-FTS	39108-34-4
Fluorotelomer carboxylic acids	3:3 Fluorotelomer carboxylic acid	3:3 FTCA	356-02-5
	5:3 Fluorotelomer carboxylic acid	5:3 FTCA	914637-49-3
	7:3 Fluorotelomer carboxylic acid	7:3 FTCA	812-70-4
Perfluorooctane sulfonamides	Perfluorooctane sulfonamide	PFOSA	754-91-6
	N-methylperfluorooctane sulfonamide	NMeFOSA	31506-32-8
	N-ethylperfluorooctane sulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids	N-methylperfluorooctane sulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols	N-methylperfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
	N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2
Ether sulfonic acids	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major)	9Cl-PF3ONS	756426-58-1
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	11Cl-PF3OUdS	763051-92-9
	Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7

6.0 DATA REDUCTION, VALIDATION, AND REPORTING

6.1 INTRODUCTION

Data collected during the field investigation will be reduced and reviewed by the laboratory quality assurance personnel, and a report on the findings will be tabulated in a standard format. The criteria used to identify and quantify the analytes will be those specified for the applicable methods in the USEPA SW-846 and subsequent updates. The data package provided by the laboratory will contain all items specified in the USEPA SW-846 methodology appropriate for the analyses to be performed, and be reported in standard format.

The completed copies of the chain-of-custody records (both external and internal) accompanying each sample from time of initial bottle preparation to completion of analysis shall be attached to the analytical reports.

6.2 DATA REDUCTION

The Analytical Services Protocol (ASP) Category B data packages and an electronic data deliverable (EDD) will be provided by the laboratory after receipt of a complete sample delivery group. The Project Manager will immediately arrange for archiving the results and preparation of result tables. These tables will form the database for assessment of the site contamination condition.

Each EDD must be formatted using a Microsoft Windows operating system and the NYSDEC data deliverable format for EQuIS. To avoid transcription errors, data will be loaded directly into the ASCII format from the laboratory information management system. If this cannot be accomplished, the consultant should be notified via letter of transmittal indicating that manual entry of data is required for a particular method of analysis. All EDDs must also undergo a quality control check by the laboratory before delivery. The original data, tabulations, and electronic media are stored in a secure and retrievable fashion.

The Project Manager or Task Manager will maintain close contact with the quality assurance reviewer to ensure all non-conformance issues are acted upon prior to data manipulation and assessment routines. Once the quality assurance review has been completed, the Project Manager may direct the Team Leaders or others to initiate and finalize the analytical data assessment.

6.3 DATA VALIDATION

Data validation will be performed in accordance with the USEPA Region 2 SOPs for data validation and USEPA's National Functional Guidelines for Organic and Inorganic Data Review. Tier 1 data validation (the equivalent of USEPA's Stage 2A validation) will be performed to evaluate data quality. Tier 1 data validation is based on completeness and compliance checks of sample-related QC results including:

- Holding times;
- Sample preservation;
- Blank results (method, trip, and field blanks);
- Surrogate recovery compounds and extracted internal standards (as applicable);
- LCS and LCSD recoveries and RPDs;
- MS and MSD recoveries and RPDs;
- Laboratory duplicate RPDs; and
- Field duplicate RPDs

A DUSR will be prepared by the data validator and reviewed by the Quality Assurance Manager before issuance. The DUSR will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain-of-custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method.

Based on the results of data validation, the validated analytical results reported by the laboratory will be assigned one of the following usability flags:

- "U" - Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank;
- "UJ" - Not detected. Quantitation limit may be inaccurate or imprecise;
- "J" - Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method
- "R" – Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample; and
- No Flag - Result accepted without qualification.

7.0 QUALITY ASSURANCE PERFORMANCE AUDITS AND SYSTEM AUDITS

7.1 INTRODUCTION

Quality assurance audits may be performed by the project quality assurance group under the direction and approval of the Quality Assurance Manager (QAM). These audits will be implemented to evaluate the capability and performance of project and subcontractor personnel, items, activities, and documentation of the measurement system(s). Functioning as an independent body and reporting directly to corporate quality assurance management, the QAM may plan, schedule, and approve system and performance audits based upon procedures customized to the project requirements. At times, the QAM may request additional personnel with specific expertise from company and/or project groups to assist in conducting performance audits. However, these personnel will not have responsibility for the project work associated with the performance audit.

7.2 SYSTEM AUDITS

System audits may be performed by the QAM or designated auditors, and encompass a qualitative evaluation of measurement system components to ascertain their appropriate selection and application. In addition, field and laboratory quality control procedures and associated documentation may be system audited. These audits may be performed once during the performance of the project. Additional audits may occur if conditions adverse to quality are detected or at the request of the Project Manager.

7.3 PERFORMANCE AUDITS

The laboratory may be required to conduct an analysis of Performance Evaluation samples or provide proof that Performance Evaluation samples submitted by USEPA or a state agency have been analyzed within the past twelve months.

7.4 FORMAL AUDITS

Formal audits refer to any system or performance audit that is documented and implemented by the quality assurance group. These audits encompass documented activities performed by qualified lead auditors to a written procedure or checklists to objectively verify that quality assurance requirements have been developed, documented, and instituted in accordance with contractual and project criteria. Formal audits may be performed on project and subcontractor work at various locations.

Audit reports will be written by auditors who have performed the site audit after gathering and evaluating all data. Items, activities, and documents determined by lead auditors to be in noncompliance shall be identified at exit interviews conducted with the involved management.

Non-compliances will be logged, and documented through audit findings, which are attached to and are a part of the integral audit report. These audit-finding forms are directed to management to satisfactorily resolve the noncompliance in a specified and timely manner.

The Project Manager has overall responsibility to ensure that all corrective actions necessary to resolve audit findings are acted upon promptly and satisfactorily. Audit reports must be submitted to the Project Manager within fifteen days of completion of the audit. Serious deficiencies will be reported to the Project Manager within 24 hours. All audit checklists, audit reports, audit findings, and acceptable resolutions are approved by the QAM prior to issue. Verification of acceptable resolutions may be determined by re-audit or documented surveillance of the item or activity. Upon verification acceptance, the QAM will close out the audit report and findings.

8.0 CORRECTIVE ACTION

8.1 INTRODUCTION

The following procedures have been established to ensure that conditions adverse to quality, such as malfunctions, deficiencies, deviations, and errors, are promptly investigated, documented, evaluated, and corrected.

8.2 PROCEDURE DESCRIPTION

When a significant condition adverse to quality is noted at a site, laboratory, or subcontractor location, the cause of the condition will be determined and corrective action will be taken to preclude repetition. Condition identification, cause, reference documents, and corrective action planned to be taken will be documented and reported to the QAM, Project Manager, Field Team Leader and involved contractor management, at a minimum. Implementation of corrective action is verified by documented follow-up action.

All project personnel have the responsibility, as part of the normal work duties, to promptly identify, solicit approved correction, and report conditions adverse to quality. Corrective actions will be initiated as follows:

- When predetermined acceptance standards are not attained;
- When procedure or data compiled are determined to be deficient;
- When equipment or instrumentation is found to be faulty;
- When samples and analytical test results are not clearly traceable;
- When quality assurance requirements have been violated;
- When designated approvals have been circumvented;
- As a result of system and performance audits;
- As a result of a management assessment;
- As a result of laboratory/field comparison studies; and
- As required by USEPA SW-846, and subsequent updates, or by the NYSDEC ASP.

Project management personnel, field investigation teams, remedial response planning personnel, and laboratory groups monitor ongoing work performance during the normal course of daily responsibilities. Work may be audited at project sites, laboratories, or contractor locations. Activities, or documents ascertained to be noncompliant with quality assurance requirements will be documented. Corrective actions will be mandated through audit finding sheets attached to the audit report. Audit findings are logged, maintained, and controlled by the Task Manager.

Personnel assigned to quality assurance functions will have the responsibility to issue and control Corrective Action Request (CAR) Forms (Figure 8.1 or similar by email). The CAR identifies the out-of-compliance condition, reference document(s), and recommended corrective action(s) to be administered. The CAR is issued to the personnel responsible for the affected item or activity. A copy is also submitted to the Project Manager. The individual to whom the CAR is addressed returns the requested response promptly to the quality assurance personnel, affixing his/her signature and date to the corrective action block, after stating the cause of the conditions and corrective action to be taken. The quality assurance personnel maintain the log for status of CARs, confirms the adequacy of the intended corrective action, and verifies its implementation. CARs will be retained in the project file for the records.

Any project personnel may identify noncompliance issues; however, the designated quality assurance personnel are responsible for documenting, numbering, logging, and verifying the close out action. The Project Manager will be responsible for ensuring that all recommended corrective actions are implemented, documented, and approved.

Figure 8.1 Correction Action Request Form

CORRECTIVE ACTION REQUEST

Number: _____ Date: _____

TO: _____

You are hereby requested to take corrective actions indicated below and as otherwise determined by you to (a) resolve the noted condition and (b) to prevent it from recurring. Your written response is to be returned to the project quality assurance manager by _____

CONDITION:

REFERENCE DOCUMENTS:

RECOMMENDED CORRECTIVE ACTIONS:

_____ _____ _____ _____ _____ _____

Originator Date Approval Date Approval Date

RESPONSE

CAUSE OF CONDITION

CORRECTIVE ACTION

(A) RESOLUTION

(B) PREVENTION

(C) AFFECTED DOCUMENTS

C.A. FOLLOWUP:

CORRECTIVE ACTION VERIFIED BY: _____ DATE:_____

9.0 REFERENCES

NYSDEC. Division of Environmental Remediation. DER-10/Technical Guidance for Site Investigation and Remediation, dated May 3, 2010.

USEPA, 2016. Low/Medium Volatile Data Validation. SOP No. HW-33A, Revision 1, dated September 2016. USEPA Region II.

USEPA, 2015. PCB Aroclor Data Validation. SOP No. HW-37A, Revision 0, dated July 2015. USEPA Region II.

USEPA, 2016. ICP-AES Data Validation. SOP No. HW-3a, Revision 1, dated September 2016. USEPA Region II.

USEPA, 2016. Mercury and Cyanide Data Validation. SOP No. HW-3c, Revision 1, dated September 2016. USEPA Region II.

USEPA, 2016. Pesticide Data Validation. SOP No. HW-36A, Revision 1, dated October 2016. USEPA Region II.

USEPA, 2016. Semivolatile Data Validation. SOP No. HW-35A, Revision 1, dated September 2016. USEPA Region II.

USEPA, 2016. Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15, Revision 6, dated September 2016. USEPA Region II.

USEPA 2017. National Functional Guidelines for Superfund Organic Methods Data Review, Office of Superfund Remediation and Technology Innovation, EPA-540-R-2017-002, January 2017.

USEPA 2017b. National Functional Guidelines for Superfund Inorganic Methods Data Review, Office of Superfund Remediation and Technology Innovation, EPA-540-R-201 7-001, January 2017

ATTACHMENT A

RESUMES

MICHAEL D. BURKE, PG, CHMM, LEED AP

SENIOR PRINCIPAL/SENIOR VICE PRESIDENT

ENVIRONMENTAL ENGINEERING AND REMEDIATION

Mr. Burke is a geologist/environmental scientist with 26 years of experience, whose practice involves site investigation and remediation, transactional due diligence, environmental site assessments, in-situ remedial technology, and manufactured gas plant (MGP) site characterization and remediation. His additional services include multi-media compliance audits, sub-slab depressurization system design, non-hazardous and hazardous waste management, emergency response, community air monitoring programs, environmental and geotechnical site investigations, and health and safety monitoring. He has experience with projects in the New York State Department of Environmental Conservation (NYSDEC) and New York State Brownfield Cleanup (NYS BCP) Programs; Inactive Hazardous Waste, and Spill Programs, and New York City Office of Environmental Remediation (OER) e-designated and New York City Voluntary Cleanup Program (NYC VCP) sites.

SELECTED PROJECTS

- 227-14 North Conduit Avenue, Industrial Wastewater Compliance, Jamaica, NY
- 420 Kent Avenue, NYS Brownfield Cleanup Program, Brooklyn, NY
- 572 Eleventh Avenue, NYC VCP, New York, NY
- Monian Site A, OER E-Designated Site, New York, NY
- 537 Sackett Street, Gowanus Canal Due Diligence/MGP Site, Brooklyn, NY
- ABC Blocks 25, 26 and 27, NYS Brownfield Cleanup Program Sites, Long Island City, NY
- 432 Rodney Street, NYS Brownfield Cleanup Program, Petroleum and Chlorinated Volatile Organic Compound Investigation and Remediation, Brooklyn, NY
- 787 Eleventh Avenue, NYS Brownfield Cleanup Program Site, New York, NY
- President Street at Gowanus Canal, NYS Brownfield Cleanup Program Site, Brooklyn, NY
- 22-36 Second Avenue at Gowanus Canal, NYS Brownfield Cleanup Program Site, Brooklyn, NY
- 563 Sacket Street, NYS Brownfield Cleanup Program Site, MGP Investigation, and Remediation, Brooklyn, NY
- 156-162 Perry Street, NYS Brownfield Cleanup Program Site, New York, NY
- Christopher and Weehawken Streets, NYS Brownfield Cleanup Program, New York, NY
- Phelps Dodge Block 2529 (Lots 40, 50, and 45), Inactive Hazardous Waste Disposal Site, Maspeth NY
- 42-50 24th Street, NYS Brownfield Cleanup Program Site, Long Island City, NY
- Storage Deluxe (163 6th Street), OER E-Designation Site, New York, NY



EDUCATION

M.S., Environmental Geology
Rutgers University

B.S., Geological Sciences
Rutgers University

B.S., Environmental Science
Rutgers University

PROFESSIONAL REGISTRATION

Professional Geologist (PG) in NY

Certified Hazardous Materials Manager – CHMM No. 15998

LEED Accredited Professional (LEED AP)

OSHA Certification for Hazardous Waste Site Supervisor

OSHA 29 CFR 1910.120 Certification for Hazardous Waste Operations and Emergency Response

NJDEP Certification for Community Noise Enforcement

AFFILIATIONS

New York State Council of Professional Geologists – Board of Directors

- Prospect Park Redevelopment, Landfill Reclamation, Prospect Park, NJ
- 431 Carroll Street, Gowanus Canal Due Diligence, Brooklyn, NY
- 76 4th Street Property, Gowanus Due Diligence, Brooklyn, NY
- Foxgate/MREC, Due Diligence and Solid Waste Compliance, Central Islip, NY
- 175-225 3rd Street at Gowanus Canal, NYS Brownfield Cleanup Program, Brooklyn, NY
- New York University Tandon School of Engineering, Spill Investigation/Remediation Dual Phase Recovery, and Laser Fluorescence Investigation, Brooklyn, NY
- 2420-2430 Amsterdam Avenue, NYS Brownfield Cleanup Program/Board of Standards and Appeals Variance, New York, NY
- 170 Amsterdam Avenue, NYC VCP, New York, NY
- 538-540 Hudson Street, NYS Brownfield Cleanup Program (Former Gas Station), New York, NY
- 234 Butler Street, Gowanus Canal Due Diligence, Brooklyn, NY
- 550 Clinton Street, NYS Brownfield Cleanup Program E-Designation, Brooklyn, NY
- 111 Leroy Street, OER E-Designation Site, New York, NY
- 335 Bond Street, NYS Brownfield Cleanup Program, New York, NY
- Gowanus Canal Northside, NYS BCP Former Fuel Oil Terminal, Brooklyn, NY
- Multiple Buildings, Major Oil Storage Facility, Gowanus Canal Location, Brooklyn, NY
- 197-205 Smith Street at Gowanus Canal, MGP Due Diligence, Brooklyn, NY
- 450 Union Street at Gowanus Canal, NYS Brownfield Cleanup Program, Brooklyn, NY
- 86 Fleet Place, NYC VCP E-Designation, Brooklyn, NY
- New York University College of Nursing at 433 1st Avenue, NYS BCP, Bronx, NY
- Retail Building at 225 3rd Street, Brooklyn, NY
- 29-37 41st Avenue, NYS Brownfield Cleanup Program, Long Island City, NY
- 43-01 22nd Street, NYS Brownfield Cleanup Program, Long Island City, NY
- Compliance Audit for NYU at Washington Square Park, New York, NY
- Former Watermark Locations, NYS Brownfield Cleanup Program, Chlorinated Volatile Organic Compound Investigation and Remediation; AS/SVE, Brooklyn, NY
- Former Gas Station (1525 Bedford Avenue), Brooklyn, NY
- NYS Brownfield Cleanup Program at 514 West 24th Street, New York, NY
- Gowanus Canal Due Diligence at 76 4th Street, Brooklyn, NY
- Urban Health Plan, Medical Building, NYS Brownfield Cleanup Program CVOC Investigation and Remediation, Bronx, NY
- 420 East 54th Street, NYS Spill Closure, New York, NY
- Equity Residential at 160 Riverside Boulevard, NYS Spill Closure, New York, NY
- 357-359 West Street and 156 Leroy Street, NYC VCP, New York, NY
- Emergency Spill Response at 322 West 57th Street, Investigation and Closure, New York, NY

New York Building Congress – Energy Committee

- Hurricane Sandy, Emergency Response at 21 West Street, New York, NY
- Hurricane Sandy, Emergency Response at 71 Pine Street, New York, NY
- Greenpoint Landing, NYC E-Designation, Brooklyn, NY
- 23-01 42nd Road, NYS Brownfield Cleanup Program, Long Island City, NY
- Greenpoint Waterfront Development, NYS Brownfield Cleanup Program, Brooklyn, NY
- 125th Street and Lenox Avenue, NYC VCP, New York, NY
- Whitehead Realty Solvent Site, Inactive Hazardous Waste site, CVOC, Investigation and Remediation, Brooklyn, NY
- SunCap Property Group Environmental On-Call Consulting, Various Locations, Nationwide
- Con Edison, Underground Storage Tank On-Call Contract, Five Boroughs of New York City, NY
- Con Edison, Construction Inspections On-Call Contract, Five Boroughs of New York City, NY
- Con Edison, Appendix B Spill Sites On-Call Contract, Five Boroughs of New York City, NY
- Meeker Avenue Plume Trackdown Site, Brooklyn, NY
- Distribution Facility, Superfund Redevelopment, Long Island City, NY
- Edison Properties, West 17th Street Development Site (Former MGP Site), New York, NY
- Con Edison, Governors Island Dielectric Fluid Spill, Investigation and Remediation, New York, NY
- 144-150 Barrow Street, NYS Brownfield Cleanup Program, New York, NY
- West 17th Street Development, NYS Brownfield Cleanup Program, MGP Investigation and Remediation, New York, NY
- Montefiore Medical Center, Emergency Response, PCB Remediation, Bronx, NY
- New York University, 4 Washington Square Village Fuel Oil Remediation, New York, NY
- NYCSCA, Proposed New York City School Construction Sites, Five Boroughs of New York City, NY
- Con Edison, East 60th Street Generating Station, New York, NY
- Residential Building at 82 Irving Place, Environmental Remediation, New York, NY
- 1113 York Avenue, Storage Tank Closures, New York, NY
- Peter Cooper Village/Stuyvesant Town, Phase I ESA, New York, NY
- Superior Ink, Waste Characterization and Remedial Action Plans, New York, NY
- Bronx Mental Health Redevelopment Project, Phase I ESA, Bronx, NY
- 2950 Atlantic Avenue, Site Characterization Investigation, Brooklyn, NY
- Con Edison, East 74th Street Generating Station, Sediment Investigation, New York, NY
- Con Edison, First Avenue Properties, New York, NY
- Queens West Development Corp. Stage II, Long Island City, NY
- Article X Project Environmental Reviews, Various New York State Electrical Generation Sites, NY
- Poletti Generating Station, Astoria, NY

- Arthur Kill Generating Station, Staten Island, NY
- Distribution Facility, Phase I & Phase II ESA and Regulatory Compliance, Bohemia, NY
- Huntington Station Superfund Due Diligence, Huntington Station, NY
- Garvies Point Bulkhead, Glen Cove, NY
- Johnson & Hoffman Metal Stamping Facility, Environmental Compliance, Carle Place, NY
- Floral Park Storage Facility, Phase I and Phase II ESA
- Garden City Phase I ESAs at two sites, including part of a Superfund Site, Garden City, NY
- Huntington Station Storage Facility, Phase I and II ESA, Huntington Station, NY
- Trevor Day School, NYS Spill Site Expert Testimony, New York, NY
- 320 West Fordham Road, Bronx, NY
- Bedford Union Armory, NYS Brownfield Cleanup Program, Brooklyn, NY

SELECTED PUBLICATIONS, REPORTS, AND PRESENTATIONS

Burke, M., Ciambruschini, S., Nicholls, G., Tashji, A., Vaidya, S., “Redeveloping a Remediated MGP Site”, MGP Symposium 2019, Atlantic City, NJ.

LAMEES ESMAIL, PE

PROJECT ENGINEER

ENVIRONMENTAL ENGINEERING

Ms. Esmail is a civil and environmental engineer with four years of experience supporting environmental oversight and remediation projects in New York City. She has performed environmental field work including preparing daily inspection reports, photo documentation of work, and reviewing contractor submittals. She currently performs site research, manages field oversight, reviews/approves contractor submittals, prepares reports, and is involved with remedial design, implementation and project management.

Prior to joining Langan, Ms. Esmail gained three years of experience supporting environmental permitting and erosion and sedimentation control primarily for linear overhead transmission line projects. Types of permits included state land disturbance approvals and Army Corps of Engineers Section 10 Pre-Construction Notifications. Ms. Esmail also has experience aiding with the siting of new substation properties, using ArcGIS and AutoCAD to compile data for potential sites.



EDUCATION

B.S., Civil Engineering (Environmental Concentration)
George Washington University

PROFESSIONAL REGISTRATION

Professional Engineer (PE) in NY

SELECTED PROJECTS

- Con Edison Partial Replacement of 345KV Feeders M51 & M52 Feasibility Study, New York, NY
- 220 Eleventh Avenue, Hudson Arts Building, New York, NY
- 50 Hudson Yards, Supertall Office Building, New York, NY
- 215 North 10th Street, Brooklyn, NY
- 320 West 135th Street, New York, NY
- 163 Varick Street, New York, NY
- 39 West 23rd Street, New York, NY
- 1 Huron Street, Brooklyn, NY
- Bedford Armory, Brooklyn, NY
- 1607 Surf Avenue, Brooklyn, NY
- 414 Gerard Avenue, Bronx, NY
- 445 Gerard Avenue, Bronx, NY
- 326-350 Rockaway Avenue, Brooklyn, NY
- 197-201 Canal Street, Staten Island, NY
- 475 Bay Street, Staten Island, NY
- Astoria Steel, Queens, NY
- 99 Hudson Boulevard, New York, NY
- 4650 Broadway, New York, NY
- 12-57 57th Street, Brooklyn, NY
- 805-825 Atlantic Avenue, Brooklyn, NY
- Various Phase I Environmental Site Assessments (ESAs) in NYC

SELECTED PUBLICATIONS, REPORTS, AND PRESENTATIONS

Esmail, L., “Transmission Line Erosion Control and Construction Specifications”, Duke Energy Progress Transmission Erosion and Sedimentation Control Seminar, Raleigh, NC, November 2016.

ALEXIS HALEY

SENIOR STAFF ENGINEER

ENVIRONMENTAL ENGINEERING

Ms. Haley is an environmental engineer with over four years of experience in environmental consulting in the New York metropolitan area. Ms. Haley has a background in air permitting and compliance, construction monitoring, daily field inspections, environmental site assessments, remedial investigations, sample collection, report writing, vapor mitigation system design and installation, and due diligence. She is currently involved in supporting multiple brownfield redevelopment and voluntary cleanup projects which involve reviewing daily reports and photo-documentation of work, ensuring compliance with contract and construction documents, and reviewing construction means and methods. Ms. Haley works as a liaison between the project team, contractors, and regulators by reviewing the project schedule and construction submittals for project sites.



SELECTED PROJECTS

- Con Edison, Feeder Refurbishment Inspections, New York, NY and Yonkers, NY
- Con Edison, EV Charging Station Implementation, Bronx, New York, Brooklyn, and Queens, NY
- Astoria Steel, Quarterly Groundwater Sampling, Tidal Influence Evaluation, Con Edison Vault Letter Report, PRRs, Astoria, NY
- 220 Eleventh Avenue, Remedial Oversight Support, New York, NY
- 1400 Ferris Place, MOSF Decommissioning Oversight, Bronx, NY
- Hudson Highlands Fjord Trail, Site Reconnaissance and Limited Subsurface Investigation, Beacon, NY
- 473 President Street, AS/SVE Pilot Testing, Brooklyn, NY
- 1095 Southern Boulevard, Phase I ESA, Emerging Contaminant Sampling and Letter Report, Bronx, NY
- 24 Woodward Avenue, Tank Closure Report and Remedial Oversight, Ridgewood, NY
- Block 4 Parcel, Tank Closure Report and Remedial Oversight, New York, NY
- 250 Water Street, Remedial Investigation and Oversight, New York, NY
- 50 Pennsylvania Avenue, Construction Oversight, Brooklyn, NY
- 126 Nassau Street, Waste Characterization, New York, NY
- 320 West 31st Street, RIWP, New York, NY
- 160-02 Liberty Avenue, Phase I ESA, Jamaica, NY
- Vital Brooklyn Sites, Phase I ESAs and RIR, Brooklyn, NY
- Alley Pond, Remedial Oversight, Douglaston, NY
- 320 West Fordham Road, Phase I ESAs, Bronx, NY
- ABC Block 27, Supplemental Remedial Investigation, Long Island City, NY
- 62 Hanson Place, Phase II ESI Report, SSDS Design and Implementation, SSDS Installation Report and OM&M Plan, Brooklyn, NY
- 27-01 Jackson Avenue, Remedial Oversight Support, FER, OSMP, Quarterly Groundwater Monitoring Reports, PRR, Long Island City, NY

EDUCATION

M.S., Chemical Engineering
Columbia University

B.S., Chemistry
(Physics and Mathematics Minors)
St. Lawrence University

PROFESSIONAL REGISTRATION

10-Hour OSHA

40-Hour OSHA HAZWOPER

AFFILIATIONS

Brownfield Coalition of the Northeast, Member

BCONE Upstate Expansion Committee

- 26-32 Jackson Avenue, Supplemental Remedial Investigation, Remedial Oversight Support, FER, PRR, Long Island City, NY
- 83 Apollo Street, Remedial Investigation, RIR, RAWP, SMDS Design and Implementation, Remedial Oversight Support, RAR and SMP, Brooklyn, NY
- 159 Boerum Street, Remedial Oversight Support, FER, Brooklyn, NY
- 222 NE 1st Avenue, Phase I ESA, Miami, FL
- 44-01 Northern Boulevard, SMDS Design and Implementation, Remedial Oversight Support, Long Island City, NY
- 326-350 Rockaway Avenue, RAWP, Remedial Oversight Support, FER, Brooklyn, NY
- Wakefield Grace United Methodist Church, Phase I ESA, Wakefield, NY
- 125 3rd Street, Phase I ESA, RIWP, Brooklyn, NY
- Manhattan Greenway, Remedial Investigation and Waste Characterization, New York, NY
- 403 East 65th Street, SSDS and GVB Design and Implementation, New York, NY
- 197-201 Canal Street, Supplemental Remedial Investigation Support, Remedial Oversight Support, Staten Island, NY
- Champlain Hudson Power Express, 3.5-Mile Corridor Study, Astoria, NY
- 31-01 20th Avenue, Due Diligence and RIWP, Remedial Investigation Support, RIR, Consent Order OM&M, Historical Document Review Memorandum, Astoria, NY
- 615 Broadway, BCP Application, Kingston, NY
- 224 3rd Avenue, SMDS Design, Brooklyn, NY
- 1709 Surf Avenue, Remedial Action Work Plan, Brooklyn, NY
- 312 Coney Island Avenue, Remedial Action Report, Brooklyn, NY
- 15 East 88th Street, Spill Investigation Support, New York, NY
- 50 Commercial Street, In-Situ Remedial Injection Support, SMDS Design, Remedial Oversight Support

SELECTED PUBLICATIONS, REPORTS, AND PRESENTATIONS

Beatty M.E.S., Gillette E.I., Haley A.T., “Controlling the Relative Fluxes of Protons and Oxygen to Electrocatalytic Buried Interfaces with Tunable Silicon Oxide Overlayers.” *Applied Energy Materials*.

ANTHONY MOFFA, JR., ASP, CHMM, COSS, CSP

ASSOCIATE
CORPORATE HEALTH AND SAFETY MANAGER

Anthony is Langan's Corporate Health & Safety Manager and is responsible for managing health and safety compliance in all Langan office locations. He has 29 years of experience in the health and safety field. He is responsible for ensuring compliance with all federal and state occupational health and safety laws and development and implementation of corporate health and safety policies. His responsibilities include reviewing and updating Langan's Corporate Health and Safety Program and assisting employees in the development of site specific Health & Safety Plans. He maintains and manages health and safety records for employees in all Langan office locations including medical evaluations, respirator fit testing, and Hazardous Waste Operations and Emergency Response training. He is also responsible for documentation and investigation of work-related injuries and incidents and sharing this information with employees to assist in the prevention of future incidents. He is also the chairman of the Corporate Health & Safety Committee and Health & Safety Leadership Team that meet periodically throughout the year. He is responsible for coordinating and providing health and safe training to Langan employees. He was formerly the Environmental, Health and Safety Coordinator at a chemical manufacturer. His experience included employee hazard communications, development of material safety data sheets for developed products, respirator fit testing and conducting required Occupational Health & Safety Association and Department of Transportation training.



EDUCATION

B.S., Physics
West Chester University

PROFESSIONAL REGISTRATION

Associate Safety Professional (ASP)

Certified Hazardous Material Manager (CHMM)

Certified Occupational Safety Specialist (COSS)

Certified Safety Professional (CSP)

AFFILIATIONS

Pennsylvania Chamber of Business & Industry

Chemical Council of New Jersey

New Jersey Business & Industry Association

American Society of Safety Professionals

JOSEPH CONBOY

SENIOR STAFF CHEMIST

ENVIRONMENTAL ENGINEERING

Joseph has 7 years of experience in environmental consulting, specializing in chemical data validation, data quality assessments, data usability evaluations, and EQuIS database management.



SELECTED PROJECTS

- 23-30 Borden Avenue, Long Island City, NY
- 25-01 Queens Plaza North, Long Island City, NY
- 37-11 30th Street, Long Island City, NY
- 266 West 96th Street, New York, NY
- 414 Gerard Avenue, Bronx, NY
- 445 Gerard Avenue, Bronx, NY
- 475 Bay Street, Staten Island,
- 538-544 Hudson Street, New York, NY
- 805-825 Atlantic Avenue, Brooklyn, NY
- 1400 Ferris Place, Bronx, NY
- 1607 Surf Avenue, Coney Island, NY
- 1900 River Road, Burlington, NJ
- 2447 Third Avenue, New York, NY
- ABC - Block 27, Long Island City, NY
- American Dream Meadowlands, East Rutherford, NJ
- Bedford Armory, Brooklyn, NY
- Former Ballantine Brewery, Newark, NJ
- Former Curtiss-Wright Facility, Wood-Ridge, NJ
- Former Duane Marine Site, Perth Amboy, NJ
- Former Perth Amboy Gas Works, Perth Amboy, NJ
- Former Plessey Dynamics Site, Hillside, NJ
- Former MGP Site, Wildwood, NJ
- Gowanus Canal Northside, Brooklyn, NY
- JCP&L Union Beach District Office, Keyport, NJ
- K-8 School, New Brunswick, NJ
- Linden Terminal, Linden, NJ
- Paulsboro Packaging Site, Paulsboro, NJ
- President Street Properties, New York, NY
- Suffolk Street, New York, NY
- Willets Point, Queens, NY

EDUCATION

B.S., Chemistry
Rowan University

ATTACHMENT B

LABORATORY REPORTING LIMITS AND METHOD DETECTION LIMITS

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Langan Engineering & Environmental

TCL Volatiles - EPA 8260D/5035 High&Low (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - 1 Vial MeOH/2 Vial Water

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Methylene chloride	75-09-2	5	2.29	ug/kg	70-130	30	70-130	30	30			
1,1-Dichloroethane	75-34-3	1	0.145	ug/kg	70-130	30	70-130	30	30			
Chloroform	67-66-3	1.5	0.14	ug/kg	70-130	30	70-130	30	30			
Carbon tetrachloride	56-23-5	1	0.23	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloropropane	78-87-5	1	0.125	ug/kg	70-130	30	70-130	30	30			
Dibromochloromethane	124-48-1	1	0.14	ug/kg	70-130	30	70-130	30	30			
1,1,2-Trichloroethane	79-00-5	1	0.267	ug/kg	70-130	30	70-130	30	30			
Tetrachloroethene	127-18-4	0.5	0.196	ug/kg	70-130	30	70-130	30	30			
Chlorobenzene	108-90-7	0.5	0.127	ug/kg	70-130	30	70-130	30	30			
Trichlorofluoromethane	75-69-4	4	0.695	ug/kg	70-139	30	70-139	30	30			
1,2-Dichloroethane	107-06-2	1	0.257	ug/kg	70-130	30	70-130	30	30			
1,1,1-Trichloroethane	71-55-6	0.5	0.167	ug/kg	70-130	30	70-130	30	30			
Bromodichloromethane	75-27-4	0.5	0.109	ug/kg	70-130	30	70-130	30	30			
trans-1,3-Dichloropropene	10061-02-6	1	0.273	ug/kg	70-130	30	70-130	30	30			
cis-1,3-Dichloropropene	10061-01-5	0.5	0.158	ug/kg	70-130	30	70-130	30	30			
1,3-Dichloropropene, Total	542-75-6	0.5	0.158	ug/kg				30	30			
1,1-Dichloropropene	563-58-6	0.5	0.159	ug/kg	70-130	30	70-130	30	30			
Bromoform	75-25-2	4	0.246	ug/kg	70-130	30	70-130	30	30			
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.166	ug/kg	70-130	30	70-130	30	30			
Benzene	71-43-2	0.5	0.166	ug/kg	70-130	30	70-130	30	30			
Toluene	108-88-3	1	0.543	ug/kg	70-130	30	70-130	30	30			
Ethylbenzene	100-41-4	1	0.141	ug/kg	70-130	30	70-130	30	30			
Chloromethane	74-87-3	4	0.932	ug/kg	52-130	30	52-130	30	30			
Bromomethane	74-83-9	2	0.581	ug/kg	57-147	30	57-147	30	30			
Vinyl chloride	75-01-4	1	0.335	ug/kg	67-130	30	67-130	30	30			
Chloroethane	75-00-3	2	0.452	ug/kg	50-151	30	50-151	30	30			
1,1-Dichloroethene	75-35-4	1	0.238	ug/kg	65-135	30	65-135	30	30			
trans-1,2-Dichloroethene	156-60-5	1.5	0.137	ug/kg	70-130	30	70-130	30	30			
Trichloroethene	79-01-6	0.5	0.137	ug/kg	70-130	30	70-130	30	30			
1,2-Dichlorobenzene	95-50-1	2	0.144	ug/kg	70-130	30	70-130	30	30			
1,3-Dichlorobenzene	541-73-1	2	0.148	ug/kg	70-130	30	70-130	30	30			
1,4-Dichlorobenzene	106-46-7	2	0.171	ug/kg	70-130	30	70-130	30	30			
Methyl tert butyl ether	1634-04-4	2	0.201	ug/kg	66-130	30	66-130	30	30			
p/m-Xylene	179601-23-1	2	0.56	ug/kg	70-130	30	70-130	30	30			
o-Xylene	95-47-6	1	0.291	ug/kg	70-130	30	70-130	30	30			
Xylene (Total)	1330-20-7	1	0.291	ug/kg				30	30			
cis-1,2-Dichloroethene	156-59-2	1	0.175	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloroethene (total)	540-59-0	1	0.137	ug/kg				30	30			
Dibromomethane	74-95-3	2	0.238	ug/kg	70-130	30	70-130	30	30			
Styrene	100-42-5	1	0.196	ug/kg	70-130	30	70-130	30	30			
Dichlorodifluoromethane	75-71-8	10	0.915	ug/kg	30-146	30	30-146	30	30			
Acetone	67-64-1	10	4.811	ug/kg	54-140	30	54-140	30	30			

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Langan Engineering & Environmental

TCL Volatiles - EPA 8260D/5035 High&Low (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - 1 Vial MeOH/2 Vial Water

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Carbon disulfide	75-15-0	10	4.55	ug/kg	59-130	30	59-130	30	30			
2-Butanone	78-93-3	10	2.22	ug/kg	70-130	30	70-130	30	30			
Vinyl acetate	108-05-4	10	2.15	ug/kg	70-130	30	70-130	30	30			
4-Methyl-2-pentanone	108-10-1	10	1.28	ug/kg	70-130	30	70-130	30	30			
1,2,3-Trichloropropane	96-18-4	2	0.127	ug/kg	68-130	30	68-130	30	30			
2-Hexanone	591-78-6	10	1.18	ug/kg	70-130	30	70-130	30	30			
Bromochloromethane	74-97-5	2	0.205	ug/kg	70-130	30	70-130	30	30			
2,2-Dichloropropane	594-20-7	2	0.202	ug/kg	70-130	30	70-130	30	30			
1,2-Dibromoethane	106-93-4	1	0.279	ug/kg	70-130	30	70-130	30	30			
1,3-Dichloropropane	142-28-9	2	0.167	ug/kg	69-130	30	69-130	30	30			
1,1,1,2-Tetrachloroethane	630-20-6	0.5	0.132	ug/kg	70-130	30	70-130	30	30			
Bromobenzene	108-86-1	2	0.145	ug/kg	70-130	30	70-130	30	30			
n-Butylbenzene	104-51-8	1	0.167	ug/kg	70-130	30	70-130	30	30			
sec-Butylbenzene	135-98-8	1	0.146	ug/kg	70-130	30	70-130	30	30			
tert-Butylbenzene	98-06-6	2	0.118	ug/kg	70-130	30	70-130	30	30			
o-Chlorotoluene	95-49-8	2	0.191	ug/kg	70-130	30	70-130	30	30			
p-Chlorotoluene	106-43-4	2	0.108	ug/kg	70-130	30	70-130	30	30			
1,2-Dibromo-3-chloropropane	96-12-8	3	0.998	ug/kg	68-130	30	68-130	30	30			
Hexachlorobutadiene	87-68-3	4	0.169	ug/kg	67-130	30	67-130	30	30			
Isopropylbenzene	98-82-8	1	0.109	ug/kg	70-130	30	70-130	30	30			
p-Isopropyltoluene	99-87-6	1	0.109	ug/kg	70-130	30	70-130	30	30			
Acrylonitrile	107-13-1	4	1.15	ug/kg	70-130	30	70-130	30	30			
n-Propylbenzene	103-65-1	1	0.171	ug/kg	70-130	30	70-130	30	30			
1,2,3-Trichlorobenzene	87-61-6	2	0.322	ug/kg	70-130	30	70-130	30	30			
1,2,4-Trichlorobenzene	120-82-1	2	0.272	ug/kg	70-130	30	70-130	30	30			
1,3,5-Trimethylbenzene	108-67-8	2	0.193	ug/kg	70-130	30	70-130	30	30			
1,2,4-Trimethylbenzene	95-63-6	2	0.334	ug/kg	70-130	30	70-130	30	30			
1,4-Dioxane	123-91-1	80	35.1	ug/kg	65-136	30	65-136	30	30			
1,4-Diethylbenzene	105-05-5	2	0.177	ug/kg	70-130	30	70-130	30	30			
4-Ethyltoluene	622-96-8	2	0.384	ug/kg	70-130	30	70-130	30	30			
1,2,4,5-Tetramethylbenzene	95-93-2	2	0.191	ug/kg	70-130	30	70-130	30	30			
Ethyl ether	60-29-7	2	0.341	ug/kg	67-130	30	67-130	30	30			
trans-1,4-Dichloro-2-butene	110-57-6	5	1.42	ug/kg	70-130	30	70-130	30	30			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
2-Chloroethoxyethane												
Toluene-d8	*2037-26-5*									*70-130*		
4-Bromofluorobenzene	*460-00-4*									*70-130*		
Dibromofluoromethane	*1868-53-7*									*70-130*		

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NYTCL Semivolatiles - EPA 8270E (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	133.6	17.3012	ug/kg	31-137	50	31-137	50	50			
1,2,4-Trichlorobenzene	120-82-1	167	19.1048	ug/kg	38-107	50	38-107	50	50			
Hexachlorobenzene	118-74-1	100.2	18.704	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroethyl)ether	111-44-4	150.3	22.6452	ug/kg	40-140	50	40-140	50	50			
2-Chloronaphthalene	91-58-7	167	16.5664	ug/kg	40-140	50	40-140	50	50			
1,2-Dichlorobenzene	95-50-1	167	29.9932	ug/kg	40-140	50	40-140	50	50			
1,3-Dichlorobenzene	541-73-1	167	28.724	ug/kg	40-140	50	40-140	50	50			
1,4-Dichlorobenzene	106-46-7	167	29.1582	ug/kg	28-104	50	28-104	50	50			
3,3'-Dichlorobenzidine	91-94-1	167	44.422	ug/kg	40-140	50	40-140	50	50			
2,4-Dinitrotoluene	121-14-2	167	33.4	ug/kg	40-132	50	40-132	50	50			
2,6-Dinitrotoluene	606-20-2	167	28.6572	ug/kg	40-140	50	40-140	50	50			
Fluoranthene	206-44-0	100.2	19.1716	ug/kg	40-140	50	40-140	50	50			
4-Chlorophenyl phenyl ether	7005-72-3	167	17.869	ug/kg	40-140	50	40-140	50	50			
4-Bromophenyl phenyl ether	101-55-3	167	25.4842	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroisopropyl)ether	108-60-1	200.4	28.5236	ug/kg	40-140	50	40-140	50	50			
Bis(2-chloroethoxy)methane	111-91-1	180.36	16.7334	ug/kg	40-117	50	40-117	50	50			
Hexachlorobutadiene	87-68-3	167	24.4488	ug/kg	40-140	50	40-140	50	50			
Hexachlorocyclopentadiene	77-47-4	477.62	151.302	ug/kg	40-140	50	40-140	50	50			
Hexachloroethane	67-72-1	133.6	27.0206	ug/kg	40-140	50	40-140	50	50			
Isophorone	78-59-1	150.3	21.6766	ug/kg	40-140	50	40-140	50	50			
Naphthalene	91-20-3	167	20.3406	ug/kg	40-140	50	40-140	50	50			
Nitrobenzene	98-95-3	150.3	24.716	ug/kg	40-140	50	40-140	50	50			
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	133.6	19.0046	ug/kg	36-157	50	36-157	50	50			
n-Nitrosodi-n-propylamine	621-64-7	167	25.7848	ug/kg	32-121	50	32-121	50	50			
Bis(2-Ethylhexyl)phthalate	117-81-7	167	57.782	ug/kg	40-140	50	40-140	50	50			
Butyl benzyl phthalate	85-68-7	167	42.084	ug/kg	40-140	50	40-140	50	50			
Di-n-butylphthalate	84-74-2	167	31.6632	ug/kg	40-140	50	40-140	50	50			
Di-n-octylphthalate	117-84-0	167	56.78	ug/kg	40-140	50	40-140	50	50			
Diethyl phthalate	84-66-2	167	15.4642	ug/kg	40-140	50	40-140	50	50			
Dimethyl phthalate	131-11-3	167	35.07	ug/kg	40-140	50	40-140	50	50			
Benzo(a)anthracene	56-55-3	100.2	18.8042	ug/kg	40-140	50	40-140	50	50			
Benzo(a)pyrene	50-32-8	133.6	40.748	ug/kg	40-140	50	40-140	50	50			
Benzo(b)fluoranthene	205-99-2	100.2	28.1228	ug/kg	40-140	50	40-140	50	50			
Benzo(k)fluoranthene	207-08-9	100.2	26.72	ug/kg	40-140	50	40-140	50	50			
Chrysene	218-01-9	100.2	17.368	ug/kg	40-140	50	40-140	50	50			
Acenaphthylene	208-96-8	133.6	25.7848	ug/kg	40-140	50	40-140	50	50			
Anthracene	120-12-7	100.2	32.565	ug/kg	40-140	50	40-140	50	50			
Benzo(ghi)perylene	191-24-2	133.6	19.6392	ug/kg	40-140	50	40-140	50	50			
Fluorene	86-73-7	167	16.2324	ug/kg	40-140	50	40-140	50	50			
Phenanthrene	85-01-8	100.2	20.3072	ug/kg	40-140	50	40-140	50	50			
Dibenzo(a,h)anthracene	53-70-3	100.2	19.3052	ug/kg	40-140	50	40-140	50	50			
Indeno(1,2,3-cd)Pyrene	193-39-5	133.6	23.2798	ug/kg	40-140	50	40-140	50	50			

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NYTCL Semivolatiles - EPA 8270E (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Pyrene	129-00-0	100.2	16.5998	ug/kg	35-142	50	35-142	50	50			
Biphenyl	92-52-4	380.76	21.71	ug/kg	37-127	50	37-127	50	50			
4-Chloroaniline	106-47-8	167	30.394	ug/kg	40-140	50	40-140	50	50			
2-Nitroaniline	88-74-4	167	32.1976	ug/kg	47-134	50	47-134	50	50			
3-Nitroaniline	99-09-2	167	31.4962	ug/kg	26-129	50	26-129	50	50			
4-Nitroaniline	100-01-6	167	69.138	ug/kg	41-125	50	41-125	50	50			
Dibenzofuran	132-64-9	167	15.7982	ug/kg	40-140	50	40-140	50	50			
2-Methylnaphthalene	91-57-6	200.4	20.1736	ug/kg	40-140	50	40-140	50	50			
Acetophenone	98-86-2	167	20.6746	ug/kg	14-144	50	14-144	50	50			
2,4,6-Trichlorophenol	88-06-2	100.2	31.6632	ug/kg	30-130	50	30-130	50	50			
P-Chloro-M-Cresol	59-50-7	167	24.883	ug/kg	26-103	50	26-103	50	50			
2-Chlorophenol	95-57-8	167	19.7394	ug/kg	25-102	50	25-102	50	50			
2,4-Dichlorophenol	120-83-2	150.3	26.8536	ug/kg	30-130	50	30-130	50	50			
2,4-Dimethylphenol	105-67-9	167	55.11	ug/kg	30-130	50	30-130	50	50			
2-Nitrophenol	88-75-5	360.72	62.792	ug/kg	30-130	50	30-130	50	50			
4-Nitrophenol	100-02-7	233.8	68.136	ug/kg	11-114	50	11-114	50	50			
2,4-Dinitrophenol	51-28-5	801.6	77.822	ug/kg	4-130	50	4-130	50	50			
4,6-Dinitro-o-cresol	534-52-1	434.2	80.16	ug/kg	10-130	50	10-130	50	50			
Pentachlorophenol	87-86-5	133.6	36.74	ug/kg	17-109	50	17-109	50	50			
Phenol	108-95-2	167	25.217	ug/kg	26-90	50	26-90	50	50			
2-Methylphenol	95-48-7	167	25.885	ug/kg	30-130.	50	30-130.	50	50			
3-Methylphenol/4-Methylphenol	106-44-5	240.48	26.1522	ug/kg	30-130	50	30-130	50	50			
2,4,5-Trichlorophenol	95-95-4	167	31.9972	ug/kg	30-130	50	30-130	50	50			
Benzoic Acid	65-85-0	541.08	169.004	ug/kg	10-110	50	10-110	50	50			
Benzyl Alcohol	100-51-6	167	51.102	ug/kg	40-140	50	40-140	50	50			
Carbazole	86-74-8	167	16.2324	ug/kg	54-128	50	54-128	50	50			
1,4-Dioxane	123-91-1	25.05	7.682	ug/kg	40-140	50	40-140	50	50			
2-Fluorophenol	*367-12-4*									*25-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*30-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-136*		
4-Terphenyl-d14	*1718-51-0*									*18-120*		

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TCL Pesticides - EPA 8081B (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Delta-BHC	319-86-8	1.6008	0.31349	ug/kg	30-150	30	30-150	50	50			
Lindane	58-89-9	0.667	0.298149	ug/kg	30-150	30	30-150	50	50			
Alpha-BHC	319-84-6	0.667	0.189428	ug/kg	30-150	30	30-150	50	50			
Beta-BHC	319-85-7	1.6008	0.60697	ug/kg	30-150	30	30-150	50	50			
Heptachlor	76-44-8	0.8004	0.358846	ug/kg	30-150	30	30-150	50	50			
Aldrin	309-00-2	1.6008	0.563615	ug/kg	30-150	30	30-150	50	50			
Heptachlor epoxide	1024-57-3	3.0015	0.90045	ug/kg	30-150	30	30-150	50	50			
Endrin	72-20-8	0.667	0.27347	ug/kg	30-150	30	30-150	50	50			
Endrin aldehyde	7421-93-4	2.001	0.70035	ug/kg	30-150	30	30-150	50	50			
Endrin ketone	53494-70-5	1.6008	0.412206	ug/kg	30-150	30	30-150	50	50			
Dieldrin	60-57-1	1.0005	0.50025	ug/kg	30-150	30	30-150	50	50			
4,4'-DDE	72-55-9	1.6008	0.370185	ug/kg	30-150	30	30-150	50	50			
4,4'-DDD	72-54-8	1.6008	0.570952	ug/kg	30-150	30	30-150	50	50			
4,4'-DDT	50-29-3	1.6008	1.28731	ug/kg	30-150	30	30-150	50	50			
Endosulfan I	959-98-8	1.6008	0.378189	ug/kg	30-150	30	30-150	50	50			
Endosulfan II	33213-65-9	1.6008	0.534934	ug/kg	30-150	30	30-150	50	50			
Endosulfan sulfate	1031-07-8	0.667	0.317492	ug/kg	30-150	30	30-150	50	50			
Methoxychlor	72-43-5	3.0015	0.9338	ug/kg	30-150	30	30-150	50	50			
Toxaphene	8001-35-2	30.015	8.4042	ug/kg	30-150	30	30-150	50	50			
cis-Chlordane	5103-71-9	2.001	0.557612	ug/kg	30-150	30	30-150	50	50			
trans-Chlordane	5103-74-2	2.001	0.528264	ug/kg	30-150	30	30-150	50	50			
Chlordane	57-74-9	13.34	5.30265	ug/kg	30-150	30	30-150	50	50			
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
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Langan Engineering & Environmental

Herbicides -EPA 8151A (SOIL)

Holding Time: 14 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
2,4-D	94-75-7	0.1665	0.0104895	mg/kg	30-150	30	30-150	30	30			
2,4,5-T	93-76-5	0.1665	0.0051615	mg/kg	30-150	30	30-150	30	30			
2,4,5-TP (Silvex)	93-72-1	0.1665	0.0044289	mg/kg	30-150	30	30-150	30	30			
DCAA	*19719-28-9*									*30-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
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Langan Engineering & Environmental

TCL PCBs - EPA 8082A (SOIL)

Holding Time: 365 days
Container/Sample Preservation: 1 - Glass 250ml/8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Aroclor 1016	12674-11-2	50	4.44	ug/kg	40-140	50	40-140	50	50			
Aroclor 1221	11104-28-2	50	5.01	ug/kg	40-140	50	40-140	50	50			
Aroclor 1232	11141-16-5	50	10.6	ug/kg	40-140	50	40-140	50	50			
Aroclor 1242	53469-21-9	50	6.74	ug/kg	40-140	50	40-140	50	50			
Aroclor 1248	12672-29-6	50	7.5	ug/kg	40-140	50	40-140	50	50			
Aroclor 1254	11097-69-1	50	5.47	ug/kg	40-140	50	40-140	50	50			
Aroclor 1260	11096-82-5	50	9.24	ug/kg	40-140	50	40-140	50	50			
Aroclor 1262	37324-23-5	50	6.35	ug/kg	40-140	50	40-140	50	50			
Aroclor 1268	11100-14-4	50	5.18	ug/kg	40-140	50	40-140	50	50			
PCBs, Total	1336-36-3	50	4.44	ug/kg				50	50			
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		

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Langan Engineering & Environmental

METALS by 6010D (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Aluminum, Total	7429-90-5	4	1.3	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Antimony, Total	7440-36-0	2	1.54	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Arsenic, Total	7440-38-2	0.4	0.1728	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Barium, Total	7440-39-3	0.4	0.0424	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Beryllium, Total	7440-41-7	0.2	0.022	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Cadmium, Total	7440-43-9	0.4	0.022	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Calcium, Total	7440-70-2	4	2.268	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Chromium, Total	7440-47-3	0.4	0.3392	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Cobalt, Total	7440-48-4	0.8	0.0992	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Copper, Total	7440-50-8	0.4	0.0908	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Iron, Total	7439-89-6	2	0.42	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Lead, Total	7439-92-1	2	0.0952	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Magnesium, Total	7439-95-4	4	0.652	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Manganese, Total	7439-96-5	0.4	0.2144	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Nickel, Total	7440-02-0	1	0.3232	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Potassium, Total	7440-09-7	100	20.28	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Selenium, Total	7782-49-2	0.8	0.1316	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Silver, Total	7440-22-4	0.2	0.1192	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Sodium, Total	7440-23-5	80	42.4	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Thallium, Total	7440-28-0	0.8	0.3608	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Vanadium, Total	7440-62-2	0.4	0.0604	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv
Zinc, Total	7440-66-6	2	0.2424	mg/kg	80-120		75-125	20	20		180 days	Metals Only-Glass 60mL/2oz unpreserv

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Langan Engineering & Environmental

METALS by 7471B (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Mercury, Total	7439-97-6	0.08	0.05216	mg/kg	80-120		80-120	20	20		28 days	Metals Only-Glass 60mL/2oz unpreserv

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Langan Engineering & Environmental

WETCHEM (SOIL)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container
Chromium, Hexavalent	18540-29-9	0.8	0.16	mg/kg	80-120	20	75-125	20	20	7196A	30 days	1 - Glass 120ml/4oz unpreserved
Cyanide, Total	57-12-5	1	0.212	mg/kg	80-120	35	75-125	35	35	9010C/9012B	14 days	1 - Glass 250ml/8oz unpreserved

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Langan Engineering & Environmental

NY PFAAs via EPA 1633 (SOIL)

Holding Time: 90 days
Container/Sample Preservation: 1 - Plastic 8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Perfluorobutanoic Acid (PFBA)	375-22-4	0.8	0.028	ng/g	70-140	30	70-140	30	30			
Perfluoropentanoic Acid (PFPeA)	2706-90-3	0.4	0.0384	ng/g	60-150	30	60-150	30	30			
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.2	0.02	ng/g	65-145	30	65-145	30	30			
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	0.8	0.0776	ng/g	60-150	30	60-150	30	30			
Perfluorohexanoic Acid (PFHxA)	307-24-4	0.2	0.0152	ng/g	65-140	30	65-140	30	30			
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	0.2	0.0264	ng/g	55-160	30	55-160	30	30			
Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.2	0.012	ng/g	65-145	30	65-145	30	30			
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	0.2	0.02	ng/g	60-150	30	60-150	30	30			
Perfluorooctanoic Acid (PFOA)	335-67-1	0.2	0.0264	ng/g	70-150	30	70-150	30	30			
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	0.8	0.148	ng/g	55-200	30	55-200	30	30			
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	0.2	0.0448	ng/g	65-155	30	65-155	30	30			
Perfluorononanoic Acid (PFNA)	375-95-1	0.2	0.0128	ng/g	70-155	30	70-155	30	30			
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.2	0.0312	ng/g	65-160	30	65-160	30	30			
Perfluorodecanoic Acid (PFDA)	335-76-2	0.2	0.0352	ng/g	70-155	30	70-155	30	30			
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	0.8	0.2592	ng/g	70-150	30	70-150	30	30			
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	0.2	0.0296	ng/g	55-140	30	55-140	30	30			
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA	2355-31-9	0.2	0.0856	ng/g	65-155	30	65-155	30	30			
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	0.2	0.0128	ng/g	70-155	30	70-155	30	30			
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	0.2	0.0144	ng/g	40-155	30	40-155	30	30			
Perfluorooctanesulfonamide (FOSA)	754-91-6	0.2	0.0104	ng/g	70-140	30	70-140	30	30			
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	0.2	0.044	ng/g	65-165	30	65-165	30	30			
Perfluorododecanoic Acid (PFDoA)	307-55-1	0.2	0.0208	ng/g	70-150	30	70-150	30	30			
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	0.2	0.016	ng/g	65-150	30	65-150	30	30			
Perfluorotetradecanoic Acid (PFTA)	376-06-7	0.2	0.024	ng/g	65-150	30	65-150	30	30			
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Pro	13252-13-6	0.8	0.0384	ng/g	70-145	30	70-145	30	30			
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	919005-14-4	0.8	0.0296	ng/g	70-160	30	70-160	30	30			
Perfluorododecane Sulfonic Acid (PFDoDS)	79780-39-5	0.2	0.0216	ng/g	25-160	30	25-160	30	30			
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3(	756426-58-1	0.8	0.0296	ng/g	70-150	30	70-150	30	30			
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-F	763051-92-9	0.8	0.04	ng/g	45-160	30	45-160	30	30			
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	31506-32-8	0.2	0.0264	ng/g	70-155	30	70-155	30	30			
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	4151-50-2	0.2	0.0216	ng/g	70-140	30	70-140	30	30			
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	24448-09-7	2	0.1216	ng/g	70-140	30	70-140	30	30			
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	1691-99-2	2	0.0816	ng/g	70-135	30	70-135	30	30			
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	377-73-1	0.4	0.0168	ng/g	30-140	30	30-140	30	30			
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	863090-89-5	0.4	0.024	ng/g	60-150	30	60-150	30	30			
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	113507-82-7	0.4	0.0464	ng/g	70-140	30	70-140	30	30			
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	151772-58-6	0.4	0.0824	ng/g	60-155	30	60-155	30	30			
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	356-02-5	1	0.092	ng/g	45-130	30	45-130	30	30			
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	914637-49-3	5	0.236	ng/g	60-130	30	60-130	30	30			
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	812-70-4	5	0.3656	ng/g	60-150	30	60-150	30	30			
Perfluoro[13C4]Butanoic Acid (MPFBA)	*NONE*									*8-130*		
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	*NONE*									*35-130*		

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NY PFAAs via EPA 1633 (SOIL)

Holding Time: 90 days
Container/Sample Preservation: 1 - Plastic 8oz unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	*NONE*									*40-135*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:	*NONE*									*40-165*		
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	*NONE*									*40-130*		
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	*NONE*									*40-130*		
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	*NONE*									*40-130*		
Perfluoro[13C8]Octanoic Acid (M8PFOA)	*NONE*									*40-130*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:	*NONE*									*40-215*		
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	*NONE*									*40-130*		
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	*NONE*									*40-130*		
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	*NONE*									*40-130*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:	*NONE*									*40-275*		
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (	*NONE*									*40-135*		
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	*NONE*									*40-130*		
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	*NONE*									*40-130*		
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5	*NONE*									*40-150*		
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	*NONE*									*40-130*		
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	*NONE*									*20-130*		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13	*NONE*									*40-130*		
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	*NONE*									*10-130*		
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	*NONE*									*10-130*		
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (	*1265205-95-5*									*20-130*		
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d	*NONE*									*15-130*		

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TCL Volatiles - EPA 8260D (WATER)

Holding Time: 14 days
Container/Sample Preservation: 3 - Vial HCl preserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Methylene chloride	75-09-2	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,1-Dichloroethane	75-34-3	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Chloroform	67-66-3	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Carbon tetrachloride	56-23-5	0.5	0.134	ug/l	63-132	20	63-132	20	20			
1,2-Dichloropropane	78-87-5	1	0.137	ug/l	70-130	20	70-130	20	20			
Dibromochloromethane	124-48-1	0.5	0.149	ug/l	63-130	20	63-130	20	20			
1,1,2-Trichloroethane	79-00-5	1.5	0.5	ug/l	70-130	20	70-130	20	20			
Tetrachloroethene	127-18-4	0.5	0.181	ug/l	70-130	20	70-130	20	20			
Chlorobenzene	108-90-7	2.5	0.7	ug/l	75-130	20	75-130	20	20			
Trichlorofluoromethane	75-69-4	2.5	0.7	ug/l	62-150	20	62-150	20	20			
1,2-Dichloroethane	107-06-2	0.5	0.132	ug/l	70-130	20	70-130	20	20			
1,1,1-Trichloroethane	71-55-6	2.5	0.7	ug/l	67-130	20	67-130	20	20			
Bromodichloromethane	75-27-4	0.5	0.192	ug/l	67-130	20	67-130	20	20			
trans-1,3-Dichloropropene	10061-02-6	0.5	0.164	ug/l	70-130	20	70-130	20	20			
cis-1,3-Dichloropropene	10061-01-5	0.5	0.144	ug/l	70-130	20	70-130	20	20			
1,3-Dichloropropene, Total	542-75-6	0.5	0.144	ug/l				20	20			
1,1-Dichloropropene	563-58-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Bromoform	75-25-2	2	0.65	ug/l	54-136	20	54-136	20	20			
1,1,2,2-Tetrachloroethane	79-34-5	0.5	0.167	ug/l	67-130	20	67-130	20	20			
Benzene	71-43-2	0.5	0.159	ug/l	70-130	20	70-130	20	20			
Toluene	108-88-3	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Ethylbenzene	100-41-4	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Chloromethane	74-87-3	2.5	0.7	ug/l	64-130	20	64-130	20	20			
Bromomethane	74-83-9	2.5	0.7	ug/l	39-139	20	39-139	20	20			
Vinyl chloride	75-01-4	1	0.0714	ug/l	55-140	20	55-140	20	20			
Chloroethane	75-00-3	2.5	0.7	ug/l	55-138	20	55-138	20	20			
1,1-Dichloroethene	75-35-4	0.5	0.169	ug/l	61-145	20	61-145	20	20			
trans-1,2-Dichloroethene	156-60-5	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Trichloroethene	79-01-6	0.5	0.175	ug/l	70-130	20	70-130	20	20			
1,2-Dichlorobenzene	95-50-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,3-Dichlorobenzene	541-73-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,4-Dichlorobenzene	106-46-7	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Methyl tert butyl ether	1634-04-4	2.5	0.166	ug/l	63-130	20	63-130	20	20			
p/m-Xylene	179601-23-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
o-Xylene	95-47-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
Xylene (Total)	1330-20-7	2.5	0.7	ug/l				20	20			
cis-1,2-Dichloroethene	156-59-2	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2-Dichloroethene (total)	540-59-0	2.5	0.7	ug/l				20	20			
Dibromomethane	74-95-3	5	1	ug/l	70-130	20	70-130	20	20			
1,2,3-Trichloropropane	96-18-4	2.5	0.7	ug/l	64-130	20	64-130	20	20			
Acrylonitrile	107-13-1	5	1.5	ug/l	70-130	20	70-130	20	20			
Styrene	100-42-5	2.5	0.7	ug/l	70-130	20	70-130	20	20			

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Langan Engineering & Environmental

TCL Volatiles - EPA 8260D (WATER)

Holding Time: 14 days
Container/Sample Preservation: 3 - Vial HCl preserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dichlorodifluoromethane	75-71-8	5	1	ug/l	36-147	20	36-147	20	20			
Acetone	67-64-1	5	1.46	ug/l	58-148	20	58-148	20	20			
Carbon disulfide	75-15-0	5	1	ug/l	51-130	20	51-130	20	20			
2-Butanone	78-93-3	5	1.94	ug/l	63-138	20	63-138	20	20			
Vinyl acetate	108-05-4	5	1	ug/l	70-130	20	70-130	20	20			
4-Methyl-2-pentanone	108-10-1	5	1	ug/l	59-130	20	59-130	20	20			
2-Hexanone	591-78-6	5	1	ug/l	57-130	20	57-130	20	20			
Bromochloromethane	74-97-5	2.5	0.7	ug/l	70-130	20	70-130	20	20			
2,2-Dichloropropane	594-20-7	2.5	0.7	ug/l	63-133	20	63-133	20	20			
1,2-Dibromoethane	106-93-4	2	0.65	ug/l	70-130	20	70-130	20	20			
1,3-Dichloropropane	142-28-9	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,1,1,2-Tetrachloroethane	630-20-6	2.5	0.7	ug/l	64-130	20	64-130	20	20			
Bromobenzene	108-86-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
n-Butylbenzene	104-51-8	2.5	0.7	ug/l	53-136	20	53-136	20	20			
sec-Butylbenzene	135-98-8	2.5	0.7	ug/l	70-130	20	70-130	20	20			
tert-Butylbenzene	98-06-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
o-Chlorotoluene	95-49-8	2.5	0.7	ug/l	70-130	20	70-130	20	20			
p-Chlorotoluene	106-43-4	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2-Dibromo-3-chloropropane	96-12-8	2.5	0.7	ug/l	41-144	20	41-144	20	20			
Hexachlorobutadiene	87-68-3	2.5	0.7	ug/l	63-130	20	63-130	20	20			
Isopropylbenzene	98-82-8	2.5	0.7	ug/l	70-130	20	70-130	20	20			
p-Isopropyltoluene	99-87-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
n-Propylbenzene	103-65-1	2.5	0.7	ug/l	69-130	20	69-130	20	20			
1,2,3-Trichlorobenzene	87-61-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2,4-Trichlorobenzene	120-82-1	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,3,5-Trimethylbenzene	108-67-8	2.5	0.7	ug/l	64-130	20	64-130	20	20			
1,2,4-Trimethylbenzene	95-63-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,4-Dioxane	123-91-1	250	60.8	ug/l	56-162	20	56-162	20	20			
1,4-Diethylbenzene	105-05-5	2	0.7	ug/l	70-130	20	70-130	20	20			
4-Ethyltoluene	622-96-8	2	0.7	ug/l	70-130	20	70-130	20	20			
1,2,4,5-Tetramethylbenzene	95-93-2	2	0.542	ug/l	70-130	20	70-130	20	20			
Ethyl ether	60-29-7	2.5	0.7	ug/l	59-134	20	59-134	20	20			
trans-1,4-Dichloro-2-butene	110-57-6	2.5	0.7	ug/l	70-130	20	70-130	20	20			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
Toluene-d8	*2037-26-5*									*70-130*		
4-Bromofluorobenzene	*460-00-4*									*70-130*		
Dibromofluoromethane	*1868-53-7*									*70-130*		

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Langan Engineering & Environmental

NYTCL Semivolatiles - EPA 8270E (RVT) (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 100ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	2	0.403	ug/l	37-111	30	37-111	30	30			
1,2,4-Trichlorobenzene	120-82-1	5	0.977	ug/l	39-98	30	39-98	30	30			
Hexachlorobenzene	118-74-1	2	0.452	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroethyl)ether	111-44-4	2	0.392	ug/l	40-140	30	40-140	30	30			
2-Chloronaphthalene	91-58-7	2	0.35	ug/l	40-140	30	40-140	30	30			
1,2-Dichlorobenzene	95-50-1	2	0.329	ug/l	40-140	30	40-140	30	30			
1,3-Dichlorobenzene	541-73-1	2	0.315	ug/l	40-140	30	40-140	30	30			
1,4-Dichlorobenzene	106-46-7	2	0.391	ug/l	36-97	30	36-97	30	30			
3,3'-Dichlorobenzidine	91-94-1	5	1.85	ug/l	40-140	30	40-140	30	30			
2,4-Dinitrotoluene	121-14-2	5	0.541	ug/l	48-143	30	48-143	30	30			
2,6-Dinitrotoluene	606-20-2	5	0.845	ug/l	40-140	30	40-140	30	30			
Fluoranthene	206-44-0	2	0.411	ug/l	40-140	30	40-140	30	30			
4-Chlorophenyl phenyl ether	7005-72-3	2	0.386	ug/l	40-140	30	40-140	30	30			
4-Bromophenyl phenyl ether	101-55-3	2	0.244	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroisopropyl)ether	108-60-1	2	0.403	ug/l	40-140	30	40-140	30	30			
Bis(2-chloroethoxy)methane	111-91-1	5	0.842	ug/l	40-140	30	40-140	30	30			
Hexachlorobutadiene	87-68-3	2	0.355	ug/l	40-140	30	40-140	30	30			
Hexachlorocyclopentadiene	77-47-4	20	1.23	ug/l	40-140	30	40-140	30	30			
Hexachloroethane	67-72-1	2	0.203	ug/l	40-140	30	40-140	30	30			
Isophorone	78-59-1	5	0.862	ug/l	40-140	30	40-140	30	30			
Naphthalene	91-20-3	2	0.542	ug/l	40-140	30	40-140	30	30			
Nitrobenzene	98-95-3	2	0.205	ug/l	40-140	30	40-140	30	30			
NitrosoDiPhenylAmine(NDPA)/DPA	86-30-6	2	0.924	ug/l	40-140	30	40-140	30	30			
n-Nitrosodi-n-propylamine	621-64-7	5	0.906	ug/l	29-132	30	29-132	30	30			
Bis(2-Ethylhexyl)phthalate	117-81-7	3	1.42	ug/l	40-140	30	40-140	30	30			
Butyl benzyl phthalate	85-68-7	5	2.61	ug/l	40-140	30	40-140	30	30			
Di-n-butylphthalate	84-74-2	5	0.957	ug/l	40-140	30	40-140	30	30			
Di-n-octylphthalate	117-84-0	5	2.26	ug/l	40-140	30	40-140	30	30			
Diethyl phthalate	84-66-2	5	0.765	ug/l	40-140	30	40-140	30	30			
Dimethyl phthalate	131-11-3	5	0.916	ug/l	40-140	30	40-140	30	30			
Benzo(a)anthracene	56-55-3	2	0.323	ug/l	40-140	30	40-140	30	30			
Benzo(a)pyrene	50-32-8	2	0.368	ug/l	40-140	30	40-140	30	30			
Benzo(b)fluoranthene	205-99-2	2	0.533	ug/l	40-140	30	40-140	30	30			
Benzo(k)fluoranthene	207-08-9	2	0.621	ug/l	40-140	30	40-140	30	30			
Chrysene	218-01-9	2	0.222	ug/l	40-140	30	40-140	30	30			
Acenaphthylene	208-96-8	2	0.315	ug/l	45-123	30	45-123	30	30			
Anthracene	120-12-7	2	0.467	ug/l	40-140	30	40-140	30	30			
Benzo(ghi)perylene	191-24-2	2	0.369	ug/l	40-140	30	40-140	30	30			
Fluorene	86-73-7	2	0.439	ug/l	40-140	30	40-140	30	30			
Phenanthrene	85-01-8	2	0.419	ug/l	40-140	30	40-140	30	30			
Dibenzo(a,h)anthracene	53-70-3	2	0.286	ug/l	40-140	30	40-140	30	30			
Indeno(1,2,3-cd)Pyrene	193-39-5	2	0.484	ug/l	40-140	30	40-140	30	30			

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Langan Engineering & Environmental

NYTCL Semivolatiles - EPA 8270E (RVT) (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 100ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Pyrene	129-00-0	2	0.407	ug/l	26-127	30	26-127	30	30			
Biphenyl	92-52-4	2	0.196	ug/l	40-140	30	40-140	30	30			
4-Chloroaniline	106-47-8	5	0.468	ug/l	40-140	30	40-140	30	30			
2-Nitroaniline	88-74-4	5	1.03	ug/l	52-143	30	52-143	30	30			
3-Nitroaniline	99-09-2	5	1.16	ug/l	25-145	30	25-145	30	30			
4-Nitroaniline	100-01-6	5	1.45	ug/l	51-143	30	51-143	30	30			
Dibenzofuran	132-64-9	2	0.401	ug/l	40-140	30	40-140	30	30			
2-Methylnaphthalene	91-57-6	2	0.372	ug/l	40-140	30	40-140	30	30			
Acetophenone	98-86-2	5	0.917	ug/l	39-129	30	39-129	30	30			
2,4,6-Trichlorophenol	88-06-2	5	2.09	ug/l	30-130	30	30-130	30	30			
P-Chloro-M-Cresol	59-50-7	2	0.606	ug/l	23-97	30	23-97	30	30			
2-Chlorophenol	95-57-8	2	0.653	ug/l	27-123	30	27-123	30	30			
2,4-Dichlorophenol	120-83-2	5	1.7	ug/l	30-130	30	30-130	30	30			
2,4-Dimethylphenol	105-67-9	5	2.04	ug/l	30-130	30	30-130	30	30			
2-Nitrophenol	88-75-5	10	1.95	ug/l	30-130	30	30-130	30	30			
4-Nitrophenol	100-02-7	10	1.42	ug/l	10-80	30	10-80	30	30			
2,4-Dinitrophenol	51-28-5	20	5.42	ug/l	20-130	30	20-130	30	30			
4,6-Dinitro-o-cresol	534-52-1	10	2.31	ug/l	20-164	30	20-164	30	30			
Pentachlorophenol	87-86-5	10	2.51	ug/l	9-103	30	9-103	30	30			
Phenol	108-95-2	5	0.35	ug/l	12-110	30	12-110	30	30			
2-Methylphenol	95-48-7	5	2.31	ug/l	30-130	30	30-130	30	30			
3-Methylphenol/4-Methylphenol	106-44-5	5	1.39	ug/l	30-130	30	30-130	30	30			
2,4,5-Trichlorophenol	95-95-4	5	2.07	ug/l	30-130	30	30-130	30	30			
Benzoic Acid	65-85-0	50	2.62	ug/l	10-164	30	10-164	30	30			
Benzyl Alcohol	100-51-6	2	0.381	ug/l	26-116	30	26-116	30	30			
Carbazole	86-74-8	2	0.309	ug/l	55-144	30	55-144	30	30			
2-Fluorophenol	*367-12-4*									*21-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*15-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-120*		
4-Terphenyl-d14	*1718-51-0*									*41-149*		

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NYTCL Semivolatiles -EPA 8270E-SIM (RVT) (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 100ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Acenaphthene	83-32-9	0.1	0.0235	ug/l	40-140	40	40-140	40	40			
2-Chloronaphthalene	91-58-7	0.2	0.0227	ug/l	40-140	40	40-140	40	40			
Fluoranthene	206-44-0	0.1	0.0272	ug/l	40-140	40	40-140	40	40			
Hexachlorobutadiene	87-68-3	0.5	0.02	ug/l	40-140	40	40-140	40	40			
Naphthalene	91-20-3	0.1	0.0245	ug/l	40-140	40	40-140	40	40			
Benzo(a)anthracene	56-55-3	0.1	0.0295	ug/l	40-140	40	40-140	40	40			
Benzo(a)pyrene	50-32-8	0.1	0.024	ug/l	40-140	40	40-140	40	40			
Benzo(b)fluoranthene	205-99-2	0.1	0.0272	ug/l	40-140	40	40-140	40	40			
Benzo(k)fluoranthene	207-08-9	0.1	0.0338	ug/l	40-140	40	40-140	40	40			
Chrysene	218-01-9	0.1	0.031	ug/l	40-140	40	40-140	40	40			
Acenaphthylene	208-96-8	0.1	0.0205	ug/l	40-140	40	40-140	40	40			
Anthracene	120-12-7	0.1	0.0239	ug/l	40-140	40	40-140	40	40			
Benzo(ghi)perylene	191-24-2	0.1	0.0237	ug/l	40-140	40	40-140	40	40			
Fluorene	86-73-7	0.1	0.0255	ug/l	40-140	40	40-140	40	40			
Phenanthrene	85-01-8	0.1	0.0392	ug/l	40-140	40	40-140	40	40			
Dibenzo(a,h)anthracene	53-70-3	0.1	0.0235	ug/l	40-140	40	40-140	40	40			
Indeno(1,2,3-cd)Pyrene	193-39-5	0.1	0.022	ug/l	40-140	40	40-140	40	40			
Pyrene	129-00-0	0.1	0.0425	ug/l	40-140	40	40-140	40	40			
2-Methylnaphthalene	91-57-6	0.1	0.0277	ug/l	40-140	40	40-140	40	40			
Pentachlorophenol	87-86-5	0.8	0.0565	ug/l	40-140	40	40-140	40	40			
Hexachlorobenzene	118-74-1	0.8	0.0134	ug/l	40-140	40	40-140	40	40			
Hexachloroethane	67-72-1	0.8	0.0224	ug/l	40-140	40	40-140	40	40			
2-Fluorophenol	*367-12-4*									*21-120*		
Phenol-d6	*13127-88-3*									*10-120*		
Nitrobenzene-d5	*4165-60-0*									*23-120*		
2-Fluorobiphenyl	*321-60-8*									*15-120*		
2,4,6-Tribromophenol	*118-79-6*									*10-120*		
4-Terphenyl-d14	*1718-51-0*									*41-149*		

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Langan Engineering & Environmental

TCL Pesticides - EPA 8081B (RVT) (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 100ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Delta-BHC	319-86-8	0.014	0.0059	ug/l	30-150	20	30-150	30	30			
Lindane	58-89-9	0.014	0.0049	ug/l	30-150	20	30-150	30	30			
Alpha-BHC	319-84-6	0.014	0.0048	ug/l	30-150	20	30-150	30	30			
Beta-BHC	319-85-7	0.02	0.0141	ug/l	30-150	20	30-150	30	30			
Heptachlor	76-44-8	0.014	0.0047	ug/l	30-150	20	30-150	30	30			
Aldrin	309-00-2	0.014	0.0051	ug/l	30-150	20	30-150	30	30			
Heptachlor epoxide	1024-57-3	0.014	0.0045	ug/l	30-150	20	30-150	30	30			
Endrin	72-20-8	0.029	0.0082	ug/l	30-150	20	30-150	30	30			
Endrin aldehyde	7421-93-4	0.03	0.0178	ug/l	30-150	20	30-150	30	30			
Endrin ketone	53494-70-5	0.029	0.0138	ug/l	30-150	20	30-150	30	30			
Dieldrin	60-57-1	0.029	0.0043	ug/l	30-150	20	30-150	30	30			
4,4'-DDE	72-55-9	0.029	0.01	ug/l	30-150	20	30-150	30	30			
4,4'-DDD	72-54-8	0.029	0.0101	ug/l	30-150	20	30-150	30	30			
4,4'-DDT	50-29-3	0.029	0.0134	ug/l	30-150	20	30-150	30	30			
Endosulfan I	959-98-8	0.014	0.0047	ug/l	30-150	20	30-150	30	30			
Endosulfan II	33213-65-9	0.029	0.0084	ug/l	30-150	20	30-150	30	30			
Endosulfan sulfate	1031-07-8	0.029	0.0065	ug/l	30-150	20	30-150	30	30			
Methoxychlor	72-43-5	0.143	0.0141	ug/l	30-150	20	30-150	30	30			
Toxaphene	8001-35-2	0.2	0.0942	ug/l	30-150	20	30-150	30	30			
cis-Chlordane	5103-71-9	0.02	0.0068	ug/l	30-150	20	30-150	30	30			
trans-Chlordane	5103-74-2	0.02	0.011	ug/l	30-150	20	30-150	30	30			
Chlordane	57-74-9	0.143	0.098	ug/l	30-150	20	30-150	30	30			
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		

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Langan Engineering & Environmental

Herbicides -EPA 8151A (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 1L unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
2,4-D	94-75-7	10	0.498	ug/l	30-150	25	30-150	25	25			
2,4,5-T	93-76-5	2	0.531	ug/l	30-150	25	30-150	25	25			
2,4,5-TP (Silvex)	93-72-1	2	0.539	ug/l	30-150	25	30-150	25	25			
DCAA	*19719-28-9*									*30-150*		

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Langan Engineering & Environmental

TCL PCBs - EPA 8082A (RVT) (WATER)

Holding Time: 365 days
Container/Sample Preservation: 2 - Amber 100ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Aroclor 1016	12674-11-2	0.071	0.0128	ug/l	40-140	50	40-140	50	50			
Aroclor 1221	11104-28-2	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
Aroclor 1232	11141-16-5	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
Aroclor 1242	53469-21-9	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
Aroclor 1248	12672-29-6	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
Aroclor 1254	11097-69-1	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
Aroclor 1260	11096-82-5	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
Aroclor 1262	37324-23-5	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
Aroclor 1268	11100-14-4	0.071	0.0153	ug/l	40-140	50	40-140	50	50			
PCBs, Total	1336-36-3	0.071	0.0153	ug/l				50	50			
2,4,5,6-Tetrachloro-m-xylene	*877-09-8*									*30-150*		
Decachlorobiphenyl	*2051-24-3*									*30-150*		

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
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METALS by 6020B (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Aluminum, Dissolved	7429-90-5	0.01	0.00327	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Aluminum, Total	7429-90-5	0.01	0.00327	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Antimony, Total	7440-36-0	0.004	0.000429	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Antimony, Dissolved	7440-36-0	0.004	0.000429	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Arsenic, Total	7440-38-2	0.0005	0.000165	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Arsenic, Dissolved	7440-38-2	0.0005	0.000165	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Barium, Dissolved	7440-39-3	0.0005	0.000173	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Barium, Total	7440-39-3	0.0005	0.000173	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Beryllium, Total	7440-41-7	0.0005	0.000107	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Beryllium, Dissolved	7440-41-7	0.0005	0.000107	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cadmium, Dissolved	7440-43-9	0.0002	0.0000599	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Calcium, Dissolved	7440-70-2	0.1	0.0394	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cadmium, Total	7440-43-9	0.0002	0.0000599	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Chromium, Dissolved	7440-47-3	0.001	0.000178	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Calcium, Total	7440-70-2	0.1	0.0394	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cobalt, Dissolved	7440-48-4	0.0005	0.000163	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Chromium, Total	7440-47-3	0.001	0.000178	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Copper, Dissolved	7440-50-8	0.001	0.000384	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Cobalt, Total	7440-48-4	0.0005	0.000163	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Copper, Total	7440-50-8	0.001	0.000384	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Iron, Dissolved	7439-89-6	0.05	0.0191	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Lead, Dissolved	7439-92-1	0.001	0.000343	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Iron, Total	7439-89-6	0.05	0.0191	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Magnesium, Dissolved	7439-95-4	0.07	0.0242	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Lead, Total	7439-92-1	0.001	0.000343	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Manganese, Dissolved	7439-96-5	0.001	0.00044	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Magnesium, Total	7439-95-4	0.07	0.0242	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Manganese, Total	7439-96-5	0.001	0.00044	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Nickel, Dissolved	7440-02-0	0.002	0.000556	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Potassium, Dissolved	7440-09-7	0.1	0.0309	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Nickel, Total	7440-02-0	0.002	0.000556	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Selenium, Dissolved	7782-49-2	0.005	0.00173	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Potassium, Total	7440-09-7	0.1	0.0309	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Selenium, Total	7782-49-2	0.005	0.00173	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Silver, Dissolved	7440-22-4	0.0004	0.000163	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Silver, Total	7440-22-4	0.0004	0.000163	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Sodium, Dissolved	7440-23-5	0.5	0.0293	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Thallium, Dissolved	7440-28-0	0.001	0.000143	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Sodium, Total	7440-23-5	0.5	0.0293	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Thallium, Total	7440-28-0	0.001	0.000143	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Vanadium, Dissolved	7440-62-2	0.005	0.00157	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Vanadium, Total	7440-62-2	0.005	0.00157	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved

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METALS by 6020B (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Zinc, Dissolved	7440-66-6	0.01	0.00341	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved
Zinc, Total	7440-66-6	0.01	0.00341	mg/l	80-120		75-125	20	20		180 days	1 - Plastic 500ml HNO3 preserved

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METALS by 7470A (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria	Holding Time	Container
Mercury, Total	7439-97-6	0.0002	0.0000915	mg/l	80-120		75-125	20	20		28 days	1 - Plastic 500ml HNO3 preserved
Mercury, Dissolved	7439-97-6	0.0002	0.0000915	mg/l	80-120		75-125	35	35		28 days	1 - Plastic 500ml HNO3 preserved

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WETCHEM (WATER)

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Method	Holding Time	Container
Chromium, Hexavalent	18540-29-9	0.01	0.003	mg/l	85-115	20	85-115	20	20	7196A	24 hours	1 - Plastic 500ml unpreserved
Cyanide, Total	57-12-5	0.005	0.0018	mg/l	85-115	20	80-120	20	20	9010C/9012B	14 days	1 - Plastic 250ml NaOH preserved

Please Note that the RL information provided in this table is calculated using a 100% Solids factor. ***(Soil/Solids only)***
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1,4 Dioxane via EPA 8270E-SIM (WATER)

Holding Time: 7 days
Container/Sample Preservation: 2 - Amber 250ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,4-Dioxane	123-91-1	150	33.9	ng/l	40-140	30	40-140	30	30			
1,4-Dioxane-d8	*17647-74-4*									*15-110*		
1,4-Dioxane-d8 (IS)	17647-74-4			ng/l								

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NY PFAAs via EPA 1633 (WATER)

Holding Time: 28 days
Container/Sample Preservation: 2 - Plastic 500ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Perfluorobutanoic Acid (PFBA)	375-22-4	6.4	0.528	ng/l	70-140	30	70-140	30	30			
Perfluoropentanoic Acid (PFPeA)	2706-90-3	3.2	0.36	ng/l	65-135	30	65-135	30	30			
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	1.6	0.4	ng/l	60-145	30	60-145	30	30			
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	757124-72-4	6.4	0.912	ng/l	70-145	30	70-145	30	30			
Perfluorohexanoic Acid (PFHxA)	307-24-4	1.6	0.248	ng/l	70-145	30	70-145	30	30			
Perfluoropentanesulfonic Acid (PFPeS)	2706-91-4	1.6	0.208	ng/l	65-140	30	65-140	30	30			
Perfluoroheptanoic Acid (PFHpA)	375-85-9	1.6	0.24	ng/l	70-150	30	70-150	30	30			
Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	1.6	0.136	ng/l	65-145	30	65-145	30	30			
Perfluorooctanoic Acid (PFOA)	335-67-1	1.6	0.264	ng/l	70-150	30	70-150	30	30			
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	27619-97-2	6.4	4.816	ng/l	65-155	30	65-155	30	30			
Perfluoroheptanesulfonic Acid (PFHpS)	375-92-8	1.6	0.2	ng/l	70-150	30	70-150	30	30			
Perfluorononanoic Acid (PFNA)	375-95-1	1.6	0.264	ng/l	70-150	30	70-150	30	30			
Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.6	0.264	ng/l	55-150	30	55-150	30	30			
Perfluorodecanoic Acid (PFDA)	335-76-2	1.6	0.208	ng/l	70-140	30	70-140	30	30			
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	39108-34-4	6.4	1.224	ng/l	60-150	30	60-150	30	30			
Perfluorononanesulfonic Acid (PFNS)	68259-12-1	1.6	0.2	ng/l	65-145	30	65-145	30	30			
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA	2355-31-9	1.6	0.48	ng/l	50-140	30	50-140	30	30			
Perfluoroundecanoic Acid (PFUnA)	2058-94-8	1.6	0.176	ng/l	70-145	30	70-145	30	30			
Perfluorodecanesulfonic Acid (PFDS)	335-77-3	1.6	0.136	ng/l	60-145	30	60-145	30	30			
Perfluorooctanesulfonamide (FOSA)	754-91-6	1.6	0.096	ng/l	70-145	30	70-145	30	30			
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	2991-50-6	1.6	0.48	ng/l	70-145	30	70-145	30	30			
Perfluorododecanoic Acid (PFDoA)	307-55-1	1.6	0.216	ng/l	70-140	30	70-140	30	30			
Perfluorotridecanoic Acid (PFTrDA)	72629-94-8	1.6	0.184	ng/l	65-140	30	65-140	30	30			
Perfluorotetradecanoic Acid (PFTA)	376-06-7	1.6	0.16	ng/l	60-140	30	60-140	30	30			
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Pro	13252-13-6	6.4	1.6	ng/l	70-140	30	70-140	30	30			
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	919005-14-4	6.4	0.376	ng/l	65-145	30	65-145	30	30			
Perfluorododecane Sulfonic Acid (PFDoDS)	79780-39-5	1.6	0.24	ng/l	50-145	30	50-145	30	30			
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3(	756426-58-1	6.4	0.44	ng/l	70-155	30	70-155	30	30			
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-F	763051-92-9	6.4	0.448	ng/l	55-160	30	55-160	30	30			
N-Methyl Perfluorooctane Sulfonamide (NMeFOSA)	31506-32-8	1.6	0.224	ng/l	60-150	30	60-150	30	30			
N-Ethyl Perfluorooctane Sulfonamide (NEtFOSA)	4151-50-2	1.6	0.352	ng/l	65-145	30	65-145	30	30			
N-Methyl Perfluorooctanesulfonamido Ethanol (NMeFOSE)	24448-09-7	16	1.304	ng/l	70-145	30	70-145	30	30			
N-Ethyl Perfluorooctanesulfonamido Ethanol (NEtFOSE)	1691-99-2	16	1.104	ng/l	70-135	30	70-135	30	30			
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	377-73-1	3.2	0.248	ng/l	55-140	30	55-140	30	30			
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	863090-89-5	3.2	0.36	ng/l	60-150	30	60-150	30	30			
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	113507-82-7	3.2	0.328	ng/l	70-140	30	70-140	30	30			
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	151772-58-6	3.2	0.544	ng/l	50-150	30	50-150	30	30			
3-Perfluoropropyl Propanoic Acid (3:3FTCA)	356-02-5	8	0.536	ng/l	65-130	30	65-130	30	30			
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3FTCA)	914637-49-3	40	4.256	ng/l	70-135	30	70-135	30	30			
3-Perfluoroheptyl Propanoic Acid (7:3FTCA)	812-70-4	40	3.184	ng/l	50-145	30	50-145	30	30			
Perfluoro[13C4]Butanoic Acid (MPFBA)	*NONE*									*5-130*		
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	*NONE*									*40-130*		

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Langan Engineering & Environmental

NY PFAAs via EPA 1633 (WATER)

Holding Time: 28 days
Container/Sample Preservation: 2 - Plastic 500ml unpreserved

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	*NONE*									*40-135*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4	*NONE*									*40-200*		
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	*NONE*									*40-130*		
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	*NONE*									*40-130*		
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	*NONE*									*40-130*		
Perfluoro[13C8]Octanoic Acid (M8PFOA)	*NONE*									*40-130*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:	*NONE*									*40-200*		
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	*NONE*									*40-130*		
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	*NONE*									*40-130*		
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	*NONE*									*40-130*		
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:	*NONE*									*40-300*		
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (	*NONE*									*40-170*		
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	*NONE*									*30-130*		
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	*NONE*									*40-130*		
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5	*NONE*									*25-135*		
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	*NONE*									*10-130*		
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	*NONE*									*10-130*		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13	*NONE*									*40-130*		
N-Methyl-d3-Perfluoro-1-Octanesulfonamide (d3-NMeFOSA)	*NONE*									*10-130*		
N-Ethyl-d5-Perfluoro-1-Octanesulfonamide (d5-NEtFOSA)	*NONE*									*10-130*		
2-(N-Methyl-d3-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (	*1265205-95-5*									*10-130*		
2-(N-Ethyl-d5-Perfluoro-1-Octanesulfonamido)ethan-d4-ol (d	*NONE*									*10-130*		

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Volatile Organics in Air: TO-15 (AIR)

Holding Time: 30 days
Container/Sample Preservation: 1 - Generic Air Can for Bottleorder

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,1,1-Trichloroethane	71-55-6	0.2	0.0614	ppbV	70-130			25	25			
1,1,2,2-Tetrachloroethane	79-34-5	0.2	0.052	ppbV	70-130			25	25			
1,1,2-Trichloroethane	79-00-5	0.2	0.0582	ppbV	70-130			25	25			
1,1-Dichloroethane	75-34-3	0.2	0.0568	ppbV	70-130			25	25			
1,1-Dichloroethene	75-35-4	0.2	0.0568	ppbV	70-130			25	25			
1,2,3-Trimethylbenzene	526-73-8	0.2	0.0576	ppbV	70-130			25	25			
1,2,4-Trichlorobenzene	120-82-1	0.2	0.1	ppbV	70-130			25	25			
1,2,4-Trimethylbenzene	95-63-6	0.2	0.0577	ppbV	70-130			25	25			
1,2,4,5-Tetramethylbenzene	95-93-2	0.2	0.135	ppbV	70-130			25	25			
1,2-Dibromoethane	106-93-4	0.2	0.0544	ppbV	70-130			25	25			
1,2-Dichlorobenzene	95-50-1	0.2	0.0619	ppbV	70-130			25	25			
1,2-Dichloroethane	107-06-2	0.2	0.0787	ppbV	70-130			25	25			
1,2-Dichloropropane	78-87-5	0.2	0.0631	ppbV	70-130			25	25			
1,3,5-Trimethylbenzene	108-67-8	0.2	0.06	ppbV	70-130			25	25			
1,3-Butadiene	106-99-0	0.2	0.0619	ppbV	70-130			25	25			
1,3-Dichlorobenzene	541-73-1	0.2	0.0777	ppbV	70-130			25	25			
1,4-Dichlorobenzene	106-46-7	0.2	0.0826	ppbV	70-130			25	25			
1,4-Dioxane	123-91-1	0.2	0.0538	ppbV	70-130			25	25			
2,2,4-Trimethylpentane	540-84-1	0.2	0.0692	ppbV	70-130			25	25			
2-Butanone	78-93-3	0.5	0.099	ppbV	70-130			25	25			
2-Hexanone	591-78-6	0.2	0.0912	ppbV	70-130			25	25			
2-Methylthiophene	554-14-3	0.2	0.0622	ppbV	70-130			25	25			
3-Methylthiophene	616-44-4	0.2	0.0634	ppbV	70-130			25	25			
3-Chloropropene	107-05-1	0.2	0.086	ppbV	70-130			25	25			
2-Ethylthiophene	872-55-9	0.2	0.0612	ppbV	70-130			25	25			
4-Ethyltoluene	622-96-8	0.2	0.0554	ppbV	70-130			25	25			
Acetone	67-64-1	1	0.515	ppbV	40-160			25	25			
Benzene	71-43-2	0.2	0.0643	ppbV	70-130			25	25			
Benzyl chloride	100-44-7	0.2	0.0939	ppbV	70-130			25	25			
Benzothiophene	95-15-8	0.5	0.273	ppbV	70-130			25	25			
Bromodichloromethane	75-27-4	0.2	0.0689	ppbV	70-130			25	25			
Bromoform	75-25-2	0.2	0.0596	ppbV	70-130			25	25			
Bromomethane	74-83-9	0.2	0.0547	ppbV	70-130			25	25			
Carbon disulfide	75-15-0	0.2	0.0465	ppbV	70-130			25	25			
Carbon tetrachloride	56-23-5	0.2	0.0686	ppbV	70-130			25	25			
Chlorobenzene	108-90-7	0.2	0.0516	ppbV	70-130			25	25			
Chloroethane	75-00-3	0.2	0.0649	ppbV	70-130			25	25			
Chloroform	67-66-3	0.2	0.0552	ppbV	70-130			25	25			
Chloromethane	74-87-3	0.2	0.0576	ppbV	70-130			25	25			
cis-1,2-Dichloroethene	156-59-2	0.2	0.0595	ppbV	70-130			25	25			
cis-1,3-Dichloropropene	10061-01-5	0.2	0.0674	ppbV	70-130			25	25			
Cyclohexane	110-82-7	0.2	0.0728	ppbV	70-130			25	25			

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Langan Engineering & Environmental

Volatile Organics in Air: TO-15 (AIR)

Holding Time: 30 days
Container/Sample Preservation: 1 - Generic Air Can for Bottleorder

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
Dibromochloromethane	124-48-1	0.2	0.0566	ppbV	70-130			25	25			
Dichlorodifluoromethane	75-71-8	0.2	0.0757	ppbV	70-130			25	25			
Ethyl Alcohol	GCDAI06	5	1.74	ppbV	40-160			25	25			
Ethyl Acetate	141-78-6	0.5	0.297	ppbV	70-130			25	25			
Ethylbenzene	100-41-4	0.2	0.0575	ppbV	70-130			25	25			
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	0.2	0.0506	ppbV	70-130			25	25			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	0.2	0.0504	ppbV	70-130			25	25			
Hexachlorobutadiene	87-68-3	0.2	0.0607	ppbV	70-130			25	25			
iso-Propyl Alcohol	67-63-0	1	0.272	ppbV	40-160			25	25			
Methylene chloride	75-09-2	0.5	0.125	ppbV	70-130			25	25			
4-Methyl-2-pentanone	108-10-1	0.5	0.19	ppbV	70-130			25	25			
Methyl tert butyl ether	1634-04-4	0.2	0.045	ppbV	70-130			25	25			
Methyl Methacrylate	80-62-6	0.5	0.226	ppbV	40-160			25	25			
p/m-Xylene	179601-23-1	0.4	0.125	ppbV	70-130			25	25			
o-Xylene	95-47-6	0.2	0.0621	ppbV	70-130			25	25			
Xylene (Total)	1330-20-7	0.2	0.0621	ppbV				25	25			
Heptane	142-82-5	0.2	0.0828	ppbV	70-130			25	25			
n-Heptane	142-82-5	0.2	0.0828	ppbV	70-130			25	25			
n-Hexane	110-54-3	0.2	0.0743	ppbV	70-130			25	25			
Propylene	115-07-1	0.5	0.135	ppbV	70-130			25	25			
Styrene	100-42-5	0.2	0.0596	ppbV	70-130			25	25			
Tetrachloroethene	127-18-4	0.2	0.0627	ppbV	70-130			25	25			
Thiophene	110-02-1	0.2	0.052	ppbV	70-130			25	25			
Tetrahydrofuran	109-99-9	0.5	0.117	ppbV	70-130			25	25			
Toluene	108-88-3	0.2	0.0867	ppbV	70-130			25	25			
trans-1,2-Dichloroethene	156-60-5	0.2	0.0755	ppbV	70-130			25	25			
1,2-Dichloroethene (total)	540-59-0	0.2	0.0595	ppbV				25	25			
trans-1,3-Dichloropropene	10061-02-6	0.2	0.0783	ppbV	70-130			25	25			
1,3-Dichloropropene, Total	542-75-6	0.2	0.0674	ppbV				25	25			
Trichloroethene	79-01-6	0.2	0.0548	ppbV	70-130			25	25			
Trichlorofluoromethane	75-69-4	0.2	0.0787	ppbV	70-130			25	25			
Vinyl acetate	108-05-4	1	0.323	ppbV	70-130			25	25			
Vinyl bromide	593-60-2	0.2	0.0722	ppbV	70-130			25	25			
Vinyl chloride	75-01-4	0.2	0.0582	ppbV	70-130			25	25			
Naphthalene	91-20-3	0.19	0.059	ppbV	70-130			25	25			
Propane	74-98-6	0.5	0.152	ppbV	70-130			25	25			
Acrylonitrile	107-13-1	0.5	0.0894	ppbV	70-130			25	25			
Acrolein	107-02-8	0.5	0.149	ppbV	60-113			25	25			
1,1,1,2-Tetrachloroethane	630-20-6	0.2	0.0508	ppbV	70-130			25	25			
Isopropylbenzene	98-82-8	0.2	0.0621	ppbV	70-130			25	25			

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Langan Engineering & Environmental

Volatile Organics in Air: TO-15 (AIR)

Holding Time: 30 days
Container/Sample Preservation: 1 - Generic Air Can for Bottleorder

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,2,3-Trichloropropane	96-18-4	0.2	0.0575	ppbV	70-130			25	25			
Acetonitrile	75-05-8	0.2	0.101	ppbV	70-130			25	25			
Bromobenzene	108-86-1	0.2	0.0579	ppbV	70-130			25	25			
Chlorodifluoromethane	75-45-6	0.2	0.0463	ppbV	70-130			25	25			
Dichlorofluoromethane	75-43-4	0.2	0.112	ppbV	70-130			25	25			
Dibromomethane	74-95-3	0.2	0.0598	ppbV	70-130			25	25			
Pentane	109-66-0	0.2	0.113	ppbV	70-130			25	25			
Octane	111-65-9	0.2	0.0676	ppbV	70-130			25	25			
Tertiary-Amyl Methyl Ether	994-05-8	0.2	0.0672	ppbV	70-130			25	25			
o-Chlorotoluene	95-49-8	0.2	0.0761	ppbV	70-130			25	25			
p-Chlorotoluene	106-43-4	0.2	0.0765	ppbV	70-130			25	25			
2,2-Dichloropropane	594-20-7	0.2	0.0429	ppbV	70-130			25	25			
1,1-Dichloropropene	563-58-6	0.2	0.0593	ppbV	70-130			25	25			
Isopropyl Ether	108-20-3	0.2	0.0631	ppbV	70-130			25	25			
Ethyl-Tert-Butyl-Ether	637-92-3	0.2	0.0731	ppbV	70-130			25	25			
1,2,3-Trichlorobenzene	87-61-6	0.2	0.0738	ppbV	70-130			25	25			
Ethyl ether	60-29-7	0.2	0.0853	ppbV	70-130			25	25			
n-Butylbenzene	104-51-8	0.2	0.0536	ppbV	70-130			25	25			
sec-Butylbenzene	135-98-8	0.2	0.0547	ppbV	70-130			25	25			
tert-Butylbenzene	98-06-6	0.2	0.0551	ppbV	70-130			25	25			
1,2-Dibromo-3-chloropropane	96-12-8	0.2	0.0624	ppbV	70-130			25	25			
p-Isopropyltoluene	99-87-6	0.2	0.0567	ppbV	70-130			25	25			
n-Propylbenzene	103-65-1	0.2	0.0633	ppbV	70-130			25	25			
1,3-Dichloropropane	142-28-9	0.2	0.0536	ppbV	70-130			25	25			
Methanol	67-56-1	5	3.029	ppbV	70-130			25	25			
Acetaldehyde	75-07-0	2.5	1.73	ppbV	70-130			25	25			
Butane	106-97-8	0.2	0.08	ppbV	70-130			25	25			
Nonane (C9)	111-84-2	0.2	0.0737	ppbV	70-130			25	25			
Decane (C10)	124-18-5	0.2	0.0697	ppbV	70-130			25	25			
Undecane	1120-21-4	0.2	0.0709	ppbV	70-130			25	25			
Indane	496-11-7	0.2	0.0591	ppbV	70-130			25	25			
Indene	95-13-6	0.2	0.0711	ppbV	70-130			25	25			
1-Methylnaphthalene	90-12-0	1	0.264	ppbV	70-130			25	25			
Dodecane (C12)	112-40-3	0.2	0.0891	ppbV	70-130			25	25			
Butyl Acetate	123-86-4	0.5	0.208	ppbV	70-130			25	25			
tert-Butyl Alcohol	75-65-0	0.5	0.132	ppbV	70-130			25	25			
2-Methylnaphthalene	91-57-6	1	0.259	ppbV	70-130			25	25			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
Toluene-d8	*2037-26-5*									*70-130*		
Bromofluorobenzene	*460-00-4*									*70-130*		

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Langan Engineering & Environmental

Volatile Organics in Air by TO-15 SIM (AIR)

Holding Time: 30 days
Container/Sample Preservation: 1 - Generic Air Can for Bottleorder

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,1,1-Trichloroethane	71-55-6	0.02	0.0059	ppbV	70-130	25		25	25			
1,1,1,2-Tetrachloroethane	630-20-6	0.02	0.01	ppbV	70-130	25		25	25			
1,1,2,2-Tetrachloroethane	79-34-5	0.02	0.0067	ppbV	70-130	25		25	25			
1,1,2-Trichloroethane	79-00-5	0.02	0.0097	ppbV	70-130	25		25	25			
1,1-Dichloroethane	75-34-3	0.02	0.0086	ppbV	70-130	25		25	25			
1,1-Dichloroethene	75-35-4	0.02	0.0077	ppbV	70-130	25		25	25			
1,2,4-Trimethylbenzene	95-63-6	0.02	0.0076	ppbV	70-130	25		25	25			
1,2-Dibromoethane	106-93-4	0.02	0.0091	ppbV	70-130	25		25	25			
1,2-Dichlorobenzene	95-50-1	0.02	0.0062	ppbV	70-130	25		25	25			
1,2-Dichloroethane	107-06-2	0.02	0.0083	ppbV	70-130	25		25	25			
1,2-Dichloropropane	78-87-5	0.02	0.0083	ppbV	70-130	25		25	25			
1,3,5-Trimethylbenzene	108-67-8	0.02	0.0096	ppbV	70-130	25		25	25			
1,3-Butadiene	106-99-0	0.02	0.0106	ppbV	70-130	25		25	25			
1,3-Dichlorobenzene	541-73-1	0.02	0.0077	ppbV	70-130	25		25	25			
1,4-Dichlorobenzene	106-46-7	0.02	0.0075	ppbV	70-130	25		25	25			
1,4-Dioxane	123-91-1	0.1	0.0344	ppbV	70-130	25		25	25			
2,2,4-Trimethylpentane	540-84-1	0.2	0.037	ppbV	70-130	25		25	25			
2-Hexanone	591-78-6	0.2	0.0354	ppbV	70-130	25		25	25			
3-Chloropropene	107-05-1	0.2	0.0327	ppbV	70-130	25		25	25			
4-Ethyltoluene	622-96-8	0.02	0.0099	ppbV	70-130	25		25	25			
Benzene	71-43-2	0.1	0.0298	ppbV	70-130	25		25	25			
Benzyl chloride	100-44-7	0.1	0.0332	ppbV	70-130	25		25	25			
Bromodichloromethane	75-27-4	0.02	0.0074	ppbV	70-130	25		25	25			
Bromoform	75-25-2	0.02	0.0111	ppbV	70-130	25		25	25			
Bromomethane	74-83-9	0.02	0.0094	ppbV	70-130	25		25	25			
Carbon disulfide	75-15-0	0.2	0.0316	ppbV	70-130	25		25	25			
Carbon tetrachloride	56-23-5	0.02	0.011	ppbV	70-130	25		25	25			
Chlorobenzene	108-90-7	0.1	0.0258	ppbV	70-130	25		25	25			
Chloroethane	75-00-3	0.1	0.0395	ppbV	70-130	25		25	25			
Chloroform	67-66-3	0.02	0.0071	ppbV	70-130	25		25	25			
Chloromethane	74-87-3	0.2	0.0756	ppbV	70-130	25		25	25			
cis-1,2-Dichloroethene	156-59-2	0.02	0.0102	ppbV	70-130	25		25	25			
trans-1,2-Dichloroethene	156-60-5	0.02	0.009	ppbV	70-130	25		25	25			
1,2-Dichloroethene (total)	540-59-0	0.02	0.009	ppbV				25	25			
cis-1,3-Dichloropropene	10061-01-5	0.02	0.0118	ppbV	70-130	25		25	25			
1,3-Dichloropropene, Total	542-75-6	0.02	0.0115	ppbV				25	25			
Cyclohexane	110-82-7	0.2	0.0313	ppbV	70-130	25		25	25			
Dibromochloromethane	124-48-1	0.02	0.008	ppbV	70-130	25		25	25			
Dichlorodifluoromethane	75-71-8	0.2	0.0499	ppbV	70-130	25		25	25			
Ethyl Alcohol	GCDAI06	5	1.35	ppbV	40-160	25		25	25			
Ethyl Acetate	141-78-6	0.5	0.323	ppbV	70-130	25		25	25			
Ethylbenzene	100-41-4	0.02	0.0085	ppbV	70-130	25		25	25			

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Langan Engineering & Environmental

Volatile Organics in Air by TO-15 SIM (AIR)

Holding Time: 30 days
Container/Sample Preservation: 1 - Generic Air Can for Bottleorder

Analyte	CAS #	RL	MDL	Units	LCS Criteria	LCS RPD	MS Criteria	MS RPD	Duplicate RPD	Surrogate Criteria		
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	0.05	0.0083	ppbV	70-130	25		25	25			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	76-14-2	0.05	0.0064	ppbV	70-130	25		25	25			
Methylene chloride	75-09-2	0.5	0.11	ppbV	70-130	25		25	25			
Methyl tert butyl ether	1634-04-4	0.2	0.0261	ppbV	70-130	25		25	25			
Naphthalene	91-20-3	0.05	0.021	ppbV	70-130	25		25	25			
p/m-Xylene	179601-23-1	0.04	0.018	ppbV	70-130	25		25	25			
o-Xylene	95-47-6	0.02	0.0087	ppbV	70-130	25		25	25			
Heptane	142-82-5	0.2	0.0313	ppbV	70-130	25		25	25			
n-Hexane	110-54-3	0.2	0.0471	ppbV	70-130	25		25	25			
Propylene	115-07-1	0.5	0.167	ppbV	70-130	25		25	25			
Styrene	100-42-5	0.02	0.0079	ppbV	70-130	25		25	25			
Tetrachloroethene	127-18-4	0.02	0.0074	ppbV	70-130	25		25	25			
Tetrahydrofuran	109-99-9	0.5	0.142	ppbV	70-130	25		25	25			
Toluene	108-88-3	0.1	0.0166	ppbV	70-130	25		25	25			
trans-1,3-Dichloropropene	10061-02-6	0.02	0.0115	ppbV	70-130	25		25	25			
Trichloroethene	79-01-6	0.02	0.006	ppbV	70-130	25		25	25			
1,2,4-Trichlorobenzene	120-82-1	0.05	0.0146	ppbV	70-130	25		25	25			
Trichlorofluoromethane	75-69-4	0.05	0.0092	ppbV	70-130	25		25	25			
Vinyl acetate	108-05-4	1	0.286	ppbV	70-130	25		25	25			
Vinyl bromide	593-60-2	0.2	0.0431	ppbV	70-130	25		25	25			
Hexachlorobutadiene	87-68-3	0.05	0.011	ppbV	70-130	25		25	25			
iso-Propyl Alcohol	67-63-0	1	0.249	ppbV	40-160	25		25	25			
Vinyl chloride	75-01-4	0.02	0.0088	ppbV	70-130	25		25	25			
Acrylonitrile	107-13-1	0.5	0.162	ppbV	70-130	25		25	25			
n-Butylbenzene	104-51-8	0.2	0.0319	ppbV	70-130	25		25	25			
sec-Butylbenzene	135-98-8	0.2	0.0266	ppbV	70-130	25		25	25			
Isopropylbenzene	98-82-8	0.2	0.0299	ppbV	70-130	25		25	25			
Xylene (Total)	1330-20-7	0.02	0.0087	ppbV				25	25			
p-Isopropyltoluene	99-87-6	0.2	0.0366	ppbV	70-130	25		25	25			
Acetone	67-64-1	1	0.539	ppbV	40-160	25		25	25			
2-Butanone	78-93-3	0.5	0.132	ppbV	70-130	25		25	25			
4-Methyl-2-pentanone	108-10-1	0.5	0.191	ppbV	70-130	25		25	25			
1,2,3-Trichlorobenzene	87-61-6	0.05	0.0223	ppbV	70-130	25		25	25			
Acrolein	107-02-8	0.05	0.0387	ppbV	60-113	25		25	25			
1,2-Dichloroethane-d4	*17060-07-0*									*70-130*		
Toluene-d8	*2037-26-5*									*70-130*		
Bromofluorobenzene	*460-00-4*									*70-130*		

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ATTACHMENT C

ANALYTICAL METHODS/
QUALITY ASSURANCE SUMMARY TABLE

ATTACHMENT C

ANALYTICAL METHODS/QUALITY ASSURANCE SUMMARY TABLE

Matrix Type	Field Parameters	Laboratory Parameters	Analytical Methods	Sample Preservation	Sample Container Volume and Type	Sample Hold Time	Field Duplicate Samples	Field Blank Samples	Media Blank Samples	Equipment Blank Samples	Trip Blank Samples	Ambient Air Samples	MS/MSD Samples
Soil	Total VOCs via PID	Part 375 + TCL VOCs	EPA 8260C	Cool to 4°C	Two 40-ml VOC vials with 5ml H_2O, one with MeOH or 3 En Core Samplers (separate container for % solids)	14 days	1 per 20 samples (minimum 1)	1 per 20 samples (minimum 1)	NA	NA	NA	NA	1 per 20 samples
		Part 375 + TCL SVOCs	EPA 8270D	Cool to 4°C	4 oz. amber glass jar	14 days extract, 40 days after extraction to analysis							
		Part 375 + TAL Metals + Cyanide	EPA 6010C, EPA 7470A, EPA 7196A, EPA 9014/9010C	Cool to 4°C	2 oz. amber glass jar	6 months, except mercury 28 days							
		Part 375 + TCL Pesticides	EPA 8081B	Cool to 4°C	4 oz. amber glass jar	14 days extract, 40 days after extraction to analysis							
		Part 375 + TCL PCBs	EPA 8082A	Cool to 4°C	4 oz. amber glass jar	14 days extract, 40 days after extraction to analysis							
		NYSDEC List PFAS	EPA 1633	Cool to 4°C	8 oz. HDPE jar	14 days to extract, 28 days after extraction to analysis				1 per day			
		1,4-Dioxane	8270 SIM	Cool to 4°C	4 oz. amber glass jar	14 days extract, 40 days after extraction to analysis				NA			
Groundwater	Temperature, Turbidity, pH, ORP, Conductivity, DO	Part 375 + TCL VOCs	EPA 8260C	Cool to 4°C; HCl to pH <2;no headspace	Three 40-mL VOC vials with Teflon®-lined cap	Analyze within 14 days of collection	1 per 20 samples (minimum 1)	1 per 20 samples (minimum 1)	NA	NA	1 per shipment of VOC samples	NA	1 per 20 samples
		Part 375 + TCL SVOCs	EPA 8270D	Cool to 4°C	Two 1-Liter amber glass	7 days to extract, 40 days after extraction to analysis							
		Part 375 + TAL Metals	EPA 6010C, EPA 7470A	HNO_3	250 ml plastic	6 months, except Mercury 28 days							
		Hexavalent Chromium	EPA 7196A	Cool to 4°C	250 ml plastic	24 hours				NA			
		Cyanide	SM 4500 C/E	NaOH plus 0.6g ascorbic acid	250 ml plastic	14 days							
		Part 375 + TCL Pesticides	EPA 8081B	Cool to 4°C	Two 1-Liter Amber Glass for Pesticides/PCB	7 days to extract, 40 days after extraction to analysis							
		PCBs	EPA 8082A	Cool to 4°C		7 days to extract, 40 days after extraction to analysis							
		PFAS	EPA 1633	Cool to 4°C	Two 250 mL HDPE	14 days to extract, 40 days after extraction to analysis				1 per day			
		1,4-dioxane	8270 SIM	Cool to 4°C	One 1 -Liter Amber Glass	7 days to extract, 40 days after extraction to analysis				NA			
Soil Vapor	Total VOCs, Oxygen, LEL, CO, and H_2S, with MultiGas Meter	TO-15 Listed VOCs	TO-15	Ambient Temperature	2.7-Liter Summa Canister	Analyze within 30 days of collection	NA	NA	NA	NA	NA	1 per 10 samples (minimum 1)	NA
Ambient/Indoor Air	Total VOCs via PID				6-Liter Summa Canister		NA	NA	NA	NA			

Notes:
1. PID - Photoionization Detector
2. VOC - Volatile organic compound
3. EPA - Environmental Protection Agency
4. TCL - Target compound list
5. TAL - Target analyte list
6. ORP - Oxidation reduction potential
7. DO - Dissolved oxygen
8. LEL - Lower explosive limit
9. CO -Carbon monoxide
10. H_2S - Hydrogen sulfide
11. PFAS - Per- and Polyfluoroalkyl substances
12. HDPE - High-Density Polyethylene

ATTACHMENT D

SAMPLE NOMENCLATURE STANDARD OPERATING PROCEDURE

SOP #01 – Sample Nomenclature

INTRODUCTION

The Langan Environmental Group conducts an assortment of site investigations where samples (Vapor, Solids, and Aqueous) are collected and submitted to analytical laboratories for analysis. The results of which are then evaluated and entered into a data base allowing quick submittal to the state regulatory authority (New York State Division of Environmental Conservation [NYSDEC]). In addition, Langan is linking their data management system to graphic and analytical software to enable efficient evaluation of the data as well as creating client-ready presentational material.

SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) is applicable to the general framework for labeling vapor, solid (soil) and aqueous (groundwater) samples that will be submitted for laboratory analysis. The nomenclature being introduced is designed to meet the NYSDEC EQuIS standard and has been incorporated into Langan software scripts to assist project personnel in processing the data. While this SOP is applicable to all site investigation; unanticipated conditions may arise which may require considerable flexibility in complying with this SOP. Therefore, guidance provided in this SOP is presented in terms of general steps and strategies that should be applied; but deviation from this SOP must be reported to the Project Manager (PM) immediately.

GENERAL SAMPLE IDENTIFICATION CONSIDERATIONS

Sample Labels

All sample ware must have a label. Recall that when you are using the Encore™ samples (see below); they are delivered in plastic lined foil bags. You are to label the bags[1]:



All other samples containers including Terra Cores™ must be labeled with laboratory provided self-adhesive labels.

Quick Breakdown of Sample Format

The general format for sample nomenclature is:

[1]Both Alpha and York laboratories permit the combining of the three Encore™ into a single bag. This may not be appropriate for all laboratories so please confirm with the labs themselves

LLNN_ID

Where

LL is a grouping of two (2) to four (4) letters signifying the sample media source. In older nomenclature SOPs this portion of the sample identification is commonly referred to as the *Sample Investigation Code*

NN represents a two digit number identifying the specific sample location or sample sequence number

_ ***(underscore)*** is required between the sample lettering and numeric identification and additional modifying data that determines the date of sampling or the depth of the sample interval

ID is a modifier specific to the sample type media (depth of soil sample or date of groundwater sample)

LL – Sample Investigation Code

Langan has devised a list of two to four letters to insure a quick ability to identify the sample investigation.

Code	Investigation
AA	Ambient Air
DS	Drum
EPB	Endpoint Location - Bottom (Excavation)
EPSW	Endpoint Location - Sidewall (Excavation)
FP	Free Product
IA	Indoor Air
IDW	Investigation Derived Waste (Soil Pile)
MW	Monitoring Well (Permanent)
SB	Soil Boring
SG	Staff Gauge (Stream Gauging)
SL	Sludge
SV	Soil Vapor Point
SVE	Soil Vapor Extraction Well
SW	Surface Water
TMW	Temporary Monitoring Well
TP	Test Pit (Excavated Material from Test Pit Not Associated With Sidewall or Bottom Samples)
WC	Waste Characterization Boring
COMP	Composite Sample
TB	Trip Blank (QA/QC Sampling – All Investigations)
FB	Field Blank (QA/QC Sampling – All Investigations)
DUP	Duplicate (QA/QC Sampling – All Investigations)

NN – Numeric Identifier

The two digit number that follows the sample investigation code (LL) identifies the specific sample based on the soil boring, monitoring well, endpoint or other location identification. For a subset of samples

where there is no specific location identifier, the two digit number is the sequence number for the sample submitted. For example, an aqueous sample from a monitoring well identified as MW-1 would have the sample investigation code of MW and the numeric identifier as 01. Note there is no hyphen. The same can be done for soil borings, a soil sample collected from soil boring 9 (SB-9) would be have the LLNN identification of SB09 (again, no hyphen).

Note however that there is a subset of samples related to laboratory analytical quality assurance, among these includes TB, FB, and DUP. On many investigations, the Scope will require multiple collections of these types of samples, therefore the numerical number represents the sequence sample count where the first sample is 01, the second sample is 02, and the third sample is 03 and so on.

_ Underscore
The underscore is required. It separates the investigation code and numeric identifier from the modifier specific to the sample itself. Note that every effort should be made to insure that the underscore is clear on the sample label and chain of custody (COC).

ID – Modifier Specific to Type Media
Each sample investigation code and numeric identifier is further modified by an ID specific to the sample type media. In general, soil samples (soil borings or endpoint samples) use an ID that indicates the depth at which the sample was taken. Aqueous samples (groundwater or surface water samples) are identified by the date the sample was collected. Other types of samples including quality control (TB, FB, and DUP), Vapor samples (AA, IA, SV or SVE), other soil type samples (IDW, sludge, free product, drum, and others) are also identified by a date. The following rules apply to the ID when using sample depth or sample date.

Sample Depth
The sample depth must be whole numbers (no fractions) separated by a hyphen. Thus for a soil sample collected from the soil boring SB-1 from a depth of 6 feet to 8 feet, the sample would be identified as:

SB01_6-8

Unfortunately, the NYSDEC EQuIS system does not accept fractions. Therefore, if your sample interval is a fraction of a foot (6.5-7.5), round up to the larger interval (6-8).

Sample Date
The sample date is always in the format of MMDDYY. Note that the year is two digits. Thus for a groundwater sample collected on July 1, 2015 from the monitoring well MW-1, the sample would be identified as:

MW01_070115

Special Cases
There are a couple of specific sample types that require further explanation.

Endpoint Sampling
End point sidewall samples are sometimes modified by magnetic direction (N, S, E, and W). For example, the first sidewall endpoint sample from the north wall of an excavation at a depth of 5 feet would be written as:

EPSW01_N_5

Again, note that the N in the identification refers to north and is separated from the prefix investigation code/numeric identifier and ID modifier suffix by underscores.

Vapor Extraction Well Sample
As with the sidewall endpoint samples, the sample name is altered by inserting a middle modifier between the prefix and suffix of the sample name. The middle modifier is used to identify the source of the sample (inlet sample port, midpoint sample port or outlet sample port). For example the midpoint port of the vapor extraction well number 1 sampled on July 1, 2015 would be written as;

SVE01_MID_070115

Matrix Spike and Matrix Spike Duplicate
On occasion, a Langan investigation will collect a sample to be used to provide the lab with a site specific medium to spike to determine the quality of the analytical method. This special case of sampling requires additional information to be used in the sample name, specifically, a suffix specifying whether the sample is the matrix spike (MS) or the matrix spike duplicate (MSD). In the following example, the sample is collected from soil boring number 1 at a depth of 2-4 feet. For the matrix spike sample:

SB01_2-4_MS

and for the matrix spike duplicate sample:

SB01_2-4_MSD

Multiple Interval Groundwater Sampling
Although not currently a common practice, low flow sampling facilitates stratigraphic sampling of a monitoring well. If the scope requires stratigraphic sampling then groundwater samples will be labeled with a lower case letter following the well number. For example, placing the pump or sampling tube at 10 feet below surface in MW01 on July 1, 2015 would require the sample to be labeled as:

MW01a_070115

While a second sample where the pump or tubing intake is placed at 20 feet would be labeled as:

MW01b_070115

Note that it is important that you record what depth the intake for each sample represents in your field notes; as this information is going to be critical to interpreting the results.

ATTACHMENT E

PFAS SAMPLING PROTOCOL AND LABORATORY SOP

NEW YORK STATE OF OPPORTUNITY.

Department of Environmental Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

April 2023



www.dec.ny.gov

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ERRATA SHEET for

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Data Assessment and Application to Site Cleanup Page 3	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	3/28/2023
Water Sample Results Page 3	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below.	NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These guidance values also include criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt).Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.	3/28/2023
Soil Sample Results Page 3	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values:	NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:	3/28/2023
Protection of Groundwater Page 3	PFOA (ppb) 1.1 PFOS (ppb) 3.7	PFOA (ppb) 0.8 PFOS (ppb) 1.0	3/28/2023

Citation and Page Number	Current Text	Corrected Text	Date
Footnote 2 Page 3	The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	3/28/2023
Testing for Imported Soil Page 4	If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.	If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.	3/28/2023
Routine Analysis, page 9	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020
Water Sample Results Page 10	PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (…) If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (…) If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Soil Sample Results, page 10	"The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase."	"Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. " [Interim SCO Table] "PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP. As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. "	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs. If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. [2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases… soil parameters, such as Total Organic Carbon (EPA Method 9060), soil…	In cases… soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil…	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021
Water Sample Results Page 9	"In addition, further assessment of water may be warranted if either of the following screening levels are met: a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L"	Deleted	6/15/2021

Citation and Page Number	Current Text	Corrected Text	Date
Routine Analysis, Page XX	Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP)… criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids).	Deleted	5/31/2022
Analysis and Reporting, Page XX	As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.	Deleted	5/31/2022
Routine Analysis, Page XX	LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media.	EPA Method 1633 is the procedure to use for environmental samples.	
Soil Sample Results, Page XX	Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6	
Appendix A	"Include in the text… LC-MS/MS for PFAS using methodologies based on EPA Method 537.1"	"Include in the text ….EPA Method 1633"	
Appendix A	"Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101"	Deleted	
Appendix B	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	

Citation and Page Number	Current Text	Corrected Text	Date
Appendix C	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix D	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix G		Updated to include all forty PFAS analytes in EPA Method 533	
Appendix H		Deleted	
Appendix I	Appendix I	Appendix H	
Appendix H	"These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report."	"These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER)."	
Appendix H	"The holding time is 14 days…"	"The holding time is 28 days…"	
Appendix H, Initial Calibration	"The initial calibration should contain a minimum of five standards for linear fit…"	"The initial calibration should contain a minimum of six standards for linear fit…"	
Appendix H, Initial Calibration	Linear fit calibration curves should have an R^2 value greater than 0.990.	Deleted	
Appendix H, Initial Calibration Verification	Initial Calibration Verification Section	Deleted	
Appendix H	secondary Ion Monitoring Section	Deleted	
Appendix H	Branched and Linear Isomers Section	Deleted	

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments, or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third-party data validator. Electronic data submissions should meet the requirements provided at: https://www.dec.ny.gov/chemical/62440.html.

DER has developed a *PFAS Analyte List* (Appendix G) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

EPA Method 1633 is the procedure to use for environmental samples. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist. Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.[1]

[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These human health criteria should also be applied to surface water that is used as a water supply. This guidance also includes criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt). Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater[2]	0.8	1.0

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These

[2] The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
    - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an "Analytical Methods/Quality Assurance Summary Table" specifying:
    - Matrix type
    - Number or frequency of samples to be collected per matrix
    - Number of field and trip blanks per matrix
    - Analytical parameters to be measured per matrix
    - Analytical methods to be used per matrix with minimum reporting limits
    - Number and type of matrix spike and matrix spike duplicate samples to be collected
    - Number and type of duplicate samples to be collected
    - Sample preservation to be used per analytical method and sample matrix
    - Sample container volume and type to be used per analytical method and sample matrix
    - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by EPA Method 1633
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
    - Reporting Limits should be less than or equal to:
        - Aqueous – 2 ng/L (ppt)
        - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
-
- Include detailed sampling procedures
    - Precautions to be taken
    - Pump and equipment types
    - Decontamination procedures
    - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the current SOP developed by the Division of Fish and Wildlife (DFW) entitled "General Fish Handling Procedures for Contaminant Analysis" (Ver. 8). This SOP should be followed when collecting fish for contaminant analysis. Note, however, that the Bureau of Ecosystem Health will not be supplying bags or tags. All supplies are the responsibility of the collector

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:

   1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).

   2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.

   3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.

B. The following data are required on each **Fish Collection Record** form:

   1. Project and Site Name.

   2. DEC Region.

   3. All personnel (and affiliation) involved in the collection.

   4. Method of collection (gill net, hook and line, etc.)

   5. Preservation Method.

C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:

   1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.

   2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.

   3. Date collected.

   4. Sample location (waterway and nearest prominent identifiable landmark).

   5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.

2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.

3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.

4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate “Age” column.

5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.

6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.

7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.

E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish’s tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with

the same information.

F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.

G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.

H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:

No materials containing Teflon.
No Post-it notes.
No ice packs; only water ice or dry ice.
Any gloves worn must be powder free nitrile.
No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
Wash hands after handling any food containers or packages as these may contain PFCs.
Keep pre-wrapped food containers and wrappers isolated from fish handling.
Wear clothing washed at least six times since purchase.
Wear clothing washed without fabric softener.
Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.

I. All fish must be kept at a temperature <45° F (<8° C) immediately following data processing. As soon as possible, freeze at -20° C ± 5° C. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.

J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

Project and Site Name _____ DEC Region _____

Collections made by (include all crew) _____

Sampling Method: □Electrofishing □Gill netting □Trap netting □Trawling □Seining □Angling □Other _____

Preservation Method: □Freezing □Other _____ Notes (SWFDB survey number): _____

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ( )	WEIGHT ( )	REMARKS

richter: revised 2011, 5/7/15, 10/4/16, 3/20/17; becker: 3/23/17, 4/26/19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY

I, _____, of _____ collected the
(Print Name) (Print Business Address)

following on _____, 20____ from _____
(Date) (Water Body)

in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of _____, in _____ County.

Item(s) _____

_____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on _____, 20_____.

_____ _____
Signature Date

I, _____, received the above mentioned sample(s) on the date specified and assigned identification number(s) _____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_____ _____
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

richter: revised 21 April 2014; becker: 23 March 2017, 26 April, 2019

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelops, approximately 2” x 3.5”, if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonic acids	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluoropentanesulfonic acid	PFPeS	2706-91-4
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorononanesulfonic acid	PFNS	68259-12-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
	Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Perfluoroalkyl carboxylic acids	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUnA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTeDA	376-06-7
Per- and Polyfluoroether carboxylic acids	Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
	4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
	Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
	Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Fluorotelomer sulfonic acids	4:2 Fluorotelomer sulfonic acid	4:2-FTS	757124-72-4
	6:2 Fluorotelomer sulfonic acid	6:2-FTS	27619-97-2
	8:2 Fluorotelomer sulfonic acid	8:2-FTS	39108-34-4
Fluorotelomer carboxylic acids	3:3 Fluorotelomer carboxylic acid	3:3 FTCA	356-02-5
	5:3 Fluorotelomer carboxylic acid	5:3 FTCA	914637-49-3
	7:3 Fluorotelomer carboxylic acid	7:3 FTCA	812-70-4
Perfluorooctane sulfonamides	Perfluorooctane sulfonamide	PFOSA	754-91-6
	N-methylperfluorooctane sulfonamide	NMeFOSA	31506-32-8
	N-ethylperfluorooctane sulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids	N-methylperfluorooctane sulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols	N-methylperfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
	N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2

Group	Chemical Name	Abbreviation	CAS Number
Ether sulfonic acids	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major)	9Cl-PF3ONS	756426-58-1
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	11Cl-PF3OUdS	763051-92-9
	Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7

Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER). Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 28 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6ºC upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of six standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects

Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results

Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample

Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects

Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

Pace ANALYTICAL SERVICES	**ENV-SOP-MANS-0111 v01 Preparation and Analysis of PFAS in Aqueous, Solid, and Tissue by EPA Method 1633**
	Effective Date: 08/07/2024

Management Approval:
John Trimble Approved on 8/7/2024 11:55:41 AM
Laura Vanasse Approved on 8/7/2024 11:32:33 AM
Pete Henriksen Approved on 8/7/2024 10:20:05 AM
Jason Hebert Approved on 8/7/2024 12:02:07 PM

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1.0 SCOPE & APPLICATION

This standard operating procedure (SOP) describes the laboratory procedure used by Alpha, a Pace Analytical Laboratory for the determination of the per- and polyfluoroalkyl substances (PFAS) by liquid chromatography/mass spectrometry (LC-MS/MS) following EPA 1633, published January 2024. This SOP is applicable to aqueous (all non-potable water and leachate), solid (soil, biosolids, sediment), and tissue matrices.

The instrumental portion of this method is for use only by analysts experienced with LC-MS/MS or under the close supervision of such qualified persons. The laboratory must demonstrate the ability to generate acceptable results using the procedures in Sections 11.3.1 and 11.3.2.

By their very nature, many components of PFAS present analytical challenges unique to this class of analytes. For example, PFAS analytes readily adhere to the walls of the sample containers and may also stratify in the container.

1.1 Target Analyte List, Limits of Detection & Quantitation (LOD & LOQ)

The target analytes that can be determined by this SOP and the associated LODs and LOQs are provided in Appendix A, Tables 1, 2, and 3.

LOQs are established in accordance with PAS policies and procedures for method validation, determination of detection limits (LOD), and quantitation limits (LOQ). Refer to laboratory SOP ID 1732 (Detection Limit (DL), Limit of Detection (LOD) & Limit of Quantitation (LOQ)) for additional information. DL and LOQ are routinely verified and updated when needed. DL and LOQ are always adjusted to account for actual sample amounts used and for dilution.

The reporting limit (RL) is the value to which analytes are reported as detected or non-detect in the final report. When the RL is less than the lower limit of quantitation (LLOQ), all detections and non-detects at the RL are qualitative. The LLOQ is the lowest point of the calibration curve used for each target analyte.

1.2 Reference Methods & Documents

This SOP is based on reference method EPA 1633 (2024). If the laboratory procedure is modified from the reference method, a list of modifications and rationale for the modifications is provided in Section 14.0. Modifications are permitted when allowed by the regulatory program for which test results will be used and when the modification has been validated comparable and equivalent to the reference method.

1.3 Quantitation Range

The quantitation range for each target analyte in this procedure is defined in Appendix A, Table 5: Calibration Standard Concentrations.

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1.4 Program Specific Requirements

Not Applicable.

2.0 SUMMARY OF METHOD

Environmental samples are prepared and extracted using method-specific procedures. Sample extracts are subjected to cleanup procedures designed to remove interferences. Analyses of the sample extracts are conducted by LC-MS/MS in the multiple reaction monitoring (MRM) mode. Sample concentrations are determined by isotope dilution or extracted internal standard quantification (see Section 9.2.1) using isotopically labeled compounds added to the samples before extraction.

Individual PFAS analytes are identified through peak analysis of the quantification and confirmation ions, where applicable. Where linear and branched isomers are present in the sample and either qualitative or quantitative standards containing branched and linear isomers are commercially available, the PFAS analyte is reported as a single analyte consisting of the sum of the linear and branched isomer concentrations.

Quantitative determination of target analyte concentrations is made with respect to an isotopically labeled PFAS standard; the concentrations are then used to convert raw peak areas in sample chromatograms to final concentrations.

Results for target analytes are recovery corrected by the method of quantification (i.e., either isotope dilution or extracted internal standard quantification, see Section 9.2.1). Recoveries of isotopically labeled extracted internal standards (EIS) are determined by comparison to the responses of one of seven non-extracted internal standards (NIS) and are used as general indicators of overall analytical quality.

The quality of the analysis is assured through reproducible calibration and testing of the extraction, cleanup, and LC-MS/MS systems.

- Aqueous samples are spiked with isotopically labeled standards (EIS), extracted using solid-phase extraction (SPE) cartridges and undergo cleanup using carbon before analysis.

- Solid samples are spiked with EIS, extracted into basic methanol, and cleaned up by carbon and SPE cartridges before analysis.

- Tissue samples are spiked with EIS, extracted in methanol with potassium hydroxide followed by acetonitrile, and cleaned up by carbon and SPE cartridges before analysis.

3.0 INTERFERENCES

Solvents, reagents, glassware, and other sample processing hardware may yield artifacts and elevated baselines causing misinterpretation of chromatograms. Specific selection of reagents and solvents is required.

Clean all equipment prior to, and after, each use to avoid PFAS cross-contamination. Typical cleaning solvents include water, methanol, and methanolic ammonium hydroxide. The residual PFAS content of disposable plasticware and filters must be verified by batch/lot number and may be used without cleaning if PFAS levels are less than the Method Detection Limit (MDL).

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Prior to use, glassware must be solvent rinsed and then air dried. A solvent rinse procedure using methanolic ammonium hydroxide (1%) and methanol is recommended.

Sample manifold ports and transfer tubing should be inspected regularly for signs of wear and/or discoloration. When such observations are made, the associated components should be replaced.

All parts of the SPE manifold must be cleaned between samples by rinsing with methanolic ammonium hydroxide (1%) and air drying prior to use. Smaller parts, like the needles, adapters, reservoirs, transfer lines, and stopcocks associated with the manifold should be rinsed with tap water prior to rinsing with methanolic ammonium hydroxide (1%) and air drying. After loading the samples but prior to elution procedures, the chamber should be rinsed with methanolic ammonium hydroxide (1%).

All materials used in the analysis must be demonstrated to be free from interferences by running method blanks (Section 11.1.1) at the beginning and with each extraction batch (samples started through the extraction process on a given batch to a maximum of 20 field samples).

Reagent water (Section 8.1) can be used to simulate water samples and Ottawa sand and/or reagent-grade sand (Section 7.3) can be used to simulate soils. Fish fillets (tilapia/ cod), chicken breast or other similar animal tissue (see Section 7.3) may be used as the reference matrix for tissue. The laboratory must verify that the source product used does not contain PFAS in detectable amounts.

Interferences co-extracted from samples will vary considerably from source to source, depending on the diversity of the site being sampled. Interfering compounds may be present at concentrations several orders of magnitude higher than the native PFAS. Because low levels of PFAS are measured by this method, elimination of interferences is essential. The cleanup steps given in Section 9.3 can be used to reduce or eliminate these interferences and thereby permit reliable determination of the PFAS at the levels shown in Tables 1, 2 and 3. The most frequently encountered interferences are fluoropolymers; however, bile salts (e.g., Taurodeoxycholic Acid [TDCA]) may be present in various matrices, including fish and wastewaters, and can interfere in the chromatography. For this reason, analysis of a standard containing TDCA is required as part of establishing the initial chromatographic conditions (see Sections 8.3.2 and 8.3.3) and each analytical sequence (see Section 9.4).

4.0 DEFINITIONS

Refer to the Laboratory Quality Manual for a glossary of common lab terms and definitions.

- **Extracted Internal Standard (EIS) quantification:** The response of the target compound is compared to the response of the isotopically labeled analog of another compound with chemical and retention time similarities.
- **Isotope dilution (ID) quantitation:** A means of determining a naturally occurring (native) compound by reference to the same compound in which one or more atoms has been isotopically enriched. The labeled PFAS are spiked into each sample and allow identification and correction of the concentration of the native compounds in the analytical process.
- **Isotopically labeled compound:** An analog of a target analyte in the method which has been synthesized with one or more atoms in the structure replaced by a stable (non-radioactive) isotope of that atom. Common stable isotopes used are 13C (Carbon-13) or Deuterium (D or 2H). These labeled compounds do not occur in nature, so they can be used for isotope dilution quantitation or other method-specific purposes.

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- **Minimum Level of quantitation (ML):** The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. It may be equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.
- **PAS:** Acronym for Pace® Analytical Services, LLC

5.0 HEALTH & SAFETY

The following sections provide general health and safety information about chemicals and materials that may be present in the laboratory.

- The toxicity or carcinogenicity of each chemical material used in the laboratory has not been fully established. Each chemical should be regarded as a potential health hazard and exposure to these compounds should be as low as reasonably achievable.
- The laboratory maintains documentation of hazard assessments and OSHA regulations regarding the safe handling of the chemicals specified in each method. Safety data sheets for all hazardous chemicals are available to all personnel. Employees must abide by the health, safety and environmental (EHS) policies and procedures specified in this SOP and in the Pace® Chemical Hygiene / Safety Manual (COR-MAN-0001).
- Personal protective equipment (PPE) such as safety glasses, gloves, and a laboratory coat must be worn in designated areas and while handling samples and chemical materials to protect against physical contact with samples that contain potentially hazardous chemicals and exposure to chemical materials used in the procedure.
- Concentrated corrosives present additional hazards and are damaging to skin and mucus membranes. For procedures that require use of acids, use acids in a fume hood whenever possible with PPE designed for handing these materials. If eye or skin contact occurs, flush with large volumes of water. When working with acids, always add acid to water to prevent violent reactions. For procedures that that emit large volumes of solvents (evaporation/concentration processes), these activities must be performed in a fume hood or apparatus that reduces exposure.

6.0 SAMPLE COLLECTION, PRESERVATION, HOLDING TIME & STORAGE

PAS does not offer sample collection services for this test method. PAS advises customers to collect samples in accordance with a sampling plan and collection procedures appropriate to meet regulatory requirements and data quality objectives for the project. The minimum sample amounts required for the test are provided in this section.

PAS provides containers for the collection of samples upon client request. The routine container type and size is provided in the following table along with requirements for sample size, preservation and holding time. Refer to Bottle Order Preparation (ENV-SOP-WEST-0005), or however named, for procedures related to preparation of bottle kits.

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Container Type, Minimum Sample Amount, Preservation, and Holding Time

Matrix	Container Size & Type[1]	Minimum Sample Amount[2]	Preservation	Holding Time
Aqueous (non-potable water)	2 x 500 mL linerless HDPE 1 x 125 mL linerless HDPE[3]	500 mL	Thermal: 0-6°C (or ≤ -20°C)	Collection to Preparation: 28 Days (or 90 Days) Preparation to Analysis: 28 Days
Aqueous (leachate)	2 x 125 mL linerless HDPE	100 mL	Thermal: 0-6°C (or ≤ -20°C)	Collection to Preparation: 28 Days (or 90 Days) Preparation to Analysis: 28 Days
Solid (sediment and soil)	3 oz/ 90 mL linerless polypropylene wide mouth	5 g	Thermal: 0-6°C or ≤ -20°C	Collection to Preparation: 90 Days Preparation to Analysis: 28 Days
Solid (biosolid)	3 oz/ 90 mL linerless polypropylene wide mouth	0.5 g	Thermal: 0-6°C or ≤ -20°C	Collection to Preparation: 90 Days Preparation to Analysis: 28 Days
Tissue[4]	3 oz/ 90 mL linerless polypropylene wide mouth	2 g	Thermal: ≤ -20°C	Collection to Preparation: 90 Days Preparation to Analysis: 28 Days

[1] *Default container type provided in sample kit. To allow room for expansion during freezing (if necessary), aqueous sample containers should not be overfilled. Aqueous sample containers should be filled only to the appropriate gradation marked on the container, or to the shoulder of the container if no gradations are provided.*

[2] *Nominal amount of sample required for each discrete test. Solid and biosolid sample amounts reflect dry weight.*

[3] *Used for pre-screening analyses.*

[4] *Container listed here will be used for tissue homogenate; samples may be received at the laboratory as whole fish or filets wrapped in aluminum foil or food grade polyethylene wrap. Ideally fish should be frozen upon collection and shipped to the laboratory as soon as possible.*

Note: Project-specific requirements dictate which storage condition applies. The storage condition to be used for each project must be formally documented in written form (QAPP or otherwise) before samples are received. Without any prior indication from the client, the lab will store all aqueous and solid/biosolid samples at 0-6°C until extraction, with a 28-day holding time (collection to prep) for aqueous matrices and a 90-day holding time (collection to prep) for solid/biosolid matrices.

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Thermal preservation is checked and recorded on receipt in accordance with laboratory SOP (ENV-SOP-WEST-0003, Sample Receipt and Login), or however named.

After receipt, samples are stored as listed above until sample preparation. Prepared sample extracts of all matrices are stored at 0-6°C until sample analysis.

After analysis, samples are retained as stated in the Pace® standard terms and conditions, unless otherwise specified in the analytical services contract. Samples are then disposed of in accordance with Federal, State, and Local regulations.

7.0 EQUIPMENT & SUPPLIES

Use of equivalent instrumentation, support equipment, and supplies from alternative vendors is acceptable so long as they meet the specifications as stated in the reference method.

Due to the possibility of adsorption of analytes onto glass, plastic containers are used for all standard, sample, and extraction preparations. Any time a new lot of SPE cartridges, solvents, cryovials, or autosampler vials are used, it must be demonstrated that a MB is reasonably free of contamination and that the criteria in Section 11.1.1 are met.

7.1 Instrumentation

- High-performance liquid chromatograph (HPLC) equipped with tandem quadrupole mass spectrometer – Sciex 5500+ or equivalent
- Agilent Zorbax RRHD Eclipse Plus C18, 2.1 x 50 mm (1.8 µm) analytical column (Agilent Part # 959757-902), or equivalent
- Guard cartridge/column – Agilent Zorbax Eclipse Plus C18, 2.1 x 5 mm, 1.8 um (Agilent Part# 821725-901), or equivalent
- Trap/delay column – InfinityLab PFC Delay Column, 4.6 x 30 mm (Agilent Part# 5062-8100), or equivalent

7.2 Support Equipment

- Oven – Capable of maintaining a temperature of 105 ± 5 ºC
- Analytical balance – Capable of weighing 0.0001 g
- Top loading balance – Capable of weighing 0.01 g
- Calibrated mechanical variable volume pipettes with disposable HDPE or polypropylene tips (10 µL to 5 mL) – used for preparation of calibration standards and spiked samples
- Point of Use water preparation system – Thermo Scientific Barnstead E-Pure; model 7119 – Used for QC samples to verify the systems are PFAS free
- Ultrasonic mixer – Fisherbrand; Model CPX3800 – 5.7L, 40 kHZ, 120V, 2.9 Amp with timer
- Analog or digital vortex mixer, single or multi-tube (Fisher Scientific 02-215-452, or equivalent)
- Variable speed mixing table (VWR Model 3500 Orbital Shaker, or equivalent)

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- Centrifuge (Beckman Allegra 6, Hettich Rotanta 460, or equivalent), capable of reaching at least 3000 rpm (~2000 RCF)
- Vacuum Pump – Sufficient capacity to maintain a vacuum of approximately 10 to 15 inches of mercury for extraction cartridges. GAST model # DOA-P704-AA, Waters Cat# 725000417, 115V, 60Hz, 4.2A
- Vacuum manifold for SPE Cartridges – Waters Cat# WAT200609: SPE Vacuum manifold, or equivalentCat
- Vacuum tubing – 1/4” ID, 5/8” OD, 3/16” wall; Fisher Scientific part# 14-176-6B or equivalent
- PE Transfer tubing – 1/8” X .062 x 500ft, Freelin Wade part# 1C-109-10 or equivalent.

7.3 Supplies

- Solid Phase Extraction (SPE) cartridges – Phenomenex part# CS0-9216, 250 mg WAX/20mL, or equivalent
- Carbon Cleanup cartridges – Phenomenex part# 8B-S528-CAJ, 50 mg GCB, or equivalent
- SPE reservoirs – 60 mL, Phenomenex part# AH0-7189, or equivalent
- SPE adapter caps – Supelco part# 57267 (Adapter cap for 12, 20 & 60 mL SPE tubes)
- Disposable liners for Vacuum Manifold – Waters part# 20685 or equivalent
- Silanized glass wool (Pyrex 3950 or equivalent)
- Reference matrix: Aqueous – reagent water
- Reference matrix: Solid – Ottawa sand
- Reference matrix: Tissue – fish fillets, chicken breast or similar animal tissue. First preference will be frozen cod fillets.
- Bottles – HDPE or PP, with linerless HDPE or polypropylene caps. Various sizes. QEC item # 6212-Q016/BC-150-PACE (500 mL), 6212-Q008BC-P (250 mL), 6213-U004BC-P (125 mL), 6214-003PPGBC-P (90 mL)
- Screw top vials, Polypropylene 0.7-mL with polypropylene caps – used in sample analysis and pre-screening (Waters Cat # 186005219 and 186004169 or equivalent)
- 15- and 50-mL conical polypropylene tubes with polypropylene screw caps for preparing and storing extract solutions and for collection of eluents (Fisher Scientific 05-527-90 and 14-432-22, or equivalent)
- 500-mL conical polypropylene centrifuge bottles for sample centrifugation (Fisher Scientific 07-200-621 or equivalent)
- Extract/Standard storage containers – 15-mL, 8-mL, or 4-mL narrow-mouth HDPE container - Thermo Scientific item# 2002-9050, 2002-9025, 2002-9125; 2.0-mL screw-top polypropylene cryogenic vials – Grainger item# 6EMV1/ Wheaton item# W985872;1.5-mL snap-cap polypropylene microcentrifuge tubes - Fisher item# 05-408-129; or equivalent
- pH Paper, range 0-14 - (VWR Cat# BD3539.606 or equivalent), 0.5-unit readability

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- Disposable glass and plastic pipets

8.0 REAGENTS & STANDARDS

Refer to laboratory SOP (ENV-SOP-MANS-0112, Reagent, Solvent, and Standard Control), or however named, for information regarding standard and reagent tracking and traceability. All reagents and stock standards are commercially prepared, when available. Expiration and storage requirements are defined per manufacturer.

8.1 Reagents

Use of equivalent reagents from alternative vendors is acceptable so long as the substitution meets the performance specifications required by the reference method.

- Acetic acid – ACS grade or equivalent, store at room temperature; VWR cat# BDH3098-3.8LP or equivalent
- Acetonitrile – UV grade or equivalent, verified before use, store at room temperature; Honeywell Cat# 018-4 or equivalent (for extraction)
- Ammonium acetate – ACS or equivalent, store at 2-8° C, replace 2 years after opening date; VWR BDH9204-500G or equivalent.
- 1M aqueous ammonium acetate (Waters Cat# 186006693-1) used for mobile phase additive; store as indicated by manufacturer.
- Ammonium hydroxide – certified ACS+ grade or equivalent, 30% in water, store at room temperature; Fisher A470-500 or equivalent
- Formic acid – greater than 96% purity or equivalent, store at room temperature; Acros 147930010 or equivalent
- Methanol – HPLC grade or better, 99.9% purity, store at room temperature; Honeywell CAT# 230-4 or equivalent
- Mobile Phase A – 2 mM ammonium acetate in 95:5 water/acetonitrile. Aliquot 0.4 mL of aqueous 5M ammonium acetate in 949.6 mL of water and 50 mL of acetonitrile. Alternatively, dissolve 0.154 g of neat ammonium acetate into 950 mL of water and 50 mL of acetonitrile. Store at room temperature; shelf life is 2 months.
- Mobile Phase B – Acetonitrile, Ultra HPLC grade or equivalent; OmniSolv AX0142-1 or equivalent
- Potassium hydroxide – certified ACS or equivalent, store at room temperature, replace after 2 years; Fisher P250-500 or equivalent.
- Reagent water – Laboratory reagent water, test by lot/batch number for residual PFAS content.

8.2 Standards

Use of equivalent standards from alternative vendors is acceptable so long as they are traceable to a national standard, when commercially available. Follow manufacturer's recommended storage conditions and expiration dates.

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8.2.1 Primary PFAS Standard

- EPA Method 1633 Native PFAS Standard mix from Wellington Laboratories (item# EPA-1633STK) – used to prepare the calibration standards and to spike the reference QC samples prepared/analyzed with every batch of samples. Also used to prepare an intermediate standard for calibration standard preparation and low-level QC sample spiking, as described below.

8.2.2 Secondary PFAS Standard

- Method 1633-PFCs-Calibration Standard mix from Absolute Standards (item# 65735) – used to prepare the ICV standard as described below.

8.2.3 Extracted Internal Standard (EIS)

- Mass-labelled PFAS Extraction Standard mix from Wellington Laboratories (item# MPFAC-HIF-ES) – used to prepare analytical standards and spike each sample prior to extraction.

8.2.4 Non-extracted Internal Standard (NIS)

- Mass-labelled PFAS Injection Standard mix from Wellington Laboratories (item# MPFAC-HIF-IS) – used to prepare analytical standards and spike sample extracts prior to instrumental analysis.

8.2.5 Bile Salt (TDCA) Standard

- Neat Taurodeoxycholic acid from Cayman Chemical (item# 15935), or equivalent – used to prepare analytical standards for bile salt interference check.

8.3 Formulations

Prepare standard solutions from materials of known purity and composition or purchase as solutions or mixtures with certification to their purity, concentration, and authenticity. Observe the safety precautions in Section 5.

Purchase of commercial standard solutions or mixtures is highly recommended for this method; however, when these are not available, preparation of stock solutions from neat materials may be necessary. If the chemical purity is 98% or greater, the weight may be used without correction to calculate the concentration of the standard.

When not being used, store standard solutions in the dark at 4 °C, unless the vendor recommends otherwise, in tightly sealed screw-capped vials. Place a mark on the vial at the level of the solution so that solvent loss by evaporation can be detected. Replace the solution if solvent loss has occurred.

Note: 18O-mass labeled perfluoroalkyl sulfonates may undergo isotopic exchange with water under certain conditions, which lowers the isotopic purity of the standards over time.

The laboratory must maintain records of the certificates for all standards for traceability purposes. Copies of the certificates should be provided as part of the data packages in order to check that proper calculations were performed.

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8.3.1 Analytical and Preparation Reagents

Analytical and Preparation reagents are stored in plastic or glass containers under ambient conditions. Expiries are listed with each reagent.

- Instrument Blank Mix (IBLK Mix) – Methanol with 4% water, 1% ammonium hydroxide and 0.625% acetic acid – add ammonium hydroxide (3.3 mL, 30%), reagent water (1.67 mL) and acetic acid (0.625 mL) to methanol (94.4 mL); store at room temperature, replace after 1 month. This solution is used to prepare the instrument blank (Sections 8.3.3.3 and 9.2.5) and sample extract dilutions.
- Mobile Phase A – 2 mM ammonium acetate in 95:5 water: acetonitrile. Aliquot 2.0 mL of aqueous 1M ammonium acetate in 948 mL of water and 50 mL of acetonitrile. Store at room temperature; replace after 2 months or less.
- Mobile Phase B – Acetonitrile, HPLC grade or equivalent; Omnisolv AX0142-1 or equivalent
- Acetic acid (0.1%) - dissolve acetic acid (1 mL) in reagent water (1 L); store at room temperature, replace after 3 months.
- Aqueous ammonium hydroxide (3%) – add ammonium hydroxide (10 mL, 30%) to reagent water (90 mL), store at room temperature, replace after 3 months.
- Methanolic ammonium hydroxide (0.3%) – add ammonium hydroxide (1 mL, 30%) to methanol (99 mL), store at room temperature, replace after 1 month.
- Methanolic ammonium hydroxide (1%) – add ammonium hydroxide (3.3 mL, 30%) to methanol (97 mL), store at room temperature, replace after 1 month.
- Methanolic ammonium hydroxide (2%) – add ammonium hydroxide (6.6 mL, 30%) to methanol (93.4 mL), store at room temperature, replace after 1 month.
- Formic acid (aqueous, 0.1 M) – dissolve formic acid (4.6 g / 3.77 mL) in reagent water (1 L), store at room temperature, replace after 2 years.
- Formic acid (aqueous, 0.3 M) – dissolve formic acid (13.8 g / 11.31 mL) in reagent water (1 L), store at room temperature, replace after 2 years.
- Formic acid (aqueous, 5% v/v) – mix 5 mL formic acid with 95 mL reagent water, store at room temperature, replace after 2 years.
- Formic acid (aqueous, 50% v/v) – mix 50 mL formic acid with 50 mL reagent water, store at room temperature, replace after 2 years.
- Formic acid (methanolic 1:1, 0.1 M formic acid/methanol) – mix equal volumes of methanol and 0.1 M formic acid, store at room temperature, replace after 2 years.
- Methanolic potassium hydroxide (0.05 M KOH) – add 3.3 g of potassium hydroxide to 1 L of methanol, store at room temperature, replace after 3 months.

8.3.2 Intermediate Standards

Intermediate standards are stored in plastic containers as listed below. Expiries are listed with each formulation.

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- TDCA Stock Solution: Dissolve 10 mg of neat TDCA into 5 mL of MeOH; final concentration equals 2000 µg/mL. Store frozen (<0°C) when not in use; replace after 1 year, or sooner if degradation is observed.
- STK-10X Solution: Dilute 200 µL of EPA-1633STK with 1.8 mL of MeOH for a final volume of 2 mL; final concentrations vary by analyte – 25, 50, 100, 125, 250, or 625 ng/mL. Store at 0-6°C when not in use; replace every time a new lot of 1633STK is used, or after 1 month.

8.3.3 Working Solutions

Working solutions are stored in plastic containers under refrigerated conditions at 0-6°C and expire 1 month from the date of preparation.

8.3.3.1 Calibration Standards

A series of calibration solutions containing the target analytes and the EIS and NIS is used to establish the initial calibration of the analytical instrument. The concentration of the method analytes in the solutions varies to encompass the working range of the instrument, while the concentrations of the EIS and NIS (and TDCA) remain constant. The calibration solutions are prepared using the standards and intermediate standards described above. The final solvent composition will match the solvent mix of sample extracts, which contain methanol with 4% water, 1% ammonium hydroxide and 0.625% acetic acid. Calibration standard solutions do not undergo solid phase extraction/cleanup. Prepare the calibration standard solutions according to the table below. Following all formulations listed in this SOP will require 3 ampoules of the 1633STK mix to prepare a full calibration set; other final volumes may be prepared. If the lab follows all formulations in this SOP as written, the remaining volumes of 1633STK and STK-10X solutions after preparing the calibration should be enough to spike approximately 40 sets of aqueous batch QC. The remainder of MPFAC-HIF-ES and MPFAC-HIF-IS mixes should provide enough volume to spike approximately 40-45 samples.

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Component[1]	L1	L2 (LOQ)	L3	L4	L5 (CCV)	L6	L7	L8	L9
STK-10X	20	16	40						
EPA-1633STK				20	100	100	200	400	500
MPFAC-HIF-ES	25	10	10	10	25	10	10	10	10
MPFAC-HIF-IS	25	10	10	10	25	10	10	10	10
TDCA Stock	25				25				10
IBLK Mix	4905	1964	1940	1960	4825	1880	1780	1580	1470
Final Volume	5000	2000	2000	2000	5000	2000	2000	2000	2000

[1]*All values listed are µL*

8.3.3.2 Initial Calibration Verification Standard (ICV)

Prepare the ICV standard using the Absolute Standards 1633 PFC Mix, following the table below; expected concentration for all compounds in the ICV will be 10 ng/mL. The ICV is prepared from a separate, second source (or separate manufacturer lot) than that used for the calibration solutions. If a second source or lot is unavailable, a separate preparation using the same stocks is acceptable.

Component	Volume used (µL)
1633 PFC Mix	20
MPFAC-HIF-ES	20
MPFAC-HIF-IS	20
IBLK Mix	3940
ICV Final Volume	4000

8.3.3.3 Instrument Blank

A solvent blank is analyzed at the beginning of each analytical sequence, to demonstrate clean instrumental background, and after samples containing high levels of target compounds (e.g., calibration, CCV) to monitor carryover from the previous injection. The instrument blank consists of clean reagent fortified with the EIS and NIS for quantitation purposes. Prepare the IBLK using the IBLK mix (Section 8.3.1) and an appropriate volume of EIS and NIS; alternatively, prep the IBLK from 1887 µL of 1% Methanolic ammonium hydroxide, 80 µL of reagent water, 12.5 µL of acetic acid, and 10 µL each of EIS and NIS.

9.0 PROCEDURE

9.1 Equipment Preparation

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9.1.1 Instrument Setup

9.1.1.1 Routine Instrument Operating Conditions

Example LC Gradient

Step	Total Time (min)	Flow Rate (µL/min)	A: 5% Acetonitrile w/ 10mM Ammonium Acetate (%)	B: Acetonitrile (%)
1	0.00	400	80	20
2	6.00	400	0	100
3	6.50	400	0	100
4	6.51	400	80	20
5	8.50	400	80	20

Example MS Parameters

MS Parameter	Setting or Value
Sample Loop	100 µL
Injection Volume	2 µL
Column Oven Temperature	40° C
MRM Scan Window	60 sec
Curtain Gas (CUR)	30.0
Collision Gas (CAD)	9
Ion Spray Voltage (IS)	-4500 V
Source Temperature (TEM)	450° C
Ion Source Gas 1 (GS1)	30.0
Ion Source Gas 2 (GS2)	50.0

9.1.1.2 Mass Calibration

The mass spectrometer must undergo mass calibration to ensure accurate assignments by the instrument. This mass calibration must be performed at least annually to maintain instrument sensitivity and stability. Mass calibration must be repeated on an as-needed basis (e.g., QC failures, ion masses fall outside of the instrument required mass window, major instrument maintenance, or if the instrument is moved). Mass calibration must be performed using the calibration compounds and procedures prescribed by the manufacturer. The procedures used for mass calibration and mass calibration verification must evaluate an ion range that encompasses the ion range (Q1 and Q2 m/z) of the analytes of interest of this method.

9.1.1.3 Mass Calibration Verification

A mass calibration verification must be performed following mass calibration, prior to standard and sample analyses. Mass verification checks must also be performed after any subsequent mass calibrations. The laboratory must follow the instructions for the individual instrument software to confirm the mass calibration, mass resolution and peak relative response. If the manufacturer's

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instructions include options for evaluation of mass resolution, the tightest resolution requirements (typically called unit resolution) must be met.

9.1.1.4 Retention Time (RT) calibration

Once RT windows have been confirmed for each target analyte, EIS, and NIS compound, then once per ICAL and at the beginning of the analytical sequence, the position of all target analyte, EIS, and NIS peaks shall be set using the midpoint standard of the ICAL curve when ICAL is performed. When an ICAL is not performed, the initial CCV retention times or the midpoint standard of the ICAL curve can be used to establish the RT window position.

The RTs for the target analytes, EIS, and NIS compounds must fall within 0.4 minutes of the predicted retention times from the midpoint standard of the ICAL or initial daily CCV, whichever was used to establish the RT window position for the analytical batch. All branched isomer peaks identified in either the calibration standard or the qualitative (technical grade) standard also must fall within 0.4 minutes of the predicted retention times from the midpoint standard of the ICAL or initial daily CCV. For all target analytes with exact corresponding isotopically labeled analogs, target analytes must elute within 0.1 minutes of the associated EIS compound.

When establishing the chromatographic conditions, it is important to consider the potential interference of bile salts (i.e. TDCA) during analyses of samples. Analytical conditions must be set to allow a separation of at least 1 minute between TDCA and the retention time window of PFOS. The method requires this evaluation when establishing the chromatographic conditions, regardless of the sample matrices to be analyzed.

9.1.2 Support Equipment

Refer to laboratory SOP (ENV-SOP-WEST-0036 Balance Calibration Verification, ENV-SOP-WEST-0123 Pipette and Bottle Top Verification), or however named, for additional information on calibration requirements for support equipment that may be used in this procedure.

9.2 Calibration

Refer to corporate POL ENV-POL-CORQ-0005, *Acceptable Calibration Practices for Instrument Testing*, for general laboratory calibration policies and procedures.

9.2.1 Calibration Frequency

Prior to the analysis of samples, and after a successful mass calibration check, each LC-MS/MS system must be calibrated at a minimum of 6 standard concentrations (Section 8.3.3.1 and Appendix A, Table 5). This method procedure calibrates and quantifies 40 PFAS target analytes, using the isotopically labeled compounds added to the sample prior to extraction, by one of two approaches (see Appendix A, Table 4 for quantitation associations):

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- Isotope Dilution quantification (ID), whereby the response of the target compound is compared to the response of its isotopically labeled analog; twenty-four target compounds are quantified in this way.
- Extracted Internal Standard quantification (EIS), whereby the response of the target compound is compared to the response of the isotopically labeled analog of another compound with chemical and retention time similarities; sixteen target compounds are quantified in this way.

Each LC-MS/MS system must be calibrated whenever the laboratory takes corrective action that might change or affect the initial calibration criteria, or if either the CCV or ISC acceptance criteria have not been met.

Each time a modification is made to this method, the laboratory is required to repeat the procedure in Sections 11.3.1 and 11.3.2. If calibration will be affected by the change, the instrument must be recalibrated.

9.2.2 Calibration Levels

Calibration standards are stored in plastic containers under refrigerated conditions (0-6°C).

Concentrations for calibration solutions are presented in Appendix A, Table 5. A minimum of six contiguous calibration standards are required for a valid analysis when using a linear calibration model, with at least five of the six calibration standards being within the quantitation range (e.g., from the LOQ to the highest calibration standard). If a second-order calibration model is used, then a minimum of seven calibration standards are required, with at least six of the seven calibration standards within the quantitation range. The lowest level calibration standard must be at a concentration less than or equal to the Limit of Quantitation (LOQ) and must meet a signal-to-noise ratio of 3:1 for the quantitation and confirmation ions that exist and must meet ion ratio requirements described in Section 10.1.1.3. If the analyte has no confirmation ion, then a 10:1 signal to noise ratio is required. All initial calibration requirements listed in Section 9.2.4 and 9.2.5 must be met.

Note: Additional calibration standards, at levels lower than the lowest calibration standard listed in the method, may be added to accommodate a lower limit of quantitation if the instrument sensitivity allows. Calibration standards at the high end of the calibration may be eliminated if the linearity of the instrument is exceeded or at the low end if those calibration standards do not meet the S/N ratio criterion of 3:1 (for quantitation and confirmation ions that exist; 10:1 for analytes with no confirmation ion), so long as the required number of calibration points is met. All analytes with commercially available stable isotope analogues must be quantified using isotope dilution.

9.2.3 Calibration Sequence

Calibration standards must be analyzed in sequence from lowest to highest concentration to minimize the chance that carryover from a higher concentration standard will boost the area of a lower concentration standard. A typical sequence for days when calibration is required is shown below.

Description	Comment
ICAL L1	

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Description	Comment
ICAL L2	Also used as ISC (Section 9.2.4.4)
ICAL L3	
ICAL L4	
ICAL L5	Also used as bracketing/closing CCV (Section 9.2.4.5)
ICAL L6	
ICAL L7	
ICAL L8	
ICAL L9	
IBLK	Any detections must be <MDL
ICV	%R must be 70 – 130%
CCV (ISC)	%R must be 70-130%; begins and ends Analytical Sequence

9.2.4 Calibration Evaluation

If the criteria for initial calibration are not met, inspect the system for problems and take corrective actions to achieve the criteria. This may require the preparation and analysis of fresh calibration standards. All initial calibration criteria must be met before any samples or required blanks are analyzed.

9.2.4.1 Curve Fit

One of the following two approaches must be used to evaluate the linearity of the instrument calibration. Weighting (typically 1/x or 1/x2) is allowed for linear and non-linear regressions.

- Option 1: Calculate the relative standard deviation (RSD) of the Relative Response (RR) or Response Factor (RF) values of the initial calibration standards for each native compound and isotopically labeled compound. See Section 10.2.1 for calculation of RR and RF. The RSD must be ≤ 20% to establish instrument linearity.

- Option 2: Calculate the relative standard error (RSE) for each native compound and EIS compound for all the initial calibration standards that were analyzed. The RSE for all method analytes must be ≤ 20% to establish instrument linearity.

If these criteria cannot be met, corrective action should be taken to restrict the range of calibration, reanalyze and/or reprepare the ICAL standards, or perform instrument maintenance and/or re-optimization.

If more than the minimum number of standards are analyzed and levels are excluded from the calibration, only the lowest or highest standards may be excluded, except as noted here. The removal of calibration levels from the interior of the curve is allowed only when there is sound technical reason for doing so and when the level is removed for all analytes; for example, when it can be proven that the wrong standard was analyzed for the calibration level or there is obvious evidence that the instrument malfunctioned during injection of the standard. The removal of any calibration level from the interior of the curve must be approved by the department supervisor/manager. Management approval and

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the rationale for the level removal must be documented and kept with the technical record.

9.2.4.2 Relative Error (% RE)

Although not required by the method, it may be useful to compare the actual responses for each standard to the calibration model; percent error of >30% between the calculated and expected concentrations of an analyte in any standard may be cause for concern.

9.2.4.3 Initial Calibration Verification (ICV)

As part of the IDOC and once after each ICAL, analyze an ICV sample prepared from a second source (different from the source of the ICAL standards). If a second vendor is not available, then a different lot of the standard from the same vendor should be used. The ICV should be prepared and analyzed just like a CCV. Acceptance criteria for the ICV are identical to the CCVs: the calculated concentration for each analyte must be within ± 30% of the expected value. If measured analyte concentrations are not of acceptable accuracy, correct the problem and rerun the ICV. If the problem persists, repeat the ICAL. Samples are not to be analyzed until the ICAL has been verified by acceptable ICV accuracy.

9.2.4.4 Instrument Sensitivity Check (ISC)

The lowest calibration standard within the quantitation range must be analyzed at the beginning of the analytical sequence. The signal-to-noise ratio of the ISC must be ≥ 3:1 for the quantification ions and the confirmation ions, or ≥ 10:1 if the analyte only has a quantification ion. Recovery of the native and EIS compounds for the ISC must be within 70-130%. If the requirements cannot be met, the problem should be corrected before analyses can proceed.

The lowest calibration standard within the quantitation range must be analyzed at the beginning of the analytical sequence. The signal-to-noise ratio of the ISC must be ≥ 3:1 for the quantification ions and the confirmation ions, or ≥ 10:1 if the analyte only has a quantification ion. Recovery of the native and EIS compounds for the ISC must be within 70-130%. If the requirements cannot be met, the problem should be corrected before analyses can proceed.

9.2.4.5 Continuing Calibration Verification (CCV)

After a passing MS resolution and a successful initial calibration is achieved and prior to the analysis of any samples, the calibration is verified by injecting an aliquot of the appropriate concentration ICAL standard, analyzed with the same conditions used during the ICAL. CCV is performed at the beginning of each analytical sequence, after every ten samples, and at the end of the analytical sequence. In this context, a “sample” is defined as a field sample: MBs, CCVs, LCSs, MSs, FDs, TBs and MSDs are not counted as samples. All CCV analyses are performed using a mid-level ICAL standard, except for the daily Instrument Sensitivity Check, as noted above.

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Calculate concentration for each native and EIS compound in the CCV; the recovery of native and EIS compounds for the CCVs must be within 70 – 130%. If the CCV criteria are not met, take corrective action (possibly including recalibration) and reanalyze any extracts that were analyzed between the last passing CCV and the one that failed. Alternately, the analyst may immediately analyze two CCVs for confirmation. If both confirmation CCV analyses meet the recovery criteria, analysis may proceed; however, the analyst must rerun any samples that were analyzed after the failing CCV and before the 2 passing CCVs. If either of the 2 confirmation CCV analyses fails to meet the acceptance criteria take corrective action and recalibrate the LC-MS/MS.

If an individual target compound recovery in a CCV is above the upper control limit and all associated samples are ND for that compound, the data for those samples may be reported. In such cases, a narrative statement must be included in the report indicating the specific compound result that was biased high in the CCV, and that samples were ND for that compound and thus reportable.

9.2.5 Initial Calibration Blank (ICB) / Continuing Calibration Blank (CCB)

One instrument blank (IBLK) is analyzed immediately following the highest ICAL standard analyzed (ICB), each analysis day prior to sample analysis, and following each bracketing CCV in a sequence (CCB), to check for carryover and instrument contamination. The concentration of each analyte must be ≤ the MDL-equivalent concentration in each IBLK/ICB/CCB. If the IBLK does not pass this requirement after the highest ICAL standard, the acquisition method should be adjusted to reduce the amount of carryover observed. Alternately, the calibration should be performed using a lower concentration for the highest standard until the acceptance criteria is met.

If unacceptable contamination is persistent in blanks, analyze additional instrument blanks until the response of the analyte is no longer detectable, or perform additional troubleshooting steps to identify and minimize other potential sources of PFAS contamination.

9.3 Sample Preparation

This section describes the sample preparation procedures for aqueous samples (Section 9.3.3), solid samples (soil, sediment or biosolid; Section 9.3.6), and tissue samples (Section 9.3.9). For solid samples, percent solids are determined using the procedures in Section 9.3.2. This section also describes the solid phase extraction (SPE) and extract cleanup protocols for all matrices.

Note: The laboratory may choose to pre-screen some samples prior to performing the analysis, following the protocol described in Appendix D. For aqueous samples, use the smaller secondary container to perform the pre-screening. If high levels of PFAS are present in the sample, a lower volume is required for analysis.

Do not use any fluoropolymer articles or task wipes in these extraction procedures. Use only HDPE or polypropylene wash bottles and centrifuge tubes. Reagents and solvents for cleaning may be kept in glass containers.

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9.3.1 Homogenization & Subsampling

Refer to laboratory SWI ENV-SWI-WEST-0128, Subsampling of Soil / Solid Samples, or however named, for information regarding the handling, homogenization, and splitting of samples to ensure that a representative aliquot is used for preparation.

The laboratory may subsample the aqueous samples as described in Appendix E; however, subsampling must meet project-specific requirements. The laboratory must notify the client that subsampling has occurred. Subsampling is acceptable for samples which require greater than a 10X dilution for over-range detections (or are known/expected to be highly contaminated), and for samples which fail the acceptance criteria for EIS compounds (see Appendix B, Tables 10-12). Other sample matrix characteristics which may require subsampling are described in Appendix G. When subsampling is required to manage high concentrations, no less than 250 µL of aqueous or leachate samples may be subsampled - if greater dilution is required, serial dilution must be employed. When subsampling is required to manage challenging matrices, no less than 1 mL of samples may be subsampled. For solid and tissue samples, no less than 10% of the target sample mass should be used for reduced-mass extractions, to help ensure the extracted mass is representative of the bulk sample. This means no less than 0.5 g for solids and no less than 0.2 g for tissues may be used for sample preparation.

Tissue sample homogenization will be performed in the Pace Green Bay facility, following SOP ENV-SOP-GBAY-0129 v05 *Sample Homogenization Compositing and Sub-Sampling*.

9.3.2 Determination of Percent Solids

Aqueous samples received with visually observable solids will be handled following the decision tree presented in Appendix G. No TSS pre-test will be performed on aqueous samples prior to preparation.

Percent solids analysis must be performed on all solid samples (excluding tissues) prior to preparation and analysis. All solid samples will be logged in for both 1633 and percent solids analysis. The percent solids analysis will follow the Method SM2540G protocol.

9.3.3 Aqueous Sample Processing

Per the parent method, this protocol is applicable to aqueous samples containing up to 100 mg/L solids per sample, and the procedure requires the preparation of the entire sample where possible. Smaller sample volumes may be analyzed for samples containing solids greater than specified for this method, or when unavoidable due to high levels of PFAS. The typical sample size is 500 mL; however, sample size may vary, depending on project requirements, applicable regulations, and sample characteristics. The sample is to be analyzed in its entirety and should not be filtered.

Leachate samples are analyzed using a 100 mL sample volume. Therefore, they must not be included in the same sample preparation batch as aqueous samples analyzed using 500 mL sample volumes. Otherwise, leachate samples are handled identically to all other aqueous samples.

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1) Visually inspect each sample and note any matrix characteristics which may pose challenges during SPE and require additional processing; see Appendix G for more information.

2) Weigh each sample bottle (with the lid) to the nearest 0.1 g. The volume of the aqueous sample analyzed is determined by weighing the full sample bottle and then the empty sample bottle after extraction is complete.

3) Prepare a method blank and two LCSs using PFAS-free water in HDPE bottles. Select a volume of water that is typical of the samples in the batch (i.e., 500 mL; 100 mL for leachate samples). Spike one LCS sample with native standard solution at 2x the LOQ (64 µL of STK-10X mix). This aliquot (LLLCS) will serve to verify the LOQ. Spike the other LCS sample at a concentration near the mid-level calibration point (40 µL of EPA-1633STK). This aliquot will serve as the traditional LCS.

Note: If matrix spikes are required for a specific project, spike the field sample bottles designated for use as MS/MSD samples in the same manner as the LCS.

4) Spike 20 µL of EIS solution (Section 8.2.3) directly into the sample in the original bottle (or subsampled bottle) as well as to the bottles prepared for the QC samples. Mix by capping and inverting the sample containers.

5) Check that the pH is 6.5 ± 0.5. If necessary, adjust pH with 50% formic acid or ammonium hydroxide (or with 5% formic acid and 3% aqueous ammonium hydroxide). The sample is now ready for solid phase extraction (SPE) and cleanup.

9.3.4 Solid Phase Extraction of Aqueous Samples

Note: Carbon cleanup is required. Carbon cleanup may remove analytes if the sample has a very low organic carbon content (this is unusual for non-drinking water environmental samples). This will be apparent if the isotope dilution standard recoveries are significantly higher on the reanalysis.

1) Pack clean silanized glass wool to half the height of a WAX SPE cartridge barrel; repeat for the total number of samples in the batch.

2) For each sample and QC aliquot, set up the vacuum manifold with one WAX SPE cartridge plus a reservoir adaptor and reservoir for each cartridge; label each reservoir with the associated sample ID. If using plastic transfer lines instead of reservoirs, ensure the connecting caps are snug in each cartridge and the transfer lines are placed within the appropriate sample; label each cartridge tube with the associated sample ID.

3) Pre-condition the cartridges by washing them with 15 mL of 1% methanolic ammonium hydroxide followed by 5 mL of 0.3M formic acid. Perform each rinse separately. Do not allow the WAX SPE to go dry. Discard the wash solvents.

4) Pour the sample into the reservoir (do not use a pipette), taking care to avoid splashing while loading; or, if using transfer lines, begin opening the stopcocks on the vacuum manifold. Adjust the vacuum/stopcocks to pass each sample through

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the cartridge at approximately 5-10 mL/min; discard the eluate. Retain the empty sample bottle for later rinsing (Section 9.3.5).

Note: In the event the SPE cartridge begins to clog during aqueous sample loading, abandon the loading step and attempt to rinse and dry the clogged cartridge, following the protocol below. The cartridge is then ready for elution. If the clogging prevents the rinse from passing through the cartridge, it will not be possible to collect an extract for the associated sample. See Appendix G for more information.

5) Rinse the walls of the reservoir with 5 mL reagent water twice, followed by 5 mL of 1:1 0.1M formic acid/methanol and pass those rinses through the cartridge using vacuum. If using sample transfer lines for loading, add the 3 rinses to the bottle and load through the transfer lines to the cartridge, one reagent at a time. Dry the cartridge by pulling air through for approximately 5 minutes. Discard the rinse solution.

6) After the WAX cartridges are sufficiently dry, rinse the GCB cartridges with 5 mL of 1% methanolic ammonium hydroxide; discard the rinsate. Do not allow the GCB to go completely dry.

7) Connect the outlet of the WAX cartridges to the inlet of the GCB cartridges to stack them on the manifold and allow for cleanup of the extract as part of elution. Ensure that the WAX cartridges are returned to their original locations on the manifold to avoid cross contamination. Continue to the elution steps in the next section.

9.3.5 Elution of Aqueous Sample Extracts

1) Place clean collection tubes inside the manifold, ensuring that the extract delivery tips do not touch the walls of the tubes. Resume vacuum and ensure a proper seal is achieved. DO NOT add NIS to these collection tubes.

2) Add 5 mL of 1% methanolic ammonium hydroxide to each empty sample bottle. Cap the bottle and rotate to ensure all internal surfaces of each bottle are rinsed; avoid vigorous shaking when rinsing the 500 mL aqueous sample bottles with only 5 mL of methanol – any evaporation/vaporization will contribute to loss of extract here. After rinsing the inside of the sample bottle, pour the rinse from the bottle or use a plastic transfer pipette to transfer the rinse to the SPE reservoir, using it to wash the walls of the reservoir. If using sample transfer lines, simply transfer this rinse from each sample container to its associated cartridge using vacuum. Allow the elution solvent to soak the SPE sorbent for 2 minutes before using vacuum to pull the elution solvent through the cartridge and into the collection tubes in a slow, dropwise manner.

3) Air dry the empty sample bottle after the rinse is transferred. Weigh the empty bottle with the cap on and subtract that from the weight of the bottle with sample, determined in Section 9.3.3, step 2.

4) Add 25 µL of concentrated acetic acid and 20 µL of NIS mix to each sample extract in its collection tube and vortex to mix. Transfer a portion of each extract into an autosampler vial for LC-MS/MS analysis. Cap the collection tubes containing the remaining extracts and store at 0 - 6 °C.

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9.3.6 Solid Sample (excluding tissues) Processing

Any solid sample received containing <50% solids (>50% moisture; >10 g target mass for 5 g dry weight) should be re-logged and prepared as a biosolid, using a target dry weight of 0.5 g. Any solid or biosolid sample received containing <5% solids (>95% moisture; >10 g target mass for 0.5 g dry weight) should be re-logged and prepared as a leachate sample, using no more than 100 mL of sample for extraction.

1) Mix the sample in its original jar. If it is impractical to mix the sample within its container, transfer the sample to a larger container. Mix the sample thoroughly, stirring from the bottom to the top and in a circular motion along the sides of the jar, breaking particles up by pressing against the side of the container. The homogenized sample should be even in color and have no separate layers. Store the homogenized material in its original container or in multiple smaller containers.

2) Determine the percent solids as per Section 9.3.2.

Note: The target sample weight for sediment or soil is 5 g dry weight. The target sample weight for biosolids is 0.5 g dry weight. Small amounts of reagent-free water used for method blanks (10% of sample weight or less) can be added to unusually dry samples. This is an option, not a requirement.

3) Check the LIMS system for the percent solids data associated with the samples to be prepared. Using the percent solids data and the calculation below, weigh out an aliquot of each solid sample, not dried, into a 50 mL polypropylene centrifuge tube. Sample mass should be within ±0.2 g of target mass for soil and sediment samples, and within ±0.02 g of target mass for biosolids samples. Sample aliquot should provide 5 g dry weight (Wi_{Dry} below) for soil and sediment or 0.5 g dry weight for biosolids. Because biosolid samples are analyzed with a 0.5 g sample mass, they must not be included in the same sample preparation batch as solid samples analyzed with 5 g sample masses. Any solid sample received containing <50% solids (>50% moisture; >10 g target mass for 5 g dry weight) should be re-logged and prepared as a biosolid, using a target dry weight of 0.5 g. Any solid or biosolid sample received containing <5% solids (>95% moisture; >10 g target mass for 0.5 g dry weight) should be re-logged and prepared as a leachate sample, using no more than 100 mL of sample for extraction.

$$Solid\ Sample\ Target\ Mass\ (g) = \frac{Wi_{Dry}\ (g)}{\%\ solids\ (decimal)}$$

4) Prepare batch QC samples using 5 g of reference solid wetted with 2.5 g of reagent water for the method blank and two LCSs (use 0.5 g of reference solid with 0.25 g of reagent water for biosolid extraction batches). The addition of reagent water to the sand provides a matrix closer in composition to real-world samples. Spike one LCS sample with native standard solution at 2x the LOQ (80 µL of STK-10X mix). This aliquot (LLLCS) will serve to verify the LOQ. Spike the other LCS sample at a concentration near the mid-level calibration point (40 µL of EPA-1633STK). This aliquot will serve as the traditional LCS.

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Note: If matrix spikes are required for a specific project, spike the field sample bottles designated for use as MS/MSD samples in the same manner as the LCS.

5) Spike 20 µL of EIS solution (Section 8.2.3) directly into each centrifuge tube containing the aliquoted field and QC samples. Vortex or shake the sample to disperse the standard and allow to equilibrate for approximately 30 minutes.

6) Add 15 mL of 0.3% methanolic ammonium hydroxide to each centrifuge tube. Vortex to disperse, then shake for 30 minutes on a variable speed mixing table. Centrifuge at 3000 rpm (~2000 RCF) for 10 minutes and transfer the supernatant to a clean, labeled 50 mL polypropylene centrifuge tube.

7) Add 15 mL of 0.3% methanolic ammonium hydroxide to the remaining solid sample in each centrifuge tube. Vortex to disperse, then shake for 30 minutes on a variable speed mixing table. Centrifuge at 3000 rpm (~2000 RCF) for 10 minutes and decant the supernatant from the second extraction into the centrifuge tube with the supernatant from the first extraction.

8) Dilute to approximately 40 mL with reagent water. A separate centrifuge tube marked at the 40 mL level may be kept for a visual reference to get the approximate volume. Samples containing excess water may yield extracts that are greater than 40 mL in volume; therefore, do not add water to these.

9) Check that the pH is 6.5 ± 0.5. If necessary, adjust pH with 50% formic acid or ammonium hydroxide (or with 5% formic acid and 3% aqueous ammonium hydroxide). The extract is now ready for solid phase extraction (SPE) and cleanup.

9.3.7 Solid Phase Extraction of Solid Samples

1) Pack clean silanized glass wool to half the height of a WAX SPE cartridge barrel; repeat for the total number of samples in the batch.

2) For each sample and QC aliquot, set up the vacuum manifold with one WAX SPE cartridge plus a reservoir adaptor and reservoir for each cartridge; label each reservoir with the associated sample ID. If using plastic transfer lines instead of reservoirs, ensure the connecting caps are snug in each cartridge and the transfer lines are placed within the appropriate sample; label each cartridge tube with the associated sample ID.

3) Pre-condition the cartridges by washing them with 15 mL of 1% methanolic ammonium hydroxide followed by 5 mL of 0.3M formic acid. Perform each rinse separately. Do not allow the WAX SPE to go dry. Discard the wash solvents.

4) Pour the sample into the reservoir (do not use a pipette), taking care to avoid splashing while loading; or, if using transfer lines, begin opening the stopcocks on the vacuum manifold. Adjust the vacuum/stopcocks to pass each sample through the cartridge at approximately 5-10 mL/min; discard the eluate. Retain the empty sample bottle for later rinsing (Section 9.3.8).

5) Rinse the walls of the reservoir with 5 mL reagent water twice, followed by 5 mL of 1:1 0.1M formic acid/methanol and pass those rinses through the cartridge using

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vacuum. If using sample transfer lines for loading, add the 3 rinses to the bottle and load through the transfer lines to the cartridge, one reagent at a time. Dry the cartridge by pulling air through for approximately 5 minutes. Discard the rinse solution.

6) After the WAX cartridges are sufficiently dry, rinse the GCB cartridges with 5 mL of 1% methanolic ammonium hydroxide; discard the rinsate. Do not allow the GCB to go completely dry.

7) Connect the outlet of the WAX cartridges to the inlet of the GCB cartridges to stack them on the manifold and allow for cleanup of the extract as part of elution. Ensure that the WAX cartridges are returned to their original locations on the manifold to avoid cross contamination. Continue to the elution steps in the next section.

9.3.8 Elution of Solid Sample Extracts

1) Place a clean collection tube in the manifold rack for each sample and QC aliquot, ensuring the extract delivery needles are not touching the walls of the tubes. Resume vacuum and ensure a proper seal is achieved. DO NOT add NIS to these collection tubes.

2) Rinse the inside of each sample's centrifuge tube using 5 mL of 1% methanolic ammonium hydroxide. Then pour the rinse from each bottle (or use a plastic transfer pipette) to transfer the rinse to the associated SPE reservoir, washing the walls of the reservoir. If using sample transfer lines, simply transfer this rinse from each sample container to its associated cartridge using vacuum. Allow the elution solvent to soak the SPE sorbent for 2 minutes, then use vacuum to pull the elution solvent through the cartridge and into the collection tubes in a slow, dropwise manner.

3) Add 25 µL of concentrated acetic acid and 20 µL of NIS mix to each sample extract in its collection tube and vortex to mix. Transfer a portion of each extract into an autosampler vial for LC-MS/MS analysis. Cap the collection tubes containing the remaining extracts and store at 0 - 6 °C.

9.3.9 Tissue Sample Processing

Prior to processing tissue samples, the laboratory must determine the exact tissue to be analyzed. Common requests for analysis of fish tissue include whole fish with the skin on, whole fish with the skin removed, edible fish fillets (filleted in the field or by the laboratory), specific organs, and other portions. Once the appropriate tissue has been determined, the samples must be prepared and homogenized.

Pace utilizes the Green Bay location for tissue homogenization, following ENV-SOP-GBAY-0129 (Sample Homogenization, Compositing, and Subsampling; specifically, Section 9.4).

1) For each sample, weigh a 2 g aliquot of homogenized tissue into a 50 mL polypropylene centrifuge tube. Reseal the container with the remaining homogenized portion of the sample and return it to frozen storage in case it needs to be used for reanalysis. The default sample weight for tissue is 2 g wet weight; however, a 1 g sample may be used. Higher sample weights are not recommended for this method.

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2) Prepare the batch QC samples using 2 g of reference tissue matrix for the method blank and two LCSs. Spike one LCS sample with native standard solutions at 2x the LOQ (80 µL of STK-10X mix). This aliquot (LLLCS) will serve to verify the LOQ. Spike the other LCS sample at a concentration near the mid-level calibration point (40 µL of EPA1633-STK). This aliquot will serve as the traditional LCS.

Note: If matrix spikes are required for a specific project, spike the field sample bottles designated for use as MS/MSD samples in the same manner as the LCS.

3) Spike 20 µL of EIS solution (Section 8.2.3) directly into each field and QC sample. Vortex and allow to equilibrate for approximately 30 minutes.

4) Add 15 mL of 0.05M KOH in methanol to each sample. Vortex to disperse the tissue then place tubes on a variable speed mixing table to shake for 1 hour. Centrifuge at 3000 rpm (~2000 RCF) for 10 minutes and collect the supernatant in a 125mL sample bottle.

5) Add 10 mL of acetonitrile to remaining tissue in the centrifuge tube, vortex to mix and disperse the tissue. Sonicate for 30 minutes. Centrifuge at 3000 rpm (~2000 RCF) for 10 minutes and collect the supernatant, adding it to the 125mL bottle containing the initial extract.

6) Dilute to approximately 75 mL with reagent water. A separate bottle marked at the 75 mL level may be used to get the approximate volume.

7) Check that the pH is 6.5 ± 0.5. If necessary, adjust pH with 50% formic acid or ammonium hydroxide (or with 5% formic acid and 3% aqueous ammonium hydroxide). The extract is now ready for solid phase extraction (SPE) and cleanup.

9.3.10 Solid Phase Extraction of Tissue Samples

1) Pack clean silanized glass wool to half the height of a WAX SPE cartridge barrel; repeat for the total number of samples in the batch.

2) For each sample and QC aliquot, set up the vacuum manifold with one WAX SPE cartridge plus a reservoir adaptor and reservoir for each cartridge; label each reservoir with the associated sample ID. If using plastic transfer lines instead of reservoirs, ensure the connecting caps are snug in each cartridge and the transfer lines are placed within the appropriate sample; label each cartridge tube with the associated sample ID.

3) Pre-condition the cartridges by washing them with 15 mL of 1% methanolic ammonium hydroxide followed by 5 mL of 0.3M formic acid. Perform each rinse separately. Do not allow the WAX SPE to go dry. Discard the wash solvents.

4) Pour the sample into the reservoir (do not use a pipette), taking care to avoid splashing while loading; or, if using transfer lines, begin opening the stopcocks on the vacuum manifold. Adjust the vacuum/stopcocks to pass each sample through the cartridge at approximately 5-10 mL/min; discard the eluate. Retain the empty sample bottle for later rinsing (Section 9.3.8).

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5) Rinse the walls of the reservoir with 5 mL reagent water twice, followed by 5 mL of 1:1 0.1M formic acid/methanol and pass those rinses through the cartridge using vacuum. If using sample transfer lines for loading, add the 3 rinses to the bottle and load through the transfer lines to the cartridge, one reagent at a time. Dry the cartridge by pulling air through for approximately 5 minutes. Discard the rinse solution.

6) After the WAX cartridges are sufficiently dry, rinse the GCB cartridges with 5 mL of 1% methanolic ammonium hydroxide; discard the rinsate. Do not allow the GCB to go completely dry.

7) Connect the outlet of the WAX cartridges to the inlet of the GCB cartridges to stack them on the manifold and allow for cleanup of the extract as part of elution. Ensure that the WAX cartridges are returned to their original locations on the manifold to avoid cross contamination. Continue to the elution steps in the next section.

9.3.11 Elution of Tissue Sample Extracts

1) Place a clean collection tube in the manifold rack for each sample and QC aliquot, ensuring the extract delivery needles are not touching the walls of the tubes. Resume vacuum and ensure a proper seal is achieved. DO NOT add NIS to these collection tubes.

2) Rinse the inside of each sample's centrifuge tube using 5 mL of 1% methanolic ammonium hydroxide. Then pour the rinse from each bottle (or use a plastic transfer pipette) to transfer the rinse to the associated SPE reservoir, washing the walls of the reservoir. If using sample transfer lines, simply transfer this rinse from each sample container to its associated cartridge using vacuum. Allow the elution solvent to soak the SPE sorbent for 2 minutes, then use vacuum to pull the elution solvent through the cartridge and into the collection tubes in a slow, dropwise manner.

3) Add 25 µL of concentrated acetic acid and 20 µL of NIS mix to each sample extract in its collection tube and vortex to mix. Transfer a portion of each extract into an autosampler vial for LC-MS/MS analysis. Cap the collection tubes containing the remaining extracts and store at 0 - 6 °C.

9.4 Analysis

9.4.1 Sequence Preparation

Analysis of sample extracts for PFAS by LC-MS/MS is performed running manufacturer's data acquisition software. The mass spectrometer is run with unit mass resolution in the multiple reaction monitoring (MRM) mode.

1) Perform mass calibration and mass calibration verification, establish the operating conditions, and perform an initial calibration prior to analyzing samples. Only after all performance criteria are met may blanks, MDLs, IDOC/LCS, and samples be analyzed.

2) Each day of analysis, the column must be thoroughly flushed with 100% Acetonitrile for at least 30 minutes to clear any accumulated impurities and interferences from the sample pathway and equilibrate the system. It is also good practice to open the purge valve(s) on the pumps for the first ~1 minute of flush time and/or use the "purge"

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function available as part of the pump functionality. Additionally, it is good practice to purge the autosampler injector flow path daily prior to analysis by using the "purge" function, if available. The column should then be equilibrated to the analysis starting conditions by flushing for approximately 15 mins with 50:50 Mobile Phase A: Mobile Phase B and finally approximately 15 mins with 80:20 Mobile Phase A: Mobile Phase B (acquisition starting conditions). Ensure that system pressure is stable.

3) Following any initial priming injections on days when a calibration is not needed, an ISC and an instrument blank will be analyzed to demonstrate system suitability and the absence of system contamination prior to sample analysis.

4) After acceptable ISC and IBLK results are confirmed, load and submit extracted samples for analysis, typically starting with batch QC with field samples following. A CCV and CCB must be analyzed after every 10 (or fewer) field samples.

9.4.2 Routine Analytical Sequence

After a successful initial calibration has been completed, samples may be analyzed; an example analytical sequence is provided below. The volume injected for samples and QCs must be identical to the volume used for calibration. Standards and sample extracts must be brought to room temperature and vortexed prior to aliquoting into an instrument vial to ensure homogeneity of the extract.

- ISC
- CCV
- Instrument Blank
- Method Blank
- LLLCS
- LCS
- Samples (10 or fewer)
- CCV
- CCB
- Samples (10 or fewer)
- CCV

If the results are acceptable, the closing CCV analysis may be used as the opening solution for the next analytical sequence.

If the response exceeds the calibration range for any sample, extracts are diluted as per Section 9.4.3 to bring all target responses within the calibration range.

Note: If the analytes that exceed the calibration range in the original analysis are known to not be of concern for the specific project (e.g., are not listed in a discharge permit), then the laboratory may consult with the client regarding the possibility of reporting that sample from the undiluted analysis.

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9.4.3 Sample Dilutions

If the measured concentration for any compound exceeds the calibration range of the system, dilute an aliquot of the sample extract with the IBLK mix solution by a factor no greater than 10x, refortify the NIS compounds to initial concentration, and analyze the diluted extract. If the responses for each applicable EIS in the diluted extract meet the S/N and retention time requirements in Section 10.1.1, and the EIS recoveries from the analysis of the diluted extract, corrected for the dilution, are within the limits presented in Table 10, 11 or 12 (according to sample matrix), then the compounds associated with those EISs may be quantified. The EIS recoveries, compound concentrations, detection limits, and LOQs are adjusted to account for the dilution.

If the EIS responses in the diluted extract do not meet the S/N and retention time requirements listed in Section 10.1.1, then the compound cannot be measured reliably in the diluted extract. In such cases, subsample a smaller aliquot of any affected aqueous sample and dilute it to 500 mL with reagent water and re-extract the sample. For solid sample matrices, prepare a smaller aliquot of soil, biosolid, sediment, or tissue and re-extract the sample. The reduced sample volume (or mass) chosen for the re-extraction should reflect the dilution applied to the original extract (i.e., if the original aqueous sample extract was analyzed at a 10X dilution, 50 mL should be subsampled for the re-extraction). See Section 9.3.1 for more guidance. The reported compound concentrations, detection limits, and LOQs are adjusted to account for the reduced sample volume (or mass) that is extracted.

If the recovery of any isotopically labeled compound is outside of the acceptance limits (Appendix B) in the original, undiluted analysis, a diluted aqueous sample or smaller aliquot (for solids and tissue) should be prepared and analyzed.

10.0 DATA ANALYSIS & CALCULATIONS

10.1 Data Analysis

10.1.1 Qualitative Identification

A native, EIS, or NIS compound is positively identified in a standard, blank, sample, or QC sample when all criteria in Sections 10.1.1.1 through 10.1.1.3 are met.

10.1.1.1 Signal-to-Noise Ratio (S/N)

Peak responses of the quantitation and confirmation ions must be at least three times the background noise level (S/N 3:1). The quantitation ion must have a S/N ≥ 10:1 if there is no confirmation ion. If the S/N ratio is not met in a standard or QC sample due to high background noise, the laboratory must correct the issue (e.g., perform instrument troubleshooting). If the S/N ratio is not met in a blank or sample, then the analyte is to be considered a non-detect.

10.1.1.2 RT Criteria

Target analyte, EIS analyte, and NIS analyte RTs must fall within 0.4 minutes of the predicted retention times from the midpoint standard of the ICAL or initial daily CCV, whichever was used to establish the RT window position for the

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analytical batch. The retention time window used must be of sufficient width to detect earlier-eluting branched isomers. For all method analytes with exact corresponding isotopically labeled analogs, method analytes must elute within 0.1 minutes of the associated EIS.

10.1.1.3 Ion Ratio Criteria

For any reported compound detection, the ratio of the total (branched and linear isomer) quantification ion response to the total (branched and linear isomer) confirmation ion response – referred to as the Ion Ratio – must fall within ± 50% of the ratio observed in the mid-point ICAL standard. The ion ratio requirement does not apply for PFBA, PFPeA, NMeFOSE, NEtFOSE, PFMPA, and PFMBA because suitable secondary transitions are unavailable (not detectable or inadequate S/N).

10.1.2 Manual Integration

Manual integration is sometimes necessary to correct inaccurate automated integrations but must never be used to meet QC criteria or to substitute for proper instrument maintenance and/or method set-up. To assure that all manual integrations are justified and proper all manual integrations must be performed, documented, reviewed, and approved in accordance with corporate SOP ENV-SOP-CORQ-0006, *Manual Integration*. Refer to this SOP for guidance on manual integration techniques and required procedures.

10.1.2.1 Branched Isomer Integration

The response of all isomers in the quantitative standards should be used to define integration parameters and ion ratios. In samples, the total integrated response should include the branched isomer peaks that have been identified in the quantitative standard, if present. For compounds with identified branched and linear isomer peaks, the reported concentration is the sum of all isomers. If standards (either quantitative or qualitative) containing a mix of isomers are not available for purchase for a particular compound, only the linear isomer can be identified and quantitated in samples.

10.1.2.2 Qualification

If the field sample result does not meet all criteria stated in Section 10.1.1, and all sample preparation avenues (e.g., extract cleanup, sample dilution, etc.) have been exhausted, the result may only be reported with a data qualifier alerting the data user that the result could not be confirmed because it did not meet the method-required criteria and therefore should be considered an estimated value. If the criteria listed above are not met for the standards, the laboratory must stop analysis of samples and correct the issue.

10.2 Calculations

Refer to laboratory SOP (ENV-SOP-WEST-0124, Common Laboratory Calculations), or however named, for equations used to perform common calculations.

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10.2.1 ICAL Relative Response (RR) and Response Factor (RF)

The response ratio (RR) for each native compound calibrated by isotope dilution is calculated according to the equation below, separately for each of the calibration standards, using the areas of the quantification ions shown in Table 4. RR is used for the 24 compounds measured by true isotope dilution quantification.

$$RR = \frac{Area_t M_{EIS}}{Area_{EIS} M_t}$$

Where:

$Area_t$ = Measured area of the quantitation ion for the target analyte.

$Area_{EIS}$ = Measured area of the quantitation ion for the corresponding labeled PFAS used as the EIS in the calibration standards.

M_{EIS} = Concentration of the isotopically labeled PFAS uses as the EIS in the calibration standards (ng/L)

M_t = Concentration of the target analyte in the calibration standard (ng/L)

Similarly, the response factor (RF) for each native compound calibrated by extracted internal standard is calculated according to the equation below. RF is used for the 16 compounds measured by extracted internal standard quantification.

$$RF = \frac{Area_t M_{EIS}}{Area_{EIS} M_t}$$

Where:

$Area_t$ = Measured area of the quantitation ion for the target analyte.

$Area_{EIS}$ = Measured area of the quantitation ion for the corresponding labeled PFAS used as the EIS in the calibration standards.

M_{EIS} = Concentration of the isotopically labeled PFAS uses as the EIS in the calibration standards (ng/L)

M_t = Concentration of the target analyte in the calibration standard (ng/L)

A response factor (RF_S) is calculated for each EIS compound in the calibration standard using the equation below. RF_S is used for the 24 isotopically labeled compounds measured by non-extracted internal standard quantification.

$$RF_S = \frac{Area_{EIS} M_{NIS}}{Area_{NIS} M_{EIS}}$$

Where:

$Area_{EIS}$ = Measured area of the quantitation ion for the EIS compound added to the sample before extraction.

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$Area_{NIS}$ = Measured area of the quantitation ion for the NIS compound in the calibration standard.

M_{NIS} = Concentration of the NIS compound in the calibration standard (ng/L).

M_{EIS} = Concentration of the EIS compound in the calibration standard (ng/L).

10.2.2 Target Analyte Concentration

Concentrations of the target analytes are determined with respect to the extracted internal standard (EIS) which is added to the sample prior to extraction (see Table 4). Other equations may be used if the laboratory demonstrates that those equations produce the same numerical result as produced by the equation below.

$$\boldsymbol{Concentration\ (ng/Lor ng/g) = \frac{Area_N M_{EIS}}{Area_{EIS}(\overline{RR}\ or\ \overline{RF})}\ x\ DF\ x \frac{Vf}{Vi}}$$

Where:

$Area_N$ = The measured area of the quantitation ion for the native (unlabeled) PFAS.

$Area_{EIS}$ = The measured area of the quantitation ion for the EIS.

M_{EIS} = The expected concentration of the EIS in the extract (ng/L)

$\boldsymbol{\overline{RR}}$ = Average response ratio used to quantify target compounds by the isotope dilution method.

$\boldsymbol{\overline{RF}}$ = Average response ratio used to quantify target compounds by the extracted internal standard method.

DF = Dilution Factor. If no extract dilution was performed, then DF=1.

Vf = Final extract volume (L)

Vi = Initial sample volume (L) or weight (g)

10.2.3 EIS Concentration

The EIS compounds are quantitated with respect to an NIS, as shown in Table 4, using the response ratios or response factors from the most recent initial calibration. Other equations may be used if the laboratory demonstrates that those equations produce the same numerical result as produced by the equation below.

$$Concentration\ (ng/L\ or\ ng/g) = \frac{Area_{EIS} M_{NIS}}{Area_{NIS}\overline{RF_S}}\ x\ DF\ x \frac{Vf}{Vi}$$

Where:

$Area_{EIS}$ = The measured area of the quantitation ion for the EIS.

$Area_{NIS}$ = The measured area of the quantitation ion for the associated NIS.

M_{NIS} = The expected concentration of the NIS in the extract (ng/L)

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$\overline{RF_S}$ = Average response factor used to quantify the EIS compound by the non-extracted internal standard method.

DF = Dilution Factor. If no extract dilution was performed, then DF=1.

Vf = Final extract volume (L)

Vi = Initial sample volume (L) or weight (g)

10.2.4 Relative Error (%RE)

$$\%\ Relative\ Error = \left(\frac{x'i - xi}{xi}\right) x\ 100$$

Where:

xi = True value of the calibration standard

x'i = Measured concentration of the calibration standard

10.2.5 Percent Relative Standard Deviation

$$\%\ Relative\ Standard\ Deviation = \left(\frac{S}{\bar{\bar{x}}}\right) x\ 100$$

Where:

S = Standard Deviation

X = Mean

10.2.6 Standard Deviation

$$S = \left(\frac{\sum (x_i - \bar{x})^2}{(n-1)}\right)$$

Where:

S = standard deviation

n = size of the population

x_i = each value of the population

$\bar{x}$ = population mean

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10.2.7 Mean

$$\bar{x} = \frac{\left(\sum_{i=1}^{n} x_i\right)}{n}$$

Where:

$\bar{x}$ = population mean

x_i = each value of the population

n = number of values in the population

10.3 Reporting

All results for aqueous samples will be reported in ng/L. All results for solid samples will be reported in ng/g, on a dry-weight basis, and the percent solids for each sample will be reported separately. All results for tissue samples will be reported in ng/g, on a wet-weight basis. All QC data will be reported with the sample results. See Appendix A for specific reporting limits in all matrices.

Unless specified otherwise by a regulatory authority or in a discharge permit, results for analytes that meet the identification criteria are reported down to the concentration of the LOQ established by the laboratory.

Results for any analyte found in a sample or extract that has been diluted will be reported at the least dilute level for which the measured concentration is within the calibration range (e.g., above the LOQ for the analyte and below the highest calibration standard) and in which isotopically labeled compound recoveries are within their respective QC acceptance criteria. This may require reporting results for some analytes from different analyses.

Recoveries of all associated EIS compounds will be reported for all field samples and QC Quality Control & Method Performance

10.4 Quality Control

Prepare and analyze the following QC samples with each batch of samples. Refer to Appendix B for acceptance criteria and required corrective action(s).

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QC Check	Acronym	Frequency
Method Blank	MB	1 per batch of 20 or fewer samples.
Laboratory Control Sample	LCS	1 per batch of 20 or fewer samples.
Low Level Laboratory Control Sample	LLLCS	1 per batch of 20 or fewer samples.
Matrix Spike	MS	1 pair per batch of 20 or fewer samples (if required/requested)
MS Duplicate	MSD	
Sample Duplicate	DUP	1 per AFFF or F3 sample.
Extracted Internal Standard	EIS	All CAL standards, batch QC and field samples.
Non-extracted Internal Standard	NIS	All CAL standards, batch QC and field samples.

The minimum quality control requirements of this method consist of an initial demonstration of laboratory capability, analysis of samples spiked with isotopically labeled compounds to evaluate and document data quality, and analysis of standards and blanks as tests of continued performance. Laboratory performance is compared to established performance criteria to determine if the results of analyses meet the performance characteristics of the method.

If the method is to be applied to a sample matrix other than water (e.g., soils, biosolids, tissue), the appropriate alternative reference matrix is substituted for the reagent water matrix in all performance tests.

The laboratory must make an initial demonstration of the ability to generate acceptable precision and recovery with this method. This demonstration is described in Section 11.3.2.

Analyses of method blanks (MBs) are required on an on-going basis to demonstrate the extent of background contamination in any reagents or equipment used to prepare and analyze field samples. The procedures and criteria for analyses of MBs are described in Section 11.1.1.

The laboratory must spike all samples with isotopically labeled compounds to monitor method performance. These evaluations are described in Sections 11.1.4 and 11.1.5. When results of these spikes indicate atypical method performance for samples, the samples are diluted to evaluate whether the performance issue is caused by the sample matrix. Procedures for dilution are given in Section 9.4.3.

The laboratory must, on an ongoing basis, demonstrate that the analytical system is in control through calibration verification (CCV) and the analysis of blanks and ongoing precision and recovery standards spiked at low (LLLCS) and mid-level concentrations (LCS). These procedures are given in Sections 9.2.4.5, 11.1.1 and 11.1.2.

10.4.1 Method Blank (MB)

A method blank is analyzed with each extraction batch to demonstrate freedom from contamination. The matrix for the method blank must be similar to the sample matrix for the batch (e.g., reagent water blank, solids matrix blank, or tissue blank [Section 7.3]).

Analyze the extract of the method blank aliquot before the analysis of the LCSs.

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If any PFAS is found in the MB 1) at a concentration greater than the LOQ for the analyte, 2) at a concentration greater than one-third the regulatory compliance limit, or 3) at a concentration greater than one-tenth the concentration in a sample in the extraction batch, whichever is greatest, analysis of samples must be halted, and the problem corrected. Other project-specific requirements may apply; therefore, the laboratory may adopt more stringent acceptance limits for the method blank at their discretion. If the contamination is traceable to the extraction batch, samples affected by the blank must be re-extracted and analyzed along with a new MB and LCS/LLLCS, provided enough sample volume is available and the samples are still within holding time. Reanalysis or re-extraction is not required if the samples are not impacted. Samples are not impacted when the MB detection is not present in the sample, or the sample concentration is ≥10x the concentration of the detection in the MB.

If the new blank also exhibits contamination and additional volume of the associated sample(s) is not available for re-extraction and analysis, the laboratory must document and report the failures (e.g., as qualifiers on results), unless the failures are not required to be reported as determined by the regulatory/control authority.

10.4.2 Laboratory Control Sample (LCS) / Low-Level LCS (LLLCS)

Analyze the extract of the LCS and LLLCS to ensure the analytical process is under control.

Compute the percent recovery of the native compounds by the appropriate quantification method depending on the compound. Compute the percent recovery of each isotopically labeled compound by the non-extracted internal standard quantitation method.

For the target analytes and EIS compounds, compare the recovery to the LCS and LLLCS limits given in Tables 7 through 10 (or 12). LCS, LLLCS, and EIS results must meet the acceptance criteria in these tables. If all compounds meet the acceptance criteria, system performance is acceptable, and analysis of blanks and aqueous samples may proceed. If, however, any individual concentration falls outside of the given range, the extraction/concentration processes are not being performed properly for that compound. In this event correct the problem, re-extract all affected samples, including any QC samples, and repeat the analysis. Samples are unaffected if the LCS or LLLCS recovery is above the acceptance criteria and the sample is ND for the failing compound.

10.4.3 Matrix Spike (MS)

Matrix spikes generally are not required for methods that employ isotope dilution quantification because deleterious effects of the matrix should be evident in the recoveries of the EIS compounds spiked into every sample. The analysis of matrix spike samples may help diagnose the potential impact of matrix interferences for specific target analytes or sample matrices. See Appendix E for MS/MSD, MS/DUP sample selection guidance.

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10.4.4 Extracted Internal Standard (EIS)

To assess method performance on the sample matrix, the laboratory must spike all samples with the EIS solution. Analyze each sample according to the procedures in this SOP. Compute the percent recovery of the EIS compound concentration using the NIS quantitation method and the equation in Section 10.2.3.

The recovery of each EIS compound in an aqueous sample must be within the limits in Table 10, which are the required QC acceptance limits for aqueous samples, including landfill leachates. The recovery of each EIS compound in soil, sediment, or biosolid samples must be within the limits in Table 11. The recovery of each EIS compound in tissue samples must be within the limits in Table 12. The limits presented in Tables 10, 11, and 12 are the required QC acceptance limits for these matrices derived from the multi-laboratory validation study. If the recovery of any EIS falls outside of these limits, method performance is unacceptable for that EIS in that sample. Additional cleanup procedures or limited dilution of the sample extract may be employed to attempt to bring the EIS recovery within the acceptance normal range.

If the recovery cannot be brought within the acceptance limits after extract dilution or additional cleanup procedures have been employed, then the laboratory must take a smaller aliquot of any affected aqueous sample, dilute it to 500 mL with reagent water and prepare and analyze the diluted sample, or must prepare and analyze a smaller aliquot of soil, sediment, biosolid, or tissue sample, per Section 9.4.3.

10.4.5 Non-extracted Internal Standard (NIS)

To assess method performance, the laboratory must spike all sample extracts with the NIS solution. Analyze each sample extract according to the procedures in this SOP. Percent recovery of the NIS compound is calculated by comparing the measured response in each analysis to the average response of the same compound measured in the ICAL.

Calculate the ratio of the NIS peak areas from the QC and field samples relative to the mean area of the corresponding NIS in the most recent initial calibration to check for possible bad injections of NIS solution or loss of instrument sensitivity.

The NIS areas in the field samples and QC samples must be within 50 to 200% of the mean area of the corresponding NIS in the most recent initial calibration (i.e., within a factor of 2). If the areas are low for all the field samples and QC samples in the batch, it suggests a loss of instrument sensitivity, while low areas in only some field or QC samples suggests a possible bad injection.

10.5 Instrument QC

Perform the following checks to verify instrument performance. Refer to Appendix B for acceptance criteria and required corrective action.

Instrument Check	Acronym	Frequency
Mass Calibration		Annually and on as-needed basis
Mass Calibration Verification		After mass calibration

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Instrument Check	Acronym	Frequency
Initial Calibration	ICAL	Prior to analysis, and on as-needed basis
Initial Calibration Verification	ICV	Following each ICAL
Instrument Blank	IBLK/ICB	Daily prior to analysis and after high standards
Instrument Sensitivity Check	ISC	Daily prior to analysis
Continuing Calibration Verification	CCV	At the beginning (ISC) and every 10 samples
Continuing Calibration Blank	CCB	After each bracketing CCV
RT Window	RTW	During ICAL and at the beginning of each analytical sequence

10.6 Method Performance

10.6.1 Method Validation

Refer to corporate SOP ENV-SOP-CORQ-0011, *Method Validation and Instrument Verification*, for general requirements and procedures for method validation.

Establish Detection Limit (DL) and limits of quantitation (LOQ) at initial method set up and verify the DL and LOQ on an on-going basis thereafter. Refer to corporate policy and/or SOP for DL and LOQ requirements and procedures.

10.6.2 Demonstration of Capability (DOC)

Refer to laboratory SOP ENV-SOP-WEST-0122 Demonstration of Capability, or however named, for information regarding the laboratory's procedures for initial and ongoing Demonstration of Capability.

Prior to unsupervised (independent) work on any client sample, analysts that prepare or analyze samples must have successful initial demonstration of capability (IDOC) and must successfully demonstrate on-going proficiency on an annual basis (see below for details). Successful means the initial or on-going DOC met criteria, documentation of the DOC is complete, and the DOC record is in the employee’s training file.

Each DOC requires the extraction and analysis of four aliquots of the reference matrix type to be tested, prepared in the same way as the mid-level LCS. At least one method blank, matching the matrix being analyzed, must be prepared with the DOC batch. If more than one MB was prepared and analyzed with the DOC batch, all blank results must be reported. All sample processing steps that are to be used for processing samples, including preparation and extraction, must be included in this test.

Using the results of the four analyses, compute the average percent recovery (%REC) and the relative standard deviation (RSD) of the concentration of each target compound. There are no mean or RSD criteria for EIS compounds in the DOC; %REC of each DOC sample should meet the criteria in Appendix B, Tables 10, 11, or 12, depending on the matrix.

For each target compound, compare RSD and %REC to the corresponding limits for initial precision and recovery in Appendix B, Tables 7, 8, or 9, depending on the matrix.

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If RSD and %REC for all compounds meet the acceptance criteria, system performance is acceptable, and analysis of blanks and samples may begin. If, however, any individual RSD exceeds the precision limit or any individual %REC falls outside the range for recovery, system performance is unacceptable for that compound. Correct the problem and repeat the test.

11.0 Data Review & Corrective Action

11.1 Data Review

The data review process of Pace® Analytical Services includes a series of checks performed at different stages of the process by different people to ensure that SOPs were followed, the analytical record is complete and properly documented, QC criteria were met, proper corrective actions were taken for QC failure and other nonconformance(s), and test results are reported with proper qualification, when necessary.

The review and checks that are performed by the employee performing the task is called primary review.

All data and test results are also peer reviewed. This process, known as secondary review, is performed to verify SOPs were followed, that calibration, instrument performance, and QC criteria were met and/or proper corrective actions were taken, qualitative ID and quantitative measurement is accurate, all manual integrations are justified, documented, and approved in accordance with the Pace® Analytical Services SOP for manual integration, calculations are correct, the analytical record is complete and traceable, and that results are properly qualified.

Lastly, a third-level review, called a completeness check, is performed by reporting or project management staff to verify the test report is complete.

Refer to laboratory SWI ENV-SWI-WEST-0087 SVOA Data Review Work Instructions for specific instructions and requirements for each step of the data review process.

11.2 Corrective Action

Corrective action is required when QC or sample results are not within acceptance criteria.

Refer to Appendix B for a complete summary of QC, acceptance criteria, and recommended corrective actions for QC associated with this test method.

If corrective action is not taken or was not successful, the decision/outcome must be documented in the analytical record. The primary analyst has primary responsibility for taking corrective action when QA/QC criteria are not met. Secondary data reviewers must verify that appropriate action was taken and/or that results reported with QC failure are properly qualified.

Corrective action is also required when carryover is suspected and when results are over range. Samples analyzed after a high concentration sample must be checked for carryover and reanalyzed if carryover is suspected. Carryover is usually indicated by low concentration detects of the analyte in successive samples analyzed after the high concentration sample.

Sample results at concentrations above the upper limit of quantitation must be diluted and reanalyzed. The result in the diluted samples should be within the working concentration range

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of the instrument calibration. If dilution is not performed, any result reported above the upper range is considered a qualitative measurement and must be qualified as an estimated value.

12.0 POLLUTION PREVENTION & WASTE MANAGEMENT

Refer to laboratory guide ENV-GUI-WEST-0020 Hazardous Waste Management and Disposal, or however named, for waste handling and management practices pertaining to the waste streams created at this facility.

Pace® proactively seeks ways to minimize waste generated during work processes. Some examples of pollution prevention include but are not limited to reduced solvent extraction, solvent capture, use of reusable cycletainers for solvent management, and real-time purchasing.

The EPA requires that laboratory waste management practices comply with all applicable federal and state laws and regulations. Excess reagents, samples, and method process wastes are characterized and disposed of in an acceptable manner in accordance with the Pace® Chemical Hygiene Plan / Safety Manual. Refer to this manual for these procedures.

13.0 MODIFICATIONS

The procedures in this SOP have been modified from the reference test method as follows:

Modification	Section of Reference Method Modified	Justification for Modification	Validation of Modification
Updated EIS quantitation matching for select compounds (PFMPA, 7:3FTCA, ADONA, 9Cl-PF3ONS, 11Cl-PF3OUdS)	Section 20, Table 10	Improved performance, more appropriate correlation	MDL, IDOC, PT
Updated product ion used for measurement of 13C4-PFOA from m/z 172 to m/z 372	Section 20, Table 10	Match ion transition used for EIS 13C8-PFOA and native PFOA	MDL, IDOC, PT
Increased SPE sorbent bed to 250mg, tube size to 20mL	Section 6.7.1	Wider cartridge improves sample loading, reduces chances of clogs	MDL, IDOC, PT
Increased allowable sample loading rate to 5-10 mL/min	Section 12.1.4	Reduced Sample processing time	MDL, IDOC, PT
Omit TSS for aqueous samples	Section 11.1 (11.1.1.5), 11.2.4	Reduced sample processing time	MDL, IDOC, PT
Solid matrix extraction: reduced liquid-solid shake/decant steps to 2; omitted concentration step	Section 11.3 (11.3.4, 11.3.6, 11.3.9)	Improved performance & reduced sample processing time	MDL, IDOC, PT
GCB cartridges: eliminated dGCB + syringe filtration	Section 11.3.7, 11.4.7, 12.1, 12.2.3, 12.2.4, 12.3.3, 12.4.3	Improved performance, reduced sample processing time, & ease of use	MDL, IDOC, PT

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Modification	Section of Reference Method Modified	Justification for Modification	Validation of Modification
Tissue matrix extraction: reduced liquid-solid shake/decant steps to 2; reduced shake time; omitted concentration step	Section 11.4.4, 11.4.6, 11.4.8	Improved performance & reduced sample processing time	MDL, IDOC, PT
Clearly defined the characteristics used to distinguish Aqueous vs. Biosolid vs. Solid matrices	n/a	Increased clarity in process decision making, improved first-run performance	MDL, IDOC, PT

When applicable, comparability and/or equivalency studies necessary to validate the modification as required per corporate SOP ENV-SOP-CORQ-0011, *Method Validation and Instrument Verification*, are retained by local quality personnel for historical reference.

14.0 RESPONSIBILITIES

- PAS employees that perform any part this procedure in their work activities must have a signed Read and Acknowledgement Statement (R&A) in their training file for the version(s) of the SOP that were in effect during the time the employee performed the activity.
- PAS supervisors and managers, however named, are responsible for training employees on the procedures in this SOP, implementing the SOP in the work area, and monitoring on-going adherence to the SOP in the work area(s) they oversee.
- PAS employees are responsible for following the procedures in this SOP. Unauthorized deviations or departures from this SOP are not allowed except with documented approval from the local QM and only when those deviations do not violate the Pace® Code of Ethics or Professional Conduct (COR-POL-0004) or associated policy and procedure(s). Hand-edits or manual changes to the SOP are not permitted. If a change is desired or necessary, Pace® employees must follow the procedures for document revision specified in corporate SOPs ENV-SOP-CORQ-0015, *Document Management* and ENV-SOP-CORQ-0016, *SOP for Creation of SOP and SWI.*

15.0 ATTACHMENTS

- Appendix A: Routine Analyte Limits (DL, LOQ), Analytical Parameters, and Calibration
- Appendix B: QC Summary & Corrective Action; Table: Method Acceptance Criteria
- Appendix C: State/Program Specific Requirements
- Appendix D: Sample Pre-screening Instructions
- Appendix E: Aqueous Sample Subsampling Instructions
- Appendix F: MS/MSD, MS/DUP Selection Protocols
- Appendix G: Aqueous Sample Management Decision Guide
- Appendix H: Aqueous Sample Centrifugation Protocol

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- Appendix I: Separation and Analysis of Liquid-Solid Biphasic Matrices
- Appendix J: TCLP/SPLP by 1633
- Appendix K: Wipe Analysis by 1633
- Appendix L: Articles of Commerce Analysis via Cryomill Processing
- Appendix M: Procedure for Total Oxidizable Precursors (TOP)

16.0 REFERENCES

- ENV-POL-CORQ-0005, *Acceptable Calibration Practices*, current version.
- ENV-SOP-CORQ-0006, *Manual Integration*, current version.
- ENV-SOP-CORQ-0011, *Method Validation and Instrument Verification*, current version.
- ENV-SOP-CORQ-0015, *Document Management*, current version.
- ENV-SOP-CORQ-0016, *Standard Operating Procedures and Standard Work Instructions,* current version.
- COR-POL-0004, *Code of Ethics and Professional Conduct*, current version.
- COR-MAN-001, *Pace® Safety Manua*l, current version.
- ENV-MAN-WEST-0001, *Quality Manual*, current version.
- TNI Standard, “Volume 1 Management and Technical Requirements for Laboratories Performing Environmental Analysis”, current version.
- “Working with Carcinogens,” Department of Health, Education, & Welfare, Public Health Service, Centers for Disease Control, NIOSH, Publication 77-206, August 1977, NTIS PB-277256.
- “OSHA Safety and Health Standards, General Industry,” OSHA 2206, 29 CFR 1910.
- “Safety in Academic Chemistry Laboratories,” ACS Committee on Chemical Safety, 1979.
- “Standard Methods for the Examination of Water and Wastewater,” 18th edition and later revisions, American Public Health Association, 1015 15th St, NW, Washington, DC 20005, 1-35: Section 1090 (Safety), 1992.
- “Standard Practice for Sampling Water,” ASTM Annual Book of Standards, ASTM, 1916 Race Street, Philadelphia, PA 19103-1187, 1980.
- “Handbook of Analytical Quality Control in Water and Wastewater Laboratories,” USEPA EMSL, Cincinnati, OH 45268, EPA 600/4-79-019, April 1979.
- “Less is Better: Laboratory Chemical Management for Waste Reduction,” American Chemical Society, 1993. Available from the American Chemical Society's Department of Government Relations and Science Policy, 1155 16th Street NW, Washington, DC 20036.
- “Environmental Management Guide for Small Laboratories,” USEPA, Small Business Division, Washington DC, EPA 233-B-00-001, May 2000.

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- SERDP. Single-Laboratory Validation Study of PFAS by Isotope Dilution LC-MS/MS. ER19-1409. January 26, 2022.
- Woudneh, Million B., Bharat Chandramouli, Coreen Hamilton, Richard Grace, 2019, "Effects of Sample Storage on the Quantitative Determination of 29 PFAS: Observation of Analyte Interconversions during Storage", Environmental Science and Technology 53(21): 12576-12585.
- EPA. Method 1633, Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS. January 2024.
- Standard Method for the Examination of Water and Wastewater, 23rd Edition, 2017 – Total, Fixed, and Volatile Solids in Solid and Semisolid Samples, Method 2540.

17.0 REVISION HISTORY

Revisions Made from Prior Version

Section	Description of Change
	N/A: new document

Document Succession: This version replaces the following document(s):

Document Number	Version	Document Title	Effective Date:
N/A	N/A	N/A	N/A

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Appendix A: Routine Analyte Limits (DL, LOQ), Analytical Parameters, and Calibration

DL and LOQ are always adjusted to account for actual amounts used and for dilution. Values listed are as of effective date of this SOP. DL and LOQ are subject to change. Contact quality personnel for current information. See Table 4 below for more information regarding analyte detection and quantitation.

Table 1: Standard Analyte List – Aqueous and Landfill Leachate Matrices

Analyte Abbreviation	CAS #	Aqueous (ng/L)		Leachate (ng/L)	
		DL	LOQ	DL	LOQ
PFBA	375-73-5	0.527	6.4	2.64	32
PFPeA	2706-91-4	0.359	3.2	1.79	16
PFHxA	355-46-4	0.245	1.6	1.22	8
PFHpA	375-92-8	0.238	1.6	1.19	8
PFOA	1763-23-1	0.263	1.6	1.31	8
PFNA	68259-12-1	0.266	1.6	1.33	8
PFDA	335-77-3	0.210	1.6	1.05	8
PFUnA	79780-39-5	0.178	1.6	0.892	8
PFDoA	375-73-5	0.214	1.6	1.07	8
PFTrDA	2706-91-4	0.187	1.6	0.934	8
PFTeDA	355-46-4	0.160	1.6	0.801	8
PFBS	375-73-5	0.402	1.6	2.01	8
PFPeS	2706-91-4	0.206	1.6	1.03	8
PFHxS	355-46-4	0.133	1.6	0.665	8
PFHpS	375-92-8	0.201	1.6	1.00	8
PFOS	1763-23-1	0.264	1.6	1.32	8
PFNS	68259-12-1	0.203	1.6	1.02	8
PFDS	335-77-3	0.140	1.6	0.699	8
PFDoS	79780-39-5	0.242	1.6	1.21	8
4:2 FTS	757124-72-4	0.910	6.4	4.55	32
6:2 FTS	27619-97-2	4.82	6.4	24.1	32
8:2 FTS	39108-34-4	1.22	6.4	6.11	32
PFOSA	754-91-6	0.097	1.6	.484	8
NMeFOSA	31506-32-8	0.226	1.6	1.13	8
NEtFOSA	4151-50-2	0.351	1.6	1.76	8

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Analyte Abbreviation	CAS #	Aqueous (ng/L)		Leachate (ng/L)	
		DL	LOQ	DL	LOQ
NMeFOSAA	2355-31-9	0.483	1.6	2.41	8
NEtFOSAA	2991-50-6	0.478	1.6	2.39	8
NMeFOSE	24448-09-7	1.30	16	6.52	80
NEtFOSE	1691-99-2	1.10	16	5.50	80
HFPO-DA	13252-13-6	1.60	6.4	8.02	32
ADONA	919005-14-4	0.376	6.4	1.88	32
PFMPA	377-73-1	0.244	3.2	1.22	16
PFMBA	863090-89-5	0.360	3.2	1.80	16
NFDHA	151772-58-6	0.541	3.2	2.71	16
9Cl-PF3ONS	756426-58-1	0.442	6.4	2.21	32
11Cl-PF3OUdS	763051-92-9	0.447	6.4	2.23	32
PFEESA	113507-82-7	0.330	3.2	1.65	16
3:3 FTCA	356-02-5	0.535	8	2.68	40
5:3 FTCA	914637-49-3	4.26	40	21.3	200
7:3 FTCA	812-70-4	3.18	40	15.9	200

Table 2: Standard Analyte List – Solid and Biosolid Matrices

Analyte Abbreviation	CAS #	Solid (ng/g)		Biosolid (ng/g)	
		DL	LOQ	DL	LOQ
PFBA	375-73-5	0.028	0.8	0.28	8
PFPeA	2706-91-4	0.038	0.4	0.38	4
PFHxA	355-46-4	0.016	0.2	0.16	2
PFHpA	375-92-8	0.012	0.2	0.12	2
PFOA	1763-23-1	0.026	0.2	0.26	2
PFNA	68259-12-1	0.012	0.2	0.12	2
PFDA	335-77-3	0.035	0.2	0.35	2
PFUnA	79780-39-5	0.013	0.2	0.13	2
PFDoA	375-73-5	0.021	0.2	0.21	2
PFTrDA	2706-91-4	0.016	0.2	0.16	2
PFTeDA	355-46-4	0.024	0.2	0.24	2
PFBS	375-73-5	0.020	0.2	0.20	2

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Analyte Abbreviation	CAS #	Solid (ng/g)		Biosolid (ng/g)	
		DL	LOQ	DL	LOQ
PFPeS	2706-91-4	0.027	0.2	0.27	2
PFHxS	355-46-4	0.020	0.2	0.20	2
PFHpS	375-92-8	0.045	0.2	0.45	2
PFOS	1763-23-1	0.031	0.2	0.31	2
PFNS	68259-12-1	0.029	0.2	0.29	2
PFDS	335-77-3	0.015	0.2	0.15	2
PFDoS	79780-39-5	0.022	0.2	0.22	2
4:2 FTS	757124-72-4	0.078	0.8	0.78	8
6:2 FTS	27619-97-2	0.148	0.8	1.48	8
8:2 FTS	39108-34-4	0.259	0.8	2.59	8
PFOSA	754-91-6	0.011	0.2	0.11	2
NMeFOSA	31506-32-8	0.026	0.2	0.26	2
NEtFOSA	4151-50-2	0.022	0.2	0.22	2
NMeFOSAA	2355-31-9	0.086	0.2	0.86	2
NEtFOSAA	2991-50-6	0.044	0.2	0.44	2
NMeFOSE	24448-09-7	0.121	2.0	1.21	20
NEtFOSE	1691-99-2	0.081	2.0	0.81	20
HFPO-DA	13252-13-6	0.039	0.8	0.39	8
ADONA	919005-14-4	0.030	0.8	0.30	8
PFMPA	377-73-1	0.017	0.4	0.17	4
PFMBA	863090-89-5	0.024	0.4	0.24	4
NFDHA	151772-58-6	0.083	0.4	0.83	4
9Cl-PF3ONS	756426-58-1	0.029	0.8	0.29	8
11Cl-PF3OUdS	763051-92-9	0.040	0.8	0.40	8
PFEESA	113507-82-7	0.046	0.4	0.46	4
3:3 FTCA	356-02-5	0.092	1.0	0.92	10
5:3 FTCA	914637-49-3	0.236	5.0	2.36	50
7:3 FTCA	812-70-4	0.365	5.0	3.65	50

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Table 3: Standard Analyte List – Tissue Matrices

Analyte Abbreviation	CAS #	DL (ng/g)	LOQ (ng/g)
PFBA	375-73-5	0.215	2.0
PFPeA	2706-91-4	0.088	1.0
PFHxA	355-46-4	0.044	0.5
PFHpA	375-92-8	0.062	0.5
PFOA	1763-23-1	0.070	0.5
PFNA	68259-12-1	0.099	0.5
PFDA	335-77-3	0.102	0.5
PFUnA	79780-39-5	0.093	0.5
PFDoA	375-73-5	0.052	0.5
PFTrDA	2706-91-4	0.067	0.5
PFTeDA	355-46-4	0.039	0.5
PFBS	375-73-5	0.044	0.5
PFPeS	2706-91-4	0.029	0.5
PFHxS	355-46-4	0.075	0.5
PFHpS	375-92-8	0.093	0.5
PFOS	1763-23-1	0.084	0.5
PFNS	68259-12-1	0.065	0.5
PFDS	335-77-3	0.056	0.5
PFDoS	79780-39-5	0.062	0.5
4:2 FTS	757124-72-4	0.222	2.0
6:2 FTS	27619-97-2	0.934	2.0
8:2 FTS	39108-34-4	0.249	2.0
PFOSA	754-91-6	0.051	0.5
NMeFOSA	31506-32-8	0.139	0.5
NEtFOSA	4151-50-2	0.115	0.5
NMeFOSAA	2355-31-9	0.089	0.5
NEtFOSAA	2991-50-6	0.106	0.5
NMeFOSE	24448-09-7	0.598	5.0
NEtFOSE	1691-99-2	0.410	5.0
HFPO-DA	13252-13-6	0.072	2.0

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Analyte Abbreviation	CAS #	DL (ng/g)	LOQ (ng/g)
ADONA	919005-14-4	0.139	2.0
PFMPA	377-73-1	0.078	1.0
PFMBA	863090-89-5	0.086	1.0
NFDHA	151772-58-6	0.113	1.0
9Cl-PF3ONS	756426-58-1	0.179	2.0
11Cl-PF3OUdS	763051-92-9	0.228	2.0
PFEESA	113507-82-7	0.069	1.0
3:3 FTCA	356-02-5	0.145	2.5
5:3 FTCA	914637-49-3	1.54	12.5
7:3 FTCA	812-70-4	1.26	12.5

Table 4: Identification and Quantification Information for Target Analytes, Extracted Internal Standards and Non-extracted Internal Standards.

Analyte Name	CAS #	Analyte Abbreviation	Parent Ion Mass	Quantification Ion Mass	Confirmation Ion Mass	Quantification Reference Compound
Perfluorobutanoic acid	375-73-5	PFBA	213	169	NA	13C4-PFBA
Perfluoropentanoic acid	2706-91-4	PFPeA	263	219	69	13C5-PFPeA
Perfluorohexanoic acid	355-46-4	PFHxA	313	269	119	13C5-PFHxA
Perfluoroheptanoic acid	375-92-8	PFHpA	363	319	169	13C4-PFHpA
Perfluorooctanoic acid	1763-23-1	PFOA	413	369	169	13C8-PFOA
Perfluorononanoic acid	68259-12-1	PFNA	463	419	219	13C9-PFNA
Perfluorodecanoic acid	335-77-3	PFDA	513	469	219	13C6-PFDA
Perfluoroundecanoic acid	79780-39-5	PFUnA	563	519	269	13C7-PFUnA
Perfluorododecanoic acid	375-73-5	PFDoA	613	569	319	13C2-PFDoA
Perfluorotridecanoic acid	2706-91-4	PFTrDA	663	619	169	13C2-PFDoA
Perfluorotetradecanoic acid	355-46-4	PFTeDA	713	669	169	13C2-PFTeDA
Perfluorobutanesulfonic acid	375-73-5	PFBS	299	80	99	13C3-PFBS
Perfluoropentansulfonic acid	2706-91-4	PFPeS	349	80	99	13C3-PFHxS
Perfluorohexanesulfonic acid	355-46-4	PFHxS	399	80	99	13C3-PFHxS

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Analyte Name	CAS #	Analyte Abbreviation	Parent Ion Mass	Quantification Ion Mass	Confirmation Ion Mass	Quantification Reference Compound
Perfluoroheptanesulfonic acid	375-92-8	PFHpS	449	80	99	13C8-PFOS
Perfluorooctanesulfonic acid	1763-23-1	PFOS	499	80	99	13C8-PFOS
Perfluorononanesulfonic acid	68259-12-1	PFNS	549	80	99	13C8-PFOS
Perfluorodecanesulfonic acid	335-77-3	PFDS	599	80	99	13C8-PFOS
Perfluorododecanesulfonic acid	79780-39-5	PFDoS	699	80	99	13C8-PFOS
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	757124-72-4	4:2 FTS	327	307	81	13C2-4:2FTS
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	27619-97-2	6:2 FTS	427	407	81	13C2-6:2FTS
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	39108-34-4	8:2 FTS	527	507	81	13C2-8:2FTS
Perfluorooctanesulfonamide	754-91-6	PFOSA	498	78	478	13C8-PFOSA
N-methyl perfluorooctanesulfonamide	31506-32-8	NMeFOSA	512	219	169	D3-NMeFOSA
N-ethyl perfluorooctanesulfonamide	4151-50-2	NEtFOSA	526	219	169	D5-NEtFOSA
N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9	NMeFOSAA	570	419	483	D3-NMeFOSAA
N-ethyl perfluorooctanesulfonamidoacetic acid	2991-50-6	NEtFOSAA	584	419	526	D5-NEtFOSAA
N-methyl perfluorooctanesulfonamidoethanol	24448-09-7	NMeFOSE	616	59	NA	D7-NMeFOSE
N-ethyl perfluorooctanesulfonamidoethanol	1691-99-2	NEtFOSE	630	59	NA	D9-NEtFOSE
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	HFPO-DA	285	169	185	13C3-HFPODA
4,8-Dioxa-3H-perfluorononanoic acid	919005-14-4	ADONA	377	251	85	13C4-PFHpA
Perfluoro-3-methoxypropanoic acid	377-73-1	PFMPA	229	85	NA	13C4-PFBA
Perfluoro-4-methoxybutanoic acid	863090-89-5	PFMBA	279	85	NA	13C5-PFPeA
Nonafluoro-3,6-dioxaheptanoic acid	151772-58-6	NFDHA	295	201	85	13C5-PFHxA

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Analyte Name	CAS #	Analyte Abbreviation	Parent Ion Mass	Quantification Ion Mass	Confirmation Ion Mass	Quantification Reference Compound
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	756426-58-1	9Cl-PF3ONS	531	351	533→353	13C8-PFOS
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9	11Cl-PF3OUdS	631	451	633→453	13C8-PFOS
Perfluoro(2-ethoxyethane)sulfonic acid	113507-82-7	PFEESA	315	135	83	13C5-PFHxA
3-Perfluoropropyl propanoic acid (FPrPA)	356-02-5	3:3FTCA	241	177	117	13C5-PFPeA
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA)	914637-49-3	5:3FTCA	341	237	217	13C5-PFHxA
3-Perfluoroheptyl propanoic acid (FHpPA)	812-70-4	7:3FTCA	441	337	317	13C9-PFNA
Extracted Internal Standard Compounds (EIS)						
Perfluoro-n-[13C4] butanoic acid	NA	13C4-PFBA	217	172	NA	13C3-PFBA
Perfluoro-n-[13C5] pentanoic acid	NA	13C5-PFPeA	268	223	NA	13C2-PFHxA
Perfluoro-n-[1,2,3,4,6-13C5] hexanoic acid	NA	13C5-PFHxA	318	273	NA	13C2-PFHxA
Perfluoro-n-[1,2,3,4-13C4] heptanoic acid	NA	13C4-PFHpA	367	322	NA	13C2-PFHxA
Perfluoro-n-[13C8] octanoic acid	NA	13C8-PFOA	421	376	NA	13C4-PFOA
Perfluoro-n-[13C9] nonanoic acid	NA	13C9-PFNA	472	427	NA	13C5-PFNA
Perfluoro-n-[1,2,3,4,5,6-13C6] decanoic acid	NA	13C6-PFDA	519	474	NA	13C2-PFDA
Perfluoro-n-[1,2,3,4,5,6,7-13C7] undecanoic acid	NA	13C7-PFUnA	570	525	NA	13C2-PFDA
Perfluoro-n-[1,2-13C2] dodecanoic acid	NA	13C2-PFDoA	615	570	NA	13C2-PFDA
Perfluoro-n-[1,2-13C2] tetradecanoic acid	NA	13C2-PFTeDA	715	670	NA	13C2-PFDA
Perfluoro-1-[2,3,4-13C3] butanesulfonic acid	NA	13C3-PFBS	302	80	NA	18O2-PFHxS
Perfluoro-1-[1,2,3-13C3] hexanesulfonic acid	NA	13C3-PFHxS	402	80	NA	18O2-PFHxS

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Analyte Name	CAS #	Analyte Abbreviation	Parent Ion Mass	Quantification Ion Mass	Confirmation Ion Mass	Quantification Reference Compound
Perfluoro-1-[13C8] octanesulfonic acid	NA	13C8-PFOS	507	80	NA	13C4-PFOS
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2] hexanesulfonic acid	NA	13C2-4:2FTS	329	81	NA	18O2-PFHxS
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2] octanesulfonic acid	NA	13C2-6:2FTS	429	81	NA	18O2-PFHxS
1H,1H,2H,2H-Perfluoro-1-[1,2-13C2] decanesulfonic acid	NA	13C2-8:2FTS	529	81	NA	18O2-PFHxS
Perfluoro-1-[13C8] octanesulfonamide	NA	13C8-PFOSA	506	78	NA	13C4-PFOS
N-methyl-D3-perfluoro-1-octanesulfonamide	NA	D3-NMeFOSA	515	219	NA	13C4-PFOS
N-ethyl-D5-perfluoro-1-octanesulfonamide	NA	D5-NEtFOSA	531	219	NA	13C4-PFOS
N-methyl-D3-perfluoro-1-octanesulfonamidoacetic acid	NA	D3-NMeFOSAA	573	419	NA	13C4-PFOS
N-ethyl-D5-perfluoro-1-octanesulfonamidoacetic acid	NA	D5-NEtFOSAA	589	419	NA	13C4-PFOS
N-methyl-D7-perfluorooctanesulfonamidoethanol	NA	D7-NMeFOSE	623	59	NA	13C4-PFOS
N-ethyl-D9-perfluorooctanesulfonamidoethanol	NA	D9-NEtFOSE	639	59	NA	13C4-PFOS
Tetrafluoro-2-heptafluoropropoxy-13C3-propanoic acid	NA	13C3-HFPO-DA	287	169	NA	13C2-PFHxA
Non-extracted Internal Standard Compounds (NIS)						
Perfluoro-n-[2,3,4-13C3] butanoic acid	NA	13C3-PFBA	216	172	NA	NA
Perfluoro-n-[1,2-13C2]hexanoic acid	NA	13C2-PFHxA	315	270	NA	NA
Perfluoro-n-[1,2,3,4-13C4]octanoic acid	NA	13C4-PFOA	417	172	NA	NA
Perfluoro-n-[1,2,3,4,5-13C5] nonanoic acid	NA	13C5-PFNA	468	423	NA	NA

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Analyte Name	CAS #	Analyte Abbreviation	Parent Ion Mass	Quantification Ion Mass	Confirmation Ion Mass	Quantification Reference Compound
Perfluoro-n-[1,2-13C2]decanoic acid	NA	13C2-PFDA	515	470	NA	NA
Perfluoro-1-hexane[18O2]sulfonic acid	NA	18O2-PFHxS	403	84	NA	NA
Perfluoro-n-[1,2,3,4-13C4] octanesulfonic acid	NA	13C4-PFOS	503	80	NA	NA

Table 5: Calibration Standard Concentrations (ng/mL)

Compound	L1	L2 (ISC)	L3	L4	L5 (CCV)	L6	L7	L8	L9
Perfluoroalkyl carboxylic acids									
PFBA	0.4	0.8	2	10	20	50	100	200	250
PFPeA	0.2	0.4	1	5	10	25	50	100	125
PFHxA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFHpA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFOA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFNA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFDA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFUnA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFDoA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFTrDA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
PFTeDA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
Perfluoroalkyl sulfonic acids									
PFBS	0.089	0.178	0.444	2.22	4.44	11.1	22.2	44.4	55.5
PFPeS	0.094	0.188	0.470	2.35	4.70	11.8	23.5	47.0	58.8
PFHxS	0.091	0.182	0.456	2.28	4.56	11.4	22.8	45.6	57.0
PFHpS	0.095	0.190	0.476	2.38	4.76	11.9	23.8	47.6	59.5
PFOS	0.093	0.186	0.464	2.32	4.64	11.6	23.2	46.4	58.0
PFNS	0.096	0.192	0.480	2.40	4.80	12.0	24.0	48.0	60.0
PFDS	0.096	0.193	0.482	2.41	4.82	12.1	24.1	48.2	60.3
PFDoS	0.097	0.194	0.484	2.42	4.84	12.1	24.2	48.4	60.5
Fluorotelomer sulfonic acids									
4:2FTS	0.375	0.750	1.87	9.37	18.7	46.9	93.7	187	234
6:2FTS	0.380	0.761	1.90	9.51	19.0	47.6	95.1	190	238
8:2FTS	0.384	0.768	1.92	9.6	19.2	48	96	192	240
Perfluorooctane sulfonamides									

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Compound	L1	L2 (ISC)	L3	L4	L5 (CCV)	L6	L7	L8	L9
PFOSA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
NMeFOSA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
NEtFOSA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
Perfluorooctane sulfonamidoacetic acids									
NMeFOSAA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
NEtFOSAA	0.1	0.2	0.5	2.5	5	12.5	25	50	62.5
Perfluorooctane sulfonamide ethanols									
NMeFOSE	1	2	5	25	50	125	250	500	625
NEtFOSE	1	2	5	25	50	125	250	500	625
Per- and polyfluoroether carboxylic acids									
HFPO-DA	0.4	0.8	2	10	20	50	100	200	250
ADONA	0.378	0.756	1.89	9.45	18.9	47.25	94.5	189	236.25
PFMPA	0.2	0.4	1	5	10	25	50	100	125
PFMBA	0.2	0.4	1	5	10	25	50	100	125
NFDHA	0.2	0.4	1	5	10	25	50	100	125
Ether sulfonic acids									
9Cl-PF3ONS	0.373	0.746	1.87	9.33	18.7	46.7	93.3	187	233
11Cl-PF3OUdS	0.377	0.754	1.89	9.43	18.9	47.2	94.3	189	236
PFEESA	0.178	0.357	0.892	4.46	8.92	22.3	44.6	89.2	112
Fluorotelomer Carboxylic Acids									
3:3FTCA	0.5	1	2.5	12.5	25	62.5	125	250	312.5
5:3FTCA	2.5	5	12.5	62.5	125	312.5	625	1250	1560
7:3FTCA	2.5	5	12.5	62.5	125	312.5	625	1250	1560
Extracted Internal Standards (EIS)									
13C4-PFBA	10	10	10	10	10	10	10	10	10
13C5-PFPeA	5	5	5	5	5	5	5	5	5
13C5-PFHxA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
13C4-PFHpA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
13C8-PFOA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
13C9-PFNA	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C6-PFDA	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C7-PFUnA	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C2-PFDoA	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C2-PFTeDA	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C3-PFBS	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33	2.33
13C3-PFHxS	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
13C8-PFOS	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
13C2-4:2FTS	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.69

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Compound	L1	L2 (ISC)	L3	L4	L5 (CCV)	L6	L7	L8	L9
13C2-6:2FTS	4.76	4.76	4.76	4.76	4.76	4.76	4.76	4.76	4.76
13C2-8:2FTS	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
13C8-PFOSA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
D3-NMeFOSA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
D5-NEtFOSA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
D3-NMeFOSAA	5	5	5	5	5	5	5	5	5
D5-NEtFOSAA	5	5	5	5	5	5	5	5	5
D7-NMeFOSE	25	25	25	25	25	25	25	25	25
D9-NEtFOSE	25	25	25	25	25	25	25	25	25
13C3-HFPODA	10	10	10	10	10	10	10	10	10
Non-Extracted Internal Standards (NIS)									
13C3-PFBA	5	5	5	5	5	5	5	5	5
13C2-PFHxA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
13C4-PFOA	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
13C5-PFNA	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C2-PFDA	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
18O2-PFHxS	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
13C4-PFOS	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40

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Appendix B: QC Summary & Corrective Action Table; Method Acceptance Criteria

Table 6: QC Summary & Corrective Action

QC Item	Frequency	Acceptance Criteria	Corrective Action	Qualification
Demonstration of Capability (DOC)	Initially, prior to analyzing field samples and annually thereafter.	See Method Acceptance Criteria for each matrix in the Tables below.	Identify and correct source of problem, repeat.	None. Do not proceed with analysis.
Mass Calibration	Annually and on as-needed basis.	Must meet manufacturer's acceptance criteria.	Identify and correct source of problem, repeat.	None. Do not proceed with analysis.
Mass Calibration Verification	After each Mass Calibration performed.	Must meet manufacturer's acceptance criteria.	Identify and correct source of problem, repeat Mass Calibration.	None. Do not proceed with analysis.
Initial Calibration (ICAL)	At instrument set up, after CCV failure and/or major maintenance.	Must meet one of the curve fit options presented in Section 9.2.4.	Identify and correct source of problem, repeat.	None. Do not proceed with analysis.
Initial Calibration Verification (ICV)	After Each ICAL.	All analytes must be within ± 30% of their true values. (%R)	Identify and correct source of problem, re-analyze. If repeat failure, repeat ICAL. Analysis may proceed if it can be demonstrated that the ICV exceedance has no impact on analytical measurements. For example, the ICV %R is high, CCV is within criteria, and the analyte is not detected in sample(s).	Qualify analytes with ICV out of criteria when results are unaffected; otherwise, correct the problem and repeat ICV.
Initial Calibration Blank (ICB)	After highest concentration ICAL standard.	Must meet criteria specified in Section 9.2.5: all detections ≤MDL concentration.	Identify and correct source of contamination or performance issue. Alternately, calibrate using a lower concentration standard for the highest point.	No samples shall be analyzed until ICB has met acceptance criteria.
RT Window Position	Once per ICAL and at the beginning of the analytical window.	Position is set using the mid-point of the ICAL on the day ICAL is performed; otherwise, opening CCV is used. RT Window is ± 60 secs from RT position.	NA	NA
Instrument Sensitivity Check (ISC)	Daily before sample analysis.	All native and isotopically labelled compounds within ± 30% recovery.	Identify and correct source of problem and reanalyze ISC. If problem persists, repeat ICAL.	No samples shall be analyzed until ISC has met acceptance

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QC Item	Frequency	Acceptance Criteria	Corrective Action	Qualification
				criteria. See Section 9.2.4.5 for exceptions.
Bile Salts Check	With each ICAL and daily with each CCV	Bile Salt peak detected >1 min outside RT window for PFOS.	Identify and correct source of problem, then reevaluate Bile Salts separation from PFOS.	No samples shall be analyzed until Bile Salts Check has met acceptance criteria.
Continuing Calibration Verification (CCV)	Daily before sample analysis, after every 10 samples, and at end of analytical sequence.	All native and isotopically labelled compounds within ±30% recovery.	See Section 9.2.4.5 for required corrective actions based on circumstance.	Qualify analytes with CCV out of criteria.
Instrument Blank (IBLK) / Continuing Calibration Blank (CCB)	Daily prior to analysis and after high standards, including CCV.	Must meet criteria specified in Section 9.2.5: all detections ≤MDL concentration.	Identify and correct source of contamination or performance issue. Reanalyze IBLK.	No samples shall be analyzed until IBLK has met acceptance criteria.
Extracted Internal Standards (EIS)	Every field sample, standard and QC sample.	See Method Acceptance Criteria for each matrix in the Tables below.	If batch QC is acceptable, reanalyze to confirm. If confirmed, re-extract and reanalyze samples. If reprep is within acceptance, report reprep data. If failure is confirmed by reprep, qualify as matrix impacted.	Qualify outages and explain in case narrative.
Non-extracted Internal Standards (NIS)	Every field sample, standard and QC sample.	NIS areas in all samples must be within 50 – 200% of the average area of the corresponding NIS in the ICAL.	Troubleshoot instrument performance. Reanalyze samples.	Qualify outages and explain in case narrative.
Method Blank (MB)	1 per batch of 20 or fewer samples.	Must meet criteria specified in Section 10.4.1: all detections ≤MDL concentration.	If IBLK is acceptable, reanalyze MB to confirm. If confirmed, re-extract and reanalyze associated impacted samples (if sufficient sample remains). If insufficient sample remains for reprep, narrate and report data associated with unacceptable MB. See Section 10.4.1 for more details.	Qualify outages and explain in case narrative.

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QC Item	Frequency	Acceptance Criteria	Corrective Action	Qualification
LCS/LLLCS	1 pair per batch of 20 or fewer samples.	See Method Acceptance Criteria for each matrix in the Tables below; must meet criteria specified in Section 10.4.2.	If most recent ISC/CCV is acceptable, reanalyze LCS to confirm. If low-failure results are confirmed, re-extract and reanalyze associated samples (if sufficient sample remains). If insufficient sample remains for reprep, narrate and report data associated with low-failure LCS. If high-failure results are confirmed and sample(s) is ND for failing compound, narrate and report sample data.	Qualify outages and explain in case narrative.
MS/MSD	1 pair per batch of 20 or fewer samples. (If requested)	RSD ≤30% between MS/MSD	If possible, reprep to confirm.	Qualify outages and explain in case narrative.
Laboratory Duplicate	1 per AFFF sample; 1 per prep batch for all other matrices (if requested).	RSD ≤30% between parent/DUP	If possible, reprep to confirm.	Qualify outages and explain in case narrative.

Table 7: DOC/LCS/LLLCS Acceptance Limits for Aqueous & Landfill Leachate Matrices

Target Analyte	DOC Mean Recovery (%)	DOC RSD (%)	LCS/LLLCS Recovery (%)
PFBA	70-135	21	70-140
PFPeA	70-135	23	65-135
PFHxA	70-135	24	70-145
PFHpA	70-135	28	70-150
PFOA	65-155	27	70-150
PFNA	70-140	28	70-150
PFDA	65-140	26	70-140
PFUnA	70-135	29	70-145
PFDoA	70-130	21	70-140
PFTrDA	60-145	29	65-140
PFTeDA	70-145	27	60-140
PFBS	70-140	23	60-145
PFPeS	70-135	25	65-140
PFHxS	70-135	27	65-145
PFHpS	70-140	30	70-150
PFOS	70-140	29	55-150
PFNS	70-135	29	65-145
PFDS	70-135	30	60-145

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Target Analyte	DOC Mean Recovery (%)	DOC RSD (%)	LCS/LLLCS Recovery (%)
PFDoS	45-135	35	50-145
4:2FTS	70-135	27	70-145
6:2FTS	70-135	32	65-155
8:2FTS	70-140	33	60-150
PFOSA	70-135	22	70-145
NMeFOSA	70-135	30	60-150
NEtFOSA	70-130	26	65-145
NMeFOSAA	65-140	32	50-140
NEtFOSAA	70-135	28	70-145
NMeFOSE	70-135	29	70-145
NEtFOSE	70-130	21	70-135
HFPO-DA	70-135	23	70-140
ADONA	70-135	23	65-145
PFMPA	60-140	23	55-140
PFMBA	65-145	27	60-150
NFDHA	65-140	37	50-150
9Cl-PF3ONS	70-145	30	70-155
11Cl-PF3OUdS	50-150	35	55-160
PFEESA	70-135	25	70-140
3:3FTCA	70-130	23	65-130
5:3FTCA	70-130	24	70-135
7:3FTCA	55-130	34	50-145

Table 8: DOC/LCS/LLLCS Acceptance Limits for Solid & Biosolid Matrices

Target Analyte	DOC Mean Recovery (%)	DOC RSD (%)	LCS/LLLCS Recovery (%)
PFBA	70-140	17	70-140
PFPeA	70-140	26	60-150
PFHxA	70-135	23	65-140
PFHpA	70-140	21	65-145
PFOA	70-140	23	70-150
PFNA	65-145	24	70-155
PFDA	70-145	26	70-155
PFUnA	70-145	26	70-155
PFDoA	70-145	25	70-150
PFTrDA	55-160	26	65-150
PFTeDA	70-145	24	65-150
PFBS	60-145	25	65-145
PFPeS	65-140	29	55-160
PFHxS	65-145	28	60-150
PFHpS	70-140	27	65-155
PFOS	70-135	27	65-160
PFNS	70-140	27	55-140

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Target Analyte	DOC Mean Recovery (%)	DOC RSD (%)	LCS/LLLCS Recovery (%)
PFDS	50-150	31	40-155
PFDoS	40-140	40	25-160
4:2FTS	70-135	27	60-150
6:2FTS	60-160	50	55-200
8:2FTS	70-140	27	70-150
PFOSA	70-140	19	70-140
NMeFOSA	65-145	26	70-155
NEtFOSA	70-135	19	70-140
NMeFOSAA	65-145	31	65-155
NEtFOSAA	60-150	31	65-165
NMeFOSE	70-140	19	70-140
NEtFOSE	70-135	17	70-135
HFPO-DA	70-140	25	70-145
ADONA	70-155	26	70-160
PFMPA	70-140	25	30-140
PFMBA	55-145	33	60-150
NFDHA	45-145	27	60-155
9Cl-PF3ONS	65-135	23	70-150
11Cl-PF3OUdS	50-135	31	45-160
PFEESA	70-140	20	70-140
3:3FTCA	45-155	32	45-130
5:3FTCA	70-135	28	60-130
7:3FTCA	70-145	39	60-150

Table 9: DOC/LCS/LLLCS Acceptance Limits for Tissue Matrix

Target Analyte	DOC Mean Recovery (%)	DOC RSD (%)	LCS/LLLCS Recovery (%)
PFBA	70-135	20	60-140
PFPeA	70-130	20	60-145
PFHxA	70-140	20	60-160
PFHpA	70-140	20	60-145
PFOA	70-130	25	60-150
PFNA	70-140	20	60-145
PFDA	70-135	20	60-150
PFUnA	70-135	20	60-155
PFDoA	70-135	20	60-140
PFTrDA	55-160	20	60-150
PFTeDA	70-140	25	60-140
PFBS	70-145	20	60-150
PFPeS	70-150	20	60-145
PFHxS	70-140	25	60-155
PFHpS	70-145	20	60-140
PFOS	70-135	30	60-160

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Target Analyte	DOC Mean Recovery (%)	DOC RSD (%)	LCS/LLLCS Recovery (%)
PFNS	60-130	20	45-140
PFDS	55-135	20	50-140
PFDoS	25-145	45	25-140
4:2FTS	65-140	30	55-150
6:2FTS	70-140	25	60-150
8:2FTS	70-150	25	60-170
PFOSA	70-140	20	60-150
NMeFOSA	70-140	30	60-160
NEtFOSA	70-140	40	60-150
NMeFOSAA	70-140	20	60-145
NEtFOSAA	70-140	25	60-145
NMeFOSE	60-150	20	40-180
NEtFOSE	70-145	40	60-205
HFPO-DA	70-140	25	60-145
ADONA	70-145	20	55-165
PFMPA	70-145	40	25-145
PFMBA	70-140	20	60-150
NFDHA	70-155	30	60-180
9Cl-PF3ONS	70-140	20	60-170
11Cl-PF3OUdS	65-140	20	50-170
PFEESA	70-145	25	50-150
3:3FTCA	55-130	25	30-140
5:3FTCA	70-145	20	60-160
7:3FTCA	70-155	20	60-200

Table 10: Acceptance Limits for EIS and NIS Compounds in Aqueous & Landfill Leachate Matrices

Labeled Compound	Aqueous Recovery (%)	Landfill Leachate Recovery (%)
13C4-PFBA	5-130	5-130
13C5-PFPeA	40-130	40-130
13C5-PFHxA	40-130	40-130
13C4-PFHpA	40-130	40-130
13C8-PFOA	40-130	40-130
13C9-PFNA	40-130	40-130
13C6-PFDA	40-130	40-130
13C7-PFUnA	30-130	40-130
13C2-PFDoA	10-130	35-130
13C2-PFTeDA	10-130	25-130
13C3-PFBS	40-135	40-130
13C3-PFHxS	40-130	40-130
13C8-PFOS	40-130	40-130

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Labeled Compound	Aqueous Recovery (%)	Landfill Leachate Recovery (%)
13C2-4:2FTS	40-200	40-220
13C2-6:2FTS	40-200	40-170
13C2-8:2FTS	40-300	40-145
13C8-PFOSA	40-130	40-130
D3-NMeFOSA	10-130	40-130
D5-NEtFOSA	10-130	35-130
D3-NMeFOSAA	40-170	35-130
D5-NEtFOSAA	25-135	30-130
D7-NMeFOSE	10-130	20-130
D9-NEtFOSE	10-130	20-130
13C3-HFPODA	40-130	40-130
13C3-PFBA	50-200	50-200
13C2-PFHxA	50-200	50-200
13C4-PFOA	50-200	50-200
13C5-PFNA	50-200	50-200
13C2-PFDA	50-200	50-200
18O2-PFHxS	50-200	50-200
13C4-PFOS	50-200	50-200

Table 11: Acceptance Limits for EIS and NIS Compounds in Solid & Biosolid Matrices

Labeled Compound	Solids Recovery (%)	Biosolids Recovery (%)
13C4-PFBA	8-130	5-130
13C5-PFPeA	35-130	35-130
13C5-PFHxA	40-130	40-130
13C4-PFHpA	40-130	40-130
13C8-PFOA	40-130	40-130
13C9-PFNA	40-130	40-145
13C6-PFDA	40-130	40-130
13C7-PFUnA	40-130	40-130
13C2-PFDoA	40-130	40-130
13C2-PFTeDA	20-130	10-160
13C3-PFBS	40-135	40-150
13C3-PFHxS	40-130	40-140
13C8-PFOS	40-130	40-130
13C2-4:2FTS	40-165	40-300
13C2-6:2FTS	40-215	40-300
13C2-8:2FTS	40-275	40-300

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Labeled Compound	Solids Recovery (%)	Biosolids Recovery (%)
13C8-PFOSA	40-130	20-140
D3-NMeFOSA	10-130	20-130
D5-NEtFOSA	10-130	20-130
D3-NMeFOSAA	40-135	30-150
D5-NEtFOSAA	40-150	20-140
D7-NMeFOSE	20-130	25-130
D9-NEtFOSE	15-130	20-130
13C3-HFPODA	40-130	40-130
13C3-PFBA	50-200	50-200
13C2-PFHxA	50-200	50-200
13C4-PFOA	50-200	50-200
13C5-PFNA	50-200	50-200
13C2-PFDA	50-200	50-200
18O2-PFHxS	50-200	50-200
13C4-PFOS	50-200	50-200

Table 12: Acceptance Limits for EIS and NIS Compounds in Tissue Matrices

Labeled Compound	Tissue Recovery (%)
13C4-PFBA	5-130
13C5-PFPeA	10-185
13C5-PFHxA	25-170
13C4-PFHpA	25-150
13C8-PFOA	25-150
13C9-PFNA	35-185
13C6-PFDA	30-150
13C7-PFUnA	30-180
13C2-PFDoA	35-180
13C2-PFTeDA	20-160
13C3-PFBS	25-190
13C3-PFHxS	35-175
13C8-PFOS	40-160
13C2-4:2FTS	30-300
13C2-6:2FTS	35-300
13C2-8:2FTS	40-365
13C8-PFOSA	25-180
D3-NMeFOSA	5-130
D5-NEtFOSA	5-130

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Labeled Compound	Tissue Recovery (%)
D3-NMeFOSAA	30-250
D5-NEtFOSAA	30-235
D7-NMeFOSE	5-160
D9-NEtFOSE	5-130
13C3-HFPODA	20-185
13C3-PFBA	50-200
13C2-PFHxA	50-200
13C4-PFOA	50-200
13C5-PFNA	50-200
13C2-PFDA	50-200
18O2-PFHxS	50-200
13C4-PFOS	50-200

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Appendix C: State/Program Specific Requirements

This appendix provides program specific requirements that supersede or supplement the main body of the SOP. When analyzing samples under DoD compliance, these requirements are applicable.

QC Item	SOP Section	Requirement
Instrument Blank	9.2.5	No analytes detected > ½ LOQ.
Method Blank	11.1.1	No analytes detected > ½ LOQ.
AFFF Sample Duplicate	Appendix E	All AFFF samples shall be prepared and analyzed in duplicate in the same manner as aqueous samples (e.g., solid phase extraction, extracted internal standards, carbon cleanup, etc.).
Laboratory Duplicate	Appendices B & F	One per preparatory batch. RPD of all analytes should be ≤ 30% between sample and DUP. RPD criterion does not apply if both results are below the LOQ.

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Appendix D: Sample Pre-screening Instructions

Samples that are known or suspected to contain high levels of analytes may be pre-screened using the following procedure. These are example procedures using smaller sample aliquots spiked with EIS and NIS and no clean up procedures. Other pre-screening procedures may be used.

Aqueous Samples

1) Weight out 10 (±0.1) g of sample into a 50-mL centrifuge tube.
2) Add 50 µL of EIS to the sample and vortex to mix.
3) Filter 1 mL of the sample through 0.2-µm membrane filter into a microvial. Sample is ready for instrumental analysis.

Solid and Tissue Samples

1) Weigh 1.0 (±0.1) g sample into 50-mL polypropylene centrifuge tubes.
2) Add 20 mL of 0.3% methanolic ammonium hydroxide to the sample. Vortex and mix on a shaker table (or equivalent) for 10 min. Allow to settle and/or centrifuge to produce a clear extract.
3) Filter using a filter vial:
    a. Add 20 µL of EIS to a clean filter vial (chamber).
    b. Add 400 µL of clear extract from step 2 (e.g., by adding extract until it reaches the fill line), carefully vortex to mix.
    c. Use filter/plunger part and filter.
4) Transfer 30 µL of filtrate to a ~300 µL polypropylene microvial and dilute to 300 µL with 0.3% methanolic ammonium hydroxide. Add NIS (1.5 µL) to the resulting solution.
5) The extract is now a 10x dilution.
6) Sample is ready for instrumental screening analysis.
7) Calculate results using the equivalent sample weight computed as follows:

$$Equivalent\ Weight = Sample\ weight\ (g) x \frac{0.4\ mL}{20\ mL}$$

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Appendix E: Aqueous Sample Subsampling Instructions

Note: Because some target analytes may be stratified within the sample (e.g., AFFF-contaminated media, surfactants), or adhere to the walls of the sample container, subsampling may only be done on a project-specific basis. Subsampling has been shown to increase uncertainty in PFAS analysis, especially on foaming samples.

If a reduced sample size is required, transfer a weighed subsample using the following subsampling procedure to a 60-mL HDPE bottle and dilute to approximately 60 mL using reagent water. This container is now considered the "sample bottle."

1) Gently invert sample 3-4 times being careful to avoid foam formation and subsample immediately (do not let stand).
2) If foam forms and more than 5 mL is required – pour sample, avoiding any foam.
3) If foaming forms and a volume less than 5 mL is required – pipette from ½ cm below the foam.
4) If no foam forms – pour or pipette based on volume required.

Required Protocol for AFFF and FFF (F3) Concentrates

Samples composed of AFFF or F3 will be subsampled consistently, with approximately **0.02 g of AFFF/F3 material** aliquoted for each discrete sample preparation/analysis; each AFFF or F3 concentrate sample analyzed under DoD direction **must be prepared in duplicate**. After creating and documenting the subsample aliquot, add approximately 60 mL of reagent water, cap the vessel, and shake vigorously by hand for 20-30 seconds. After adding the reagent water and agitating, allow **at least 3 hours** for the subsample aliquot to fully dissolve in the water. If dissolution is incomplete after 3 hours, agitate again and wait another 3 hours; consider applying continuous agitation (orbital shaker) if full dissolution of the aliquot into water requires extended time. Following the extended dissolution time, prepared AFFF/F3 samples should be prepared and analyzed following the routine protocols for aqueous sample processing. Aqueous reporting limits (MDL/LOD/LOQ) will be used, with values adjusted to account for the actual sample aliquot, assuming 1 g/mL; this constitutes a 25,000X nominal adjustment factor for AFFF/F3 reporting limits, relative to nominal aqueous reporting limits.

Pace **STRONGLY DISCOURAGES** clients from sending AFFF concentrate material for analysis; this protocol is designed for "as-prepared" AFFF materials (i.e. pre-diluted to application concentration) and newer generation 'Fluorine Free Foam' (F3) concentrates. If F3 material (concentrate or as-prepared) or as-prepared AFFF material is received, follow the normal routines described in the first paragraph above. If an AFFF concentrate material (usually of a thick gel-like consistency) is received for analysis, the lab shall prepare a 3% (w/w) aqueous solution from the received sample (in the smallest volume feasible) prior to subsampling and diluting 0.02 g for extraction. Handling of AFFF concentrate should ideally be done in an isolated area outside of the PFAS processing area to prevent gross lab contamination. Following the two dilution steps, the nominal adjustment factor for AFFF concentrate material is 833,333X (8.33×10^5) relative to nominal aqueous reporting limits.

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Appendix F: MS/MSD, MS/DUP SAMPLE SELECTION PROTOCOL

Project-specific requirements may include that matrix spikes (MS), matrix spike duplicates (MSD), and/or laboratory duplicates (DUP) be prepared and analyzed with project samples. The client/field team should identify those samples which are designated for these additional QC procedures and provide additional sample material for them. In the event that samples are received for such a project without additional containers for MS/MSD/DUP, prep analysts will select samples to be used for this purpose following a hierarchy of preference, as defined below.

Note: Any kind of blank (Field Blank, Trip Blank, Equipment Blank, Rinsate Blank, etc.) will not be used for MS/MSD/DUP analysis.

1) First preference is to use client-designated samples as MS/MSD samples. This designation should show up on the prep worklist, in the comments. It is possible that SR will miss adding this comment to the sample, but this designation will be present in the COC from the client, on the right side of the COC under “Comments/Remarks/Cooler ID.” When a client designates a sample to be used for MS/MSD analysis, they will typically provide us with more than 2 bottles (often 4, sometimes as many as 6).

2) Lacking a client-designated MS/MSD sample, the next preference is to use any sample received with more than 2 bottles provided. If an analyst selects a set of samples for prep in which none of the samples are client-designated for MS/MSD, the analyst should check for any samples in the set that were received with 3 or more bottles. If there is a sample with 3 or more bottles, pull 3 of them and use one for the parent sample and spike the other two for analysis as MS/MSD samples.

3) Lacking any samples received with 3 or more bottles, the prep analyst must use two different parent samples to create an MS/DUP pair. Find two samples out of the set of samples selected for prep which were received with 2 bottles and pull both bottles for each sample. Pick one sample (pair of bottles) to be used for parent/MS prep and the other sample (pair of bottles) to be used for parent/DUP. The sample selected for parent/MS will have one bottle spiked with targets and one prepped as normal, with no added spiking. The bottle which is spiked should be identified in the LIMS as MS. The sample selected for parent/DUP will have both bottles prepared following normal procedures but one of the two should be identified in the LIMS as DUP.

4) If all samples in a particular prep batch were all received in just one bottle, analysis of an MS/MSD or MS/DUP pair will not be possible. This should be an uncommon occurrence, as prep analysts will attempt to adjust batching to ensure that every prep batch contains an MS/MSD or MS/DUP for projects which require the additional QC.

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Appendix G: Aqueous Sample Management Decision Guide

NOTE: No TSS pre-test will be performed on aqueous samples received for 1633 analysis.

Per Method 1633, Section 11.1.1.5, “laboratories may utilize other documented strategies for minimizing the disruptions due to SPE clogging and slow extractions.” Follow the guide below to evaluate aqueous sample matrices for solid material and determine the appropriate preparation approach; a matching decision tree is included at the end of this appendix.

If potential interferences other than settled solids are observed, take action to mitigate the impacts on data quality. Examples of other sample characteristics that could lead the lab to take precautionary measures with a field sample (i.e., prepare from reduced volume) include: presence of standing foam in the sample after shaking, thick/viscous matrix, collected from a known highly contaminated site/project, client notes indicating potential high concentrations, and knowledge of potential hazards to safety, equipment performance, or process integrity due to sample composition. Consider any visible indications of particulate matter including settled solids collected on the bottom of the container, cloudiness and/or dark color of the sample, suspended solids within the sample, increased viscosity, etc. If uncertain, seek a second opinion from another analyst, supervisor, or operations director; these matrix characteristics may require reduced-volume extraction. The lab will attempt to use the largest volume possible (i.e., the smallest reduction possible) when performing a reduced-volume extraction to manage challenging matrix characteristics, and no less than 1 mL of sample will be used in this case.

1) Allow samples to sit for at least 15 minutes to allow solids in the matrix to settle to the bottom of the container.

2) Visually inspect each sample for settled solids collected in the bottom of the container and follow the appropriate protocol based on observation:

    a. If no solids are observed in the bottom of the container, proceed to step 3.

    b. If solids are observed in the bottom of the container with an approximate depth <1/2 cm (<5 mm), proceed to step 5.

    c. If solids are observed in the bottom of the container with an approximate depth >1/2 cm (>5 mm), proceed to step 7.

    d. If solids observed in the container make up approximately 5% or more of the total sample volume, proceed to step 9.

<u>No Settled Solids Observed:</u>

3) Do not take any additional action to prepare for extraction and follow routine protocols.

4) If the SPE cartridge begins to clog during sample loading (see Identifying Cartridge Clogging section below), abandon loading of the remaining sample volume and proceed to the cartridge rinsing and drying described in step 10 of Section 9.3.4.

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a. Document the inability to load the entire sample volume due to cartridge clogging. If the resulting EIS recoveries are below the method acceptance ranges, this documentation provides the rationale for re-extraction from reduced volume.

b. The sample bottle rinse described in step 12 of Section 9.3.5 must be omitted; simply add the 5 mL of 1% methanolic ammonium hydroxide directly to the reservoir/cartridge.

c. If the cartridge clog prevents the cartridge rinses or elution solvent from passing through the cartridge, document that an extract could not be collected for that sample. Submit the sample for re-extraction from reduced volume. Notify the group leader and prep team of this necessity and, based on the total volume loaded in the first extraction attempt, provide a suggested reduction factor (i.e., reduce volume 5X, 10X, 20X, etc.).

Settled Solids Depth <1/2 cm Observed:

5) Do not take any additional action to prepare for extraction and follow routine protocols; however, be aware that there is a higher probability that the SPE cartridge will clog, and care must be taken in sample loading to attempt to pass the entire sample through the sorbent.

6) If the SPE cartridge begins to clog during sample loading (see Identifying Cartridge Clogging section below), abandon loading of the remaining sample volume and proceed to the cartridge rinsing and drying described in step 10 of Section 9.3.4.

a. The sample bottle rinse described in step 12 of Section 9.3.5 must be omitted; simply add the 5 mL of 1% methanolic ammonium hydroxide directly to the reservoir/cartridge.

b. Document the inability to load the entire sample volume due to cartridge clogging. If the resulting EIS recoveries are below the method acceptance ranges, this documentation provides the rationale for re-extraction following centrifugation; however,

c. If the cartridge clog prevents the cartridge rinses or elution solvent from passing through the cartridge, document that an extract could not be collected for that sample. Submit the sample for re-extraction with sample centrifugation (See Aqueous Sample Centrifugation Protocol in Appendix H). Notify the group leader and prep team of this necessity.

i. If, in the judgment of an experienced analyst, the nature of the solids present in the sample is of a nature that would preclude successful centrifugation and decantation, the decision should be confirmed with the group supervisor and/or another experienced analyst; once confirmed, the sample is submitted for re-extraction from reduced volume. Notify the group of this necessity and, based on the total volume loaded in the first extraction attempt, provide a suggested reduction factor (i.e., reduce volume 5X, 10X, 20X, etc.).

ii. If the centrifuged sample clogs the cartridge in the second extraction, see step 6 above; if there is sufficient sample remaining for another re-extraction, submit the sample for re-extraction from reduced volume as described in (i) above. If there is not sufficient sample remaining for another re-extraction, narrate any quality exceedances and report data for all runs.

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Settled Solids Depth >1/2 cm Observed:

7) The sample will need to be centrifuged before performing SPE. Instead of following the routine sample extraction procedures, refer to Appendix H for the Aqueous Sample Centrifugation Protocol.

8) Document the decision to centrifuge the sample prior to SPE.

    a. If resulting EIS recoveries are below the method acceptance ranges, this documentation provides evidence that the results are impacted by matrix interference.

        i. Report the data with a narrative statement explaining that the results are matrix-impacted.

        ii. Alternately, submit the sample for re-extraction from reduced volume to attempt to provide data with compliant EIS recoveries.

    b. If the decanted sample clogs the SPE and prevents successful collection of the extract, document that detail and submit the sample for re-extraction from reduced volume. Notify the group of this necessity and, based on the total volume loaded in the first extraction attempt, provide a suggested reduction factor (i.e., reduce volume 5X, 10X, 20X, etc.) for the re-extraction.

Settled Solids Observed to be ≥ 5% of Total Volume:

9) Shake the sample to thoroughly homogenize it, then immediately subsample 1 mL into a pre-labeled 50mL centrifuge tube and add reagent water to approximately 40 mL. At 5% solids, a sample contains 50,000 mg/L, so 1 mL contains 50 mg of solid material.

10) Spike the diluted subsample with EIS as normal and proceed with extraction.

11) If the SPE cartridge begins to clog during sample loading (see Identifying Cartridge Clogging section below), abandon loading of the remaining sample volume and proceed to the cartridge rinsing and drying described in step 10 of Section 9.3.4.

    a. Document the inability to load the entire sample volume due to cartridge clogging.

    b. The sample bottle rinse described in step 12 of Section 9.3.5 must be omitted; simply add the 5 mL of 1% methanolic ammonium hydroxide directly to the reservoir/cartridge.

    c. If the cartridge clog prevents the cartridge rinses or elution solvent from passing through the cartridge, document that an extract could not be collected for that sample.

12) If the cartridge clogs during extraction and causes failing results, the lab will contact the client and notify them that sample extraction failed due to the nature of the matrix, and that they must decide between two options for reprocessing the sample:

    a. Apply biosolid matrix protocols, following Sections 9.3.6 through 9.3.8 of this SOP. Use 0.5 g of sample for extraction; do not submit for % solids analysis and report results as ng/g, on a wet weight basis.

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b. Attempt to separate and analyze the aqueous and solid phases separately. If the client selects this option, follow the protocol detailed in Appendix I.

Identifying Cartridge Clogging

During the loading phase of the SPE process, some samples may cause their cartridges to clog, preventing the entire sample from being loaded through, and sometimes preventing an extract from being collected. If you have a sample that slows down considerably during the loading process, you may need to abandon loading the remainder of the sample. The goal is to stop the process before the cartridge seizes up completely, so that a sample extract can still be collected from the cartridge.

When Clogs Start

Some of the first visual indications of a cartridge becoming clogged include: discoloration of the cartridge frit and/or sorbent bed, reduced drip rate of the sample through the cartridge, and coloration or sedimentation on the bottom of the reservoir.

When a cartridge starts to clog, it is important to stop the process before the cartridge seizes up completely. Take the actions listed below; an evaluation must be made to decide whether each cartridge can reasonably be used further without seizing up completely.

- Do not continue to add any more sample volume to the reservoir of the clogging cartridge.
- If there is substantial volume remaining in the reservoir (i.e., > 10 mL) and the cartridge is in apparent imminent danger of seizing completely, close the manifold port to stop sample loading. Carefully remove the cartridge-adaptor-reservoir assembly for the sample in question and pour whatever sample volume remains in the reservoir back into the original sample bottle. This volume will be included in the evaluation of extracted sample volume (initial volume).
- If the reservoir on the clogging cartridge empties before the other samples have finished loading, close the manifold port to prevent the cartridge from drying.
- If sample volume remains in any of the slowed cartridges after the loading of the other samples is finished, close all the manifold ports and focus pressure on the slowed cartridge in an attempt to load the volume remaining in the reservoir. (Do this one at a time for multiple clogs.) If the cartridge appears to be in imminent danger of seizing up completely, do not attempt to load the volume remaining in the reservoir; follow the steps in the second bullet of this section.

Abandoning Sample Loading

If the decision is made to abandon sample loading, take the following actions. Some of these are partial duplicates of the actions listed in the section above.

- If any sample remains in the reservoir, carefully remove the cartridge-adaptor-reservoir assembly for the sample in question and pour whatever sample volume remains in the reservoir back into the

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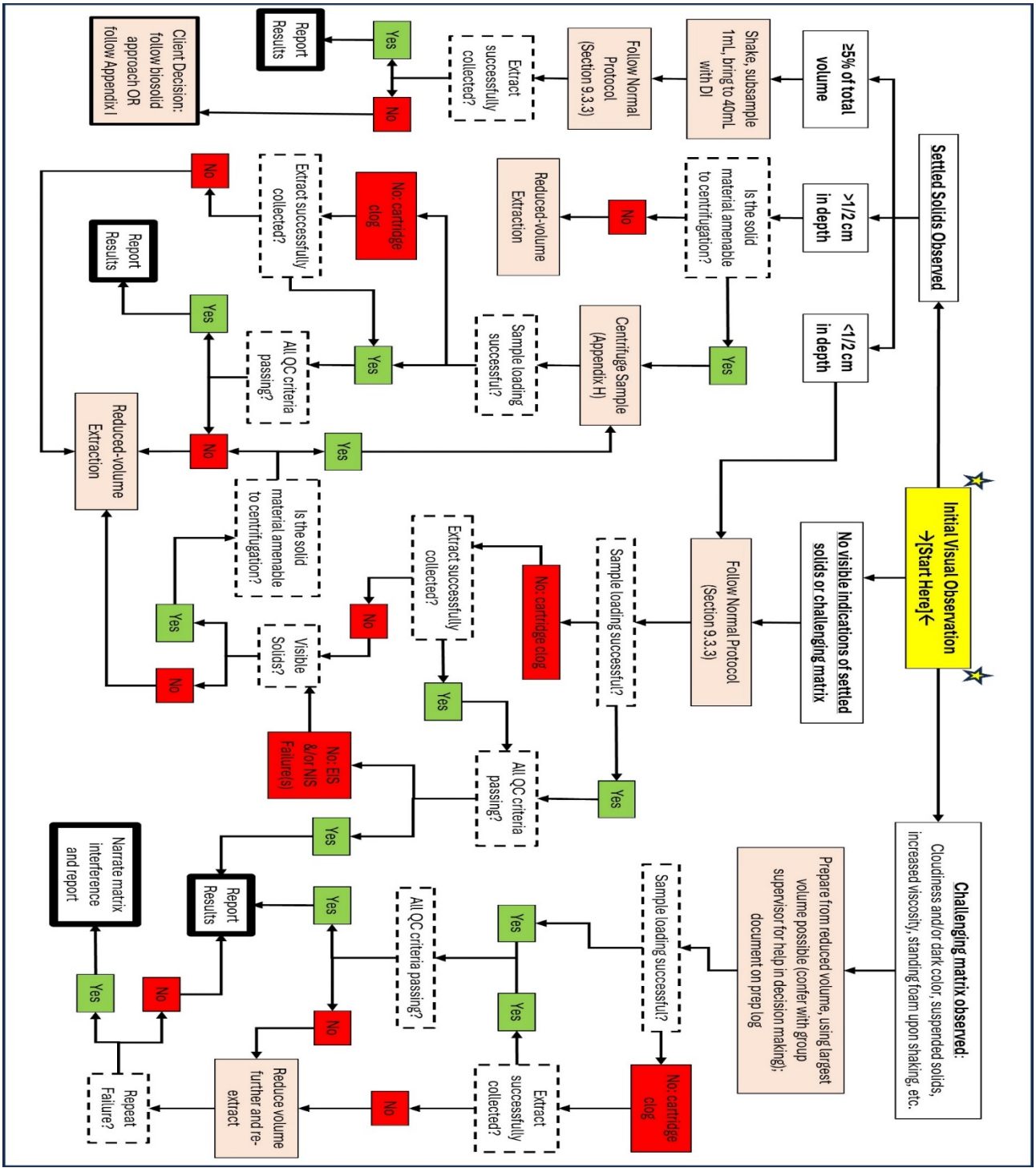
original sample bottle. This volume will be included in the evaluation of extracted sample volume (initial volume).

- Use the cartridge from the abandoned sample and finish the SPE process to collect what extract is available.
- The sample bottle rinse described in step 12 of Section 9.3.5 must be omitted; simply add the 5 mL of 1% methanolic ammonium hydroxide directly to the reservoir/cartridge.
- Weigh the sample in its original bottle to establish the “empty bottle” weight (aka post-extraction weight).

Fully Clogged Cartridges

Samples will have to be re-extracted when cartridges clog so fully that the extraction process cannot be taken to completion to collect a sample extract. Based on the total volume loaded in the failed extraction attempt, provide a suggested reduction factor for the re-extraction (i.e., reduce volume 5X, 10X, 20X, etc.) The sample should be shaken up before subsampling for the reduced volume re-extraction. However, for samples containing solids that are very fine and easily suspended, the analyst may consider allowing the sample to settle before subsampling an aliquot for reduced volume re-extraction; this may help prevent cartridge clogging in the re-extraction process.

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Appendix H: Aqueous Sample Centrifugation Protocol

Method 1633 states “laboratories may utilize other documented strategies for minimizing the disruptions due to SPE clogging and slow extractions,” and “a trained analyst should be able to distinguish samples with very low TSS and focus…on only those samples that might present a risk of clogging.” Therefore, whether an individual sample will require centrifugation for proper preparation will be determined and documented by the preparation analyst, following the guidance in Appendix G. Additionally, the method states “If centrifugation is used to prevent samples with high TSS from clogging the SPE, the EIS compounds must be spiked into the original sample container prior to centrifugation.” This protocol complies with that dictate.

1) Follow Appendix G to evaluate the sample for the presence of solids. Inspect the sample and consider the necessity of centrifuging.

2) If the sample is determined to require centrifugation/decantation, contemporaneously make a note on the prep batch log indicating this fact.

3) Spike samples requiring centrifugation in the same manner and with the same standard volume as samples which will not be centrifuged.

4) Label a 500mL conical centrifuge bottle with the sample ID for each sample that will be centrifuged. Set them in an appropriate rack with the caps removed.

5) Vigorously shake the spiked sample and then quickly pour it into the appropriately labeled centrifuge bottle. Try to ensure that the original sample bottle is devoid of any solid material after the transfer. Be careful to avoid spilling sample during the transfer process. Tightly cap each centrifuge bottle after transfers are complete.

6) Transfer capped centrifuge bottles to the centrifuge rotor, ensuring that the carousel is symmetrically balanced. Close the top and centrifuge at 3000 RPM (~2000 RCF) for 6 minutes.

7) Remove centrifuge bottles and decant the centrifuged liquid from the condensed solids by transferring it back into the original sample bottle. Try to avoid transferring any of the condensed solids from the centrifuge bottle back to the original sample bottle, while maximizing the amount of liquid collected in the sample bottle.

8) Weigh the full, decanted original sample bottle and document in the prep batch log.

9) Extract the decanted sample as normal alongside un-centrifuged samples, through the cartridge rinsing and drying (step 10 of Section 9.3.4).

10) When the SPE cartridges have been dried, rinse the original sample bottle following the protocol in step 12 of Section 9.3.5. Additionally, add 5mL of 1% methanolic ammonium hydroxide (1%-MeOH) to each centrifuge bottle to rinse the inside of them as well as the solids they contain. If the condensed solids become re-suspended while rinsing the bottles, centrifugation may be required. Using a transfer pipet or mechanical pipet, transfer the 1%-MeOH rinse from the centrifuge bottle into the reservoir/SPE cartridge and elute with the original sample bottle rinse into a 15mL conical centrifuge tube.

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11) Add 5 mL of additional 1%-MeOH directly to the SPE reservoir of all batch QC samples (MB/LCS/LLLCS) and elute with the normal bottle rinse. This is to match the volume used for elution of centrifuged field samples in the prep batch.

12) After elution, all sample extracts (client and QC) with additional elution volume shall be concentrated to ~3.5 mL and brought to a final volume of ~4 mL with 1%-MeOH. Concentrate each extract at approximately 55 ºC with N2 flow of approximately 1.2 L/min. Use a reference elution tube to reconstitute to the appropriate volume, like the protocol in step 8 of Section 9.3.6 of this SOP. This extract concentration and reconstitution must be done BEFORE adding acetic acid and NIS to the extracts, as directed in step 14 of Section 9.3.5.

13) Weigh the empty bottle with the cap on and subtract that from the weight of the bottle with sample, determined in step 8 of this appendix, to determine initial sample volume.

14) Add 25 µL of concentrated acetic acid and 20 µL of NIS mix to each sample extract in its collection tube and vortex to mix. Transfer a portion of each extract into an autosampler vial for LC-MS/MS analysis. Cap the collection tubes containing the remaining extracts and store at 0 - 6 °C.

15) Generate a narrative statement noting which samples in the prep batch included centrifugation in the extraction process. Include any additional observations and/or deficiencies that were noted during the centrifugation or extraction process, particularly if any issues were encountered during the sample loading step of the SPE process.

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Appendix I: Separation & Analysis of Liquid-Solid Biphasic Matrices

Method 1633 states “laboratories may utilize other documented strategies for minimizing the disruptions due to SPE clogging and slow extractions, including centrifuging the sample before adding the EIS and treating the supernatant aqueous phase and the solid phase as separate samples.” This will be done only according to client direction or project requirement; see Appendix G for more information regarding management of solids in aqueous samples.

1) If the client has requested to have the sample separated into aqueous and solid phases for analysis, the sample must be logged into the LIMS system separately for both matrices. The resulting solid phase will be reported on a wet weight basis and will not be analyzed for percent solids (aka percent moisture).

NOTE: The LOQ for the resulting solid analysis will depend on the amount of solid material available after decanting – the lab will use ~5 g of material if available, but any reduction in available solids will result in an increase in the reported LOQ.

2) Label a 500mL conical centrifuge bottle with the sample ID for each sample that will be centrifuged. Set them in an appropriate rack with the caps removed.

3) Vigorously shake the sample and then quickly pour it into the appropriately labeled centrifuge bottle. Try to ensure that the original sample bottle is devoid of any solid material after the transfer. Be careful to avoid spilling sample during the transfer process. Tightly cap each centrifuge bottle after transfers are complete.

4) Transfer capped centrifuge bottles to the centrifuge rotor, ensuring that the carousel is symmetrically balanced. Close the top and centrifuge at 3000 RPM (~2000 RCF) for 6 minutes.

5) Remove centrifuge bottles and decant the centrifuged liquid from the condensed solids by transferring it back into the original sample bottle. Try to avoid transferring any of the condensed solids from the centrifuge bottle back to the original sample bottle, while maximizing the amount of liquid collected in the sample bottle.

6) Weigh the full, decanted original sample bottle and document in the prep batch log.

7) Extract the decanted aqueous sample as normal alongside un-centrifuged samples, starting with EIS addition.

8) Label a 50 mL centrifuge tube with the sample ID for each solid phase sample generated from phase separation. Using a wooden tongue depressor or a pre-cleaned metal scoopula, transfer the solid material from the decanted 500 mL centrifuge bottle to the labeled 50 mL tube, targeting 5 g of total sample mass. Record the sample mass transferred to the 50 mL tube – this will be the extracted sample mass used for calculations and reporting. In many cases, re-extraction will not be possible due to limited solid material.

9) Spike the collected solid material with EIS and extract as normal alongside solid samples which were not generated from phase separation.

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Appendix J: TCLP/SPLP by 1633

Clients may submit samples (solid or aqueous) for PFAS following TCLP or SPLP procedures. For solid samples, the TCLP and SPLP procedures are used to simulate the leaching of environmental contaminants over extended periods of time from a solid material into the environment. A subsample of the client's sample is weighed out and combined with a leaching solution and mechanically tumbled for a set period. Each leachate prep method (TCLP: Method 1311 or SPLP: Method 1312) employs a unique leaching solution dictated by the parent methods. After the sample has been tumbled/leached by the Organic prep department, the leachate is filtered by the Organic Prep department and delivered to the PFAS sample holding area. The PFAS department is notified by email when the leachate solutions are ready for PFAS prep. The filtered leachate solutions are prepared by the PFAS prep analysts using the 1633 aqueous prep method, at a 1:5 dilution (100 mL of leachate solution).

1) Samples requested for PFAS by SPLP/TCLP analysis will be batched and leached by the normal SPLP/TCLP procedures used by the Westborough Alpha Organic Prep department. Organic Prep will be the initial responsible party for samples analyzed for PFAS by SPLP/TCLP.

2) When the leaching process is complete, Organic Prep will collect approximately 500mL (at minimum 100mL) of the leachate solutions in clean HDPE containers provided by the Emerging Contaminants department.

3) After collecting the leachate solution, an Organic Prep analyst will filter approximately 500 mL (at minimum 100mL) of each leachate solution using a Flipmate apparatus, using normal protocols for Flipmate filtration.

4) After filtering the leachates, the Organic Prep analyst will deliver the filtrates to the Sample management department for transport to the Emerging Contaminants Department (EC) at the Alpha Mansfield Facility. Leachates will be transferred to the EC department's designated sample storage refrigerator.

5) Samples to be analyzed for PFAS following TCLP/SPLP will appear on a separate PFAS prep worklist, the title of which will contain "SPLP" or "TCLP." From these worklists, PFAS analysts will select the samples to be extracted.

6) Pour ~100 mL of filtrate solution into a pre-labeled HDPE PFAS sample bottle, using the gradations marked on the bottle as a guide. Record the actual amount of filtrate by weighing the sample bottle. LOQs for samples prepared in this way will be ~5X higher than normal Aqueous matrix LOQs.

7) Following the instructions in step 7, use the leachate blank solution (typically has sample ID L0000000-01) to prepare three bottles for use as batch QC. Volume for the leachate blank, LLLCS, and LCS will be recorded as 100 mL.

8) Label and fill a clean 125 mL HDPE bottle with ~125 mL of pre-tested reagent water for use as a typical 1633 MB sample. Volume for the 1633 MB sample will be recorded as 100 mL.

9) After preparing the diluted filtrate, filtrate batch QC, and 1633 MB bottles, follow the normal extraction steps for aqueous matrices. Each sample will be spiked with EIS as normal. The filtrate

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LLLCS and LCS will be spiked with target analytes according to the routine aqueous protocol for LLLCS and LCS target spiking.

10) Leachate batch QC (MB/LLLCS/MS/MSD) are documented in LIMS as leachate blank (MB), and LLLCS (LCS).

11) Following the SPE process, the instrumental analyst will analyze the extracts by the 1633 method, as normal.

12) After processing, reviewing, generating reports for the data, and importing the data into LIMS, the TCLP/SPLP tumble date must be input into the analytical results from the leachate logs.

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Appendix K: Surface Wipe PFAS Analysis by 1633

Clients may submit wipe samples for PFAS analysis by 1633; wipes can be used as a proxy measurement of surface contamination in production facilities, labs, etc. The lab provides sampling kits for users which consist of a 50 mL centrifuge tube paired with a packaged ghost wipe for each surface to be sampled (ghost wipes: Environmental Express Part# SC5000). The wipe is used to swab a defined area of the surface or item of interest and is placed in the accompanying centrifuge tube, which is then capped, labeled, and shipped back to the lab for preparation and analysis.

Used wipe samples are prepared directly in the container in which they are received, following the protocols for solid matrices described in Sections 9.3.6 through 9.3.8; analysis follows normal 1633 routines. No correction will be made for percent solids, and results are reported as ng/wipe.

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Appendix L: Articles of Commerce Analysis via Cryomill Processing

Clients may submit samples of various consumer product materials and 'articles of commerce' for analysis of PFAS contained in the products. To effectively mobilize any PFAS that may be present within the structure of the material, samples must be milled to a fine powder using a cryogenic mill (or Cryomill).

This appendix provides strategies for processing samples obtained from an article of commerce. Common techniques are covered for mechanical size reduction of articles and their sub-units or portions thereof prior to the determination of PFAS in the article or article components via extraction and quantitative analysis. Polymer powders, nanomaterials, fibers, pastes, fluorinated ionomers etc. may not require size reduction if they are known to be sufficiently homogenous and more than 95% of the material passes a 250 µm sieve. Examples of common articles requiring milling prior to extraction and analysis are compacted cakes, melt extruded pellets and molded articles, elastomers and agglomerates, coated wire, textiles, paper, leather, food, and LDPE and polypropylene.

The user shall elect to apply one or more of the approaches, or compendium of approaches, to create homogenous samples suitable for extraction and analysis. Selection of the appropriate technique(s) depends on the article. Alternative methods of mechanical sample preparation can be used, provided that the required particle size (avg. particle size approx. 100 µm) of the sample is achieved without contaminating or compromising the sample.

Sample Processing Equipment and Materials

The following sample processing equipment and materials are required, subject to the type of material being prepared. Conditions for cryogenic fine milling are provided for the Retsch CryoMill, however, alternative cryomilling equipment like the SPEX ® Freezer/Mill may be used for most products.

1) Scissors, heavy plate shears or RetschTM ZM 200 Grinding Mill (Centrifugal Mill) with 6 or 12 tooth stainless steel (SS) rotor and 1 mm stainless steel bottom sieve.
2) Retsch CryoMill (Ball Mill), with SS grinding cartridge and 25 mm grinding ball (50 mL grinding cartridge, 5 g fill), or equivalent cryogenic mill capable of grinding to approximately 100 µm particles.
3) Cleaning brushes (different sizes) and polishing cloths, or cotton balls/swabs
4) Liquid nitrogen (LN2)
5) High purity methanol and ASTM Type I water for cleaning mill parts
6) Ventilated hood, to minimize exposure to fine particles/dusts/aerosols and chemical vapors
7) Ventilated drying oven capable of > 200°C
8) Precision sieves and accessories, nickel mesh, 50 µm and 150 µm sizes

Manual Cutting

If possible, manual cutting with pre-cleaned shears or scissors is suitable for rough cutting and preparation of samples for further reduction by grinding, etc. Recommended maximum sample size is 10

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x 10 mm but will depend on the specification of the equipment used in the subsequent preparation processes.

Fine Grinding by Cryomill

Fine grinding via cryomill is suitable for further mechanical breakdown of samples, grinding material to pieces ~100 µm in diameter. Be careful not to allow the LN2 to come into direct contact with the sample to prevent spattering and sample loss. Thorough cleaning of the mill components between samples is crucial to avoid cross-contamination; see steps 7-11 below for details.

Cryomilling will be performed using a Retsch CryoMill (ball mill) with automatic LN2 feed, as described below:

Sample Type[1]	Cycles	Preset	Frequency (Hz)	PCT (minutes)	MT (minutes)	ICT (minutes)
Elastomers (FKM, FFKM, FEPM, and agglomerates)	1	1	30	Auto	2	NA
Compacted Cake	5	NA	30	Auto	2	2
Melt Extruded Pellets and Molded Articles	7	2	30	Auto	4	2
Coated Wire	3	3	30	Auto	2	2
Textiles, Paper, Leather	3	4	25	10	2.5	0
Food (meat, cheese)	1	5	25	8	2	NA
LDPE and PP	2	6	25	10	2	2

[1] *In most applications, a feed mass of 5 g is used.*
PCT: Precooling time (automatic set)
MT: Milling time
ICT: In-between cooling time

1) In the case of FFKM compounds and articles, care must be taken to avoid excessive energy input as it may lead to cryo-mechanical degradation of the polymer and the creation of mechanoradicals, which can inflate the amount of target substance detected. Filling levels will impact the energy applied in the grinding process and can inflate test results as well.

2) In the case of cured FFKM elastomeric articles, pulverizing the product in a 2-roll mill as commonly used for compounding of elastomers can be an alternate sample preparation method to avoid or reduce the risk of mechanical degradation. Alternative methods for FFKM compounds and articles that do not require cryo-grinding are being investigated.

3) Cryogenically mill the sample powder and sweep out the milled material to collect all the powder. The collected plastic-based sample material should be precision sieved to obtain a sufficiently homogeneous portion of known particle size range of 50 µm to 150 µm, by first sieving material

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through the 150 µm sieve, then the 50 µm sieve (keep contents captured on 50 µm sieve). Size range is 100 + 50 µm (i.e. ~ 100 µm).

4) The collected FKM-, FFKM- and FEPM-based samples are visually inspected for homogenous size, verification via light-scattering is beneficial. Sieving of the samples is not recommended due to materials' elastomeric nature and the potential for particles to re-agglomerate into larger segments over time.

NOTE: Freshly cryomilled samples should either be extracted ASAP (same day) OR placed under frozen conditions (-10° C) ASAP and held under frozen conditions until ready to extract.

5) Make sure to follow the User Manual for installing and removing the grinding jar. This includes the two lock rings on the left side of the mechanism.

    a. Make sure outer LOCK RINGS are loosened.

    b. Screw in the grinding jar (from the right side of the mechanism). Tighten with black plastic tightening aid.

    c. TIGHTEN TWO LOCK RINGS: Outside ring tightened first (hand-tighten only); inner ring tightened second (snug), using the tool.

    d. Perform grinding cycle.

    e. LOOSEN THOSE TWO LOCK RINGS: Inside ring loosened first, outer ring loosened second. To loosen either ring, the tool will be needed because of icing.

    f. Unscrew grinding jar.

    g. When cryomill is not in use, make sure to replace the cooling jacket seal.

6) For extraction of cryomilled materials, follow the solid matrix extraction protocol listed in Sections 9.3.6-9.3.8, using 2 g as the target sample mass instead of 5 g. Sample results will be reported as ng/g, with no moisture correction.

Cleaning Procedure for Mill Components

Thorough cleaning of the mill components between samples is crucial to avoid cross-contamination. The following cleaning procedure is recommended.

7) Remove residual polymer thoroughly with DI water and brush.

8) If necessary, wipe away last polymer residue with clean polish cloth or cotton ball/swab.

9) Rinse all parts with methanol, use an ultrasonic bath as needed.

10) Rinse all parts with DI Water, use an ultrasonic bath as needed.

11) Repeat steps 7-10 as needed.

Analysis and Holding Time

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Matrix	Routine Container	Minimum Sample Amount	Preservation	Holding Time
Fluoropolymers, molded articles, coated wire, pellets, or other Articles of Commerce[1]	Any container or packaging that does not contain PFAS. Target container is a 125 mL PFAS container; however, clients will often send in Ziploc bags or other packaging.	5 g (target weight for clients to send is 20 g).	Can be shipped at any temperature (being an Article of Commerce). Once received in the lab: <6°C (prior to cryomill) Once cryomilled: Frozen Extract storage: <6°C	Sample receipt (or dated collected)[2] to cryomill: 1 year From cryomilling to extraction: 14 days Once extracted: 30 days

[1] Almost any "solid" material is applicable to this approach, as long as it can be manually coarse cut to approximately 5-10 mm in size (half a pea). If the matrix is soft (e.g., gummy bear), a larger feed size can be used.

[2] Often clients do not include "date collected." If none provided, "date collected" becomes "date received."

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Appendix M: Procedure for Total Oxidizable Precursors (TOP)

The following modifications to the referenced SOP are as follows:

Section 7: Water Bath – Capable of monitoring recording to .1 C maintaining 85 C.

Section 8.1: Sodium Hydroxide (NaOH, CAS#: 1310-73-2) – High purity, demonstrated to be free of analytes and interferences.

Potassium Persulfate ($K_2S_2O_8$, CAS#: 7727-21-1) - High purity, demonstrated to be free of analytes and interferences.

Hydrochloric Acid (HCl, CAS#: 7647-01-0) - High purity, demonstrated to be free of analytes and interferences.

Additional table to be added to Section 8

Table 1

Isotope Labeled Standard	Conc. Top Surr Stock (ng/mL)	Vol. of Top Surr Stock (µl)	Final Vol. of Top Surr PDS (mL)	Final Conc. of Top Surr PDS (ng/mL)
$^{13}C_2$-PFOA	50,000	40	4.0	500
$^{13}C_2D_4$-4:2FTS	50,000	80	4.0	1000

For Aqueous samples, prior to Section 10 of SOP 45852, add to each 125 ml sample with Potassium Persulfate until 60 mM (about 2 grams). Add Sodium Hydroxide until the sample is 125 mM (about .625 grams).

Sample should have a pH >12.

Fortify each sample with 20 µl of TOP pre-assay surrogate containing 1 negative control surrogates and 1 positive control surrogates from table 1.

Place sample in a water bath at 85 C for 6 hours.

Remove sample from water bath and adjust pH 6-8 with Hydrochloric Acid.

Following pre-treatment, follow the aqueous extraction protocol from section 10 of SOP 45852 unaltered.

Section 11, An additional calculation is added for the final reporting of the TOP assay results.

TOP Assay = Result of Post TOP assay extraction – Result of analysis from Pre-Top Assay extraction.

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APPENDIX D
Community Air Monitoring Plan

New York State Department of Health Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area and when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.
Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a **continuous** bases or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment

should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored **continuously** at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m3 of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative-pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

- If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Background readings in the occupied spaces must be taken prior to commencement of the planned work. Any unusual background readings should be discussed with NYSDOH prior to commencement of the work.

- If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m3 or less at the monitoring point.

- Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work with Co-Located Residences or Facilities

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under “Special Requirements for Work Within 20 Feet of Potentially Exposed Individuals or Structures” except that in this instance “nearby/occupied structures” would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g. weekends or evenings) when building occupancy is at a minimum.