Jay-Hague Site (#C828216)
485 Hague Street
City of Rochester
Monroe County, New York

Interim Remedial Measures
Construction Completion Report

Prepared for:

Jay Hague Properties, LLC
12 Walnut Hill Drive
Penfield, New York 14526

Prepared By:

Joseph C. Lu Engineering PC
339 East Avenue, Suite 200
Rochester, NY 14604

January 2023

Lu Project No. 50380-01

Certification

I, Michael E. Hanscom, P.E., certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Interim Remedial Measure Work Plan was implemented and that all construction activities were completed in substantial conformance with the DER-approved work plan.

If the Interim Remedial Measure Work Plan identifies time frames to be achieved by the remedial program, the certification must include: The data submitted to DER demonstrates that the remediation requirements set forth in the Interim Remedial Measure Work Plan and all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, are established in the work plan.

Michael E Hanscom
Signature

January 18, 2023
Date

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1.0 Introduction & Site Background

Lu Engineers has developed this Construction Completion Report (CCR) on behalf of Jay Hague Properties, LLC, for submission to the New York State Department of Environmental Conservation (NYSDEC) Region 8 Division of Environmental Remediation. The selected scope of work included limited surface soil excavation and installation of a soil cover system along portions of the eastern façade of existing buildings located at 485 Hague Street.

The Site is currently listed in the New York State Brownfield Cleanup Program (BCP) as Site #C828216. The cover system was installed to address elevated levels of polycyclic aromatic hydrocarbons (PAHs) in surface soils located within two (2) discrete greenspace areas along the eastern property line. The PAH impacts were identified as part of the Site Remedial Investigation (RI) and have generally been attributed to the urban setting of the Site and industrial history of the surrounding neighborhood.

All work described herein was performed in accordance with NYSDEC approved Interim Remedial Measures (IRM) Work Plan, dated June 2022. The IRM Work Plan has been prepared in accordance with NYSDEC procedures set forth in DER-10 *'Technical Guidance for Site Investigation and Remediation,'* dated May 2010, and complies with all applicable Federal, State, and local laws, regulations, and requirements.

1.1 Site Location

The Site is located at 485 Hague Street in the City of Rochester, New York, at the northwest corner of the intersection of Jay and Hague Streets. According to the City of Rochester Online Zoning Map, the Site is located within an urban area, and is comprised of approximately 1.36-acres of land zoned for industrial use. The Site is listed as parcel 105.80-1-13.001, which consists of 485 Hague Street and a rectangular portion of a parcel formerly listed as part of 1030 Jay Street (acquired in 2009) (Figure 2).

1.2 Site History

The Site has been occupied by Woerner Industries, LLC (formerly Woerner Industries Inc.), a furniture manufacturing company, since the 1970s. Records indicate the Site has historically been utilized as a machine shop, metal stamping and fabrication shop, tool manufacturing operation, and a furniture manufacturing facility.

Historical use of the Site is summarized below:

1892-1912:
The Site was developed with a residential dwelling

1912-1950:
The Site was developed with a residential dwelling, along with several lumber storage buildings.

1950-1970:
Developed with a dwelling, a woodworking shop (current Building 1), machine shop (current Building 2), including one (1) underground storage tank (UST).

1970-present:
Developed with a woodworking shop (current Building 1), and a machine shop (current Building 2).

1.3 Previous Investigations

From 1999 through 2017, a series of environmental assessments and investigations were conducted relative to the Site including:

- Phase I Environmental Site Assessment (ESA); February 1998 by C & O Technologies
- Phase II ESA; March 1998 by C & O Technologies
- Phase I ESA; December 1998 by C & O Technologies
- Phase I ESA (1030 Jay Street); February 2001 by Sear-Brown
- Phase II ESA (1030 Jay Street); February 2001 by Sear-Brown
- Remedial Activities Report (1030 Jay Street); January 2009 by Passero Associates
- Phase I ESA; September 2016 by LaBella Associates
- Phase II ESA; November 2016 by LaBella Associates
- Phase II Supplement; March 2017 by LaBella Associates
- Remedial Investigation; March 2021 by Lu Engineers

Brief descriptions of each of these investigations and assessments are provided in the Remedial Investigation Work Plan (RIWP) and Remedial Investigation Report (RIR).

2.0 Nature and Extent of Contamination

Surface soil samples were collected during the RI at two (2) bare/uncovered locations of the Site (SS-01 and SS-02), for analysis of:

- semi-volatile organic compounds (SVOCs) by United States Environmental Protection Agency (EPA) method 8270;
- volatile organic compounds (VOCs) by EPA method 8260;
- Resource Conservation and Recovery Act (RCRA) metals by EPA method 6010;
- pesticides/herbicides by EPA method 8081;
- polychlorinated biphenyls (PCBs) by EPA method 8082; and
- per/poly fluoroalkyl substances (PFAS) by EPA method 537.

Surface soils observed within the greenspace areas primarily consisted of topsoil (predominantly sand and silt). Analytical results for surface soil samples were compared to the NYSDEC Soil Cleanup Objectives (SCOs) presented in 6 New York Code Rules and Regulations (6 NYCRR) Part 375-6.8(a) and (b) (effective December 14, 2006).

Several SVOCs, specifically PAHs, were identified in exceedance of both Industrial Use SCOs and Protection of Groundwater Standards (PGSCOs). Surface soil analytical results for all other analyzed parameters (VOCs, PCBs, herbicides, and PFAS) were detected below Unrestricted Use SCOs. Sampling of additional environmental media (i.e., subsurface soil, groundwater, & soil vapor) during the RI did not identify conditions necessitating remedial action. Based on sampling and analytical results observed during the RI, IRM work discussed herein was limited to the greenspace areas to address PAH exceedances of Industrial Use criteria.

3.0 Remedial Action Objectives

Based on the results and findings of the RI, the following soil Remedial Action Objectives (RAOs) were identified:

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil.
- Prevent migration of contaminants that would result in groundwater or surface water contamination.

4.0 Description of the Selected Remedy

The following IRM scope of work was selected based on identified RAOs, the present and intended use of the Site, investigations conducted at the Site to date, and coordination with the NYSDEC:

- Pre-IRM utility stakeout
- Soft (pneumatic/vacuum) excavation of soil/fill exceeding the Industrial Use/Protection of Groundwater (POG) soil cleanup objectives (SCO) to a maximum depth of 1-foot below ground surface (bgs).
- Demarcation barrier placement (synthetic orange snow fencing material) overlain by 1-foot of clean fill (i.e., topsoil) over the entire landscape areas to prevent human exposure to remaining contaminated soil/fill remaining at the Site.
- Surface restoration (i.e. re-grading, re-seeding/mulching as necessary).
- Disposal of excavated soils in accordance with applicable regulatory criteria.

All IRM work was completed in accordance with Lu Engineers' IRM Work Plan dated June 2022.

4.1 Governing Documents

In accordance with the approved work plan, monitoring of the work area and screening of soils was conducted throughout the duration of field activities to ensure the safety of on-Site workers and the general public.

Health and Safety Plan

A copy of the Site-Specific Health and Safety Plan (HASP) is provided as Attachment A of the approved work plan. The HASP was reviewed by all employees visiting the Site before commencement of IRM work. Monitoring of the work area and screening of soil and groundwater was be conducted throughout the duration of IRM activities using a MiniRAE 3000® PID equipped with a 10.6 eV lamp, as necessary. All workers that took part in IRM activities possessed Occupational Health and Safety (OSHA) 40-Hazardous Waste Operations (HazWOPER) certifications.

Community Air Monitoring Plan

Continuous air monitoring was conducted at upwind and downwind locations during all ground intrusive activities during IRM work, consistent with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP). Particulate and vapor monitoring of the work areas was conducted using a TSI Dust Trak™ II aerosol monitors and PID, respectively.

A special requirements CAMP was also implemented due to the close proximity of the work zone to occupied Site structures. Based on observations and screening during IRM work, the use of engineering controls such as vapor/dust barriers or special ventilation devices was determined to not be necessary. Air monitoring data is included as Attachment A.

Quality Assurance Project Plan
Characterization testing of imported topsoil was performed by Eurofins TestAmerica Inc., an independent, NYSDOH ELAP approved laboratory. Sampling and equipment decontamination was conducted in accordance with the Quality Assurance Project Plan (QAPP), included as Attachment B of the approved work plan.

5.0 IRM Implementation

Sun Environmental Corp. (Sun) was contracted to conduct IRM field operations with oversight from Lu Engineers; prior to implementation, an Underground Facilities Protective Organization (UFPO) stakeout was called in to verify the presence and location of potential nearby subsurface utility lines.

Due to the proximity of the work area to the public right of way, perimeter fencing and signage was erected to facilitate Site control prior to any intrusive soil work. Photographs of IRM implementation are included as Attachment B.

5.1 Excavations

As discussed in the work plan, multiple healthy red maple and alder trees are situated within the areas subject to IRM work. Based on correspondence with the NYSDEC, the scope of work was designed to protect the health and quality of the trees. 'Soft-dig' methods (i.e., compressed air and vacuum extraction) were utilized for all IRM excavations to prevent unnecessary damage to the tree roots.

Sun mobilized to the Site on August 30, 2022, to commence soft excavation of surface soils within the IRM work areas. Prior to vacuum extraction, a pneumatic air spade was utilized to loosen soils and facilitate removal. Plywood sheets were placed over nearby windows and a safety cone was utilized on the end of the air spade as a shield to mitigate potential blowback of subsurface material. Once the soils were adequately loosened, a vacuum truck was used to extract soils from the work areas.

In accordance with the approved work plan, excavations were advanced up to a maximum depth of 1-foot bgs, as permitted by the network of tree roots. After attaining the maximum depth allowable by the trees and/or roots, a demarcation layer consisting of chemically inert polyethylene barrier fencing was placed within the excavation areas to serve as a visual indicator prior to backfilling.

5.2 Backfilling and Restoration

A total of 18-cubic yards of clean topsoil was imported from Syracusa Sand and Gravel Inc. to backfill the excavations and serve as the soil cover system. Prior to placement, imported materials were characterized in accordance with requirements outlined NYSDEC DER-10 *'Technical Guidance for Site Investigation and Remediation'* Table 5.4(e)10, as summarized below:

Contaminant:	**VOCs**	**SVOCs, Metals, PCBs, Pesticides, Cyanide**	
Soil Quantity (yd^3)	Discrete Samples	Composite Samples	Note:
0 - 50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis

After collection, characterization samples were stored on ice and relinquished to Europhins TestAmerica Inc., NYSDOH ELAP approved laboratory. All sample analytical results were below Unrestricted Use criteria; refer to the attached tables. A copy of the laboratory analytical report is included as Attachment C.

Prior to and during placement, imported materials were inspected for evidence of contamination (visual, olfactory observations) and screened with a PID by qualified Lu Engineers personnel. After backfilling, soils were hand compacted to achieve a stable and homogeneous cover system that is free of stratifications, lenses, or voids.

IRM work areas were re-seeded with a lawn seed mix after final grading to stabilize the cover system and prevent potential future erosion. A typical cover system detail is included as Figure 3.

5.3 Disposal

Approximately 18-cubic yards of vacuum excavated soils were stockpiled on and covered by a double layer of polyethylene sheeting withing the fenced-in secured boundary of the Site. A non-hazardous waste profile was established with Republic Services Inc. using Site data generated during the RI. On December 02, 2022, Trec Environmental Inc. mobilized a wheeled loader to the Site to load the stockpiled soils into two (2) dump trucks for off-Site transport to an appropriately permitted receiving facility located in Niagara Falls, New York.

A total of 12.45-tons of soils were excavated and disposed of at Republic Service's facility located at 5600 Niagara Falls Boulevard (refer to Attachment D).

6.0 Deviations from the Work Plan

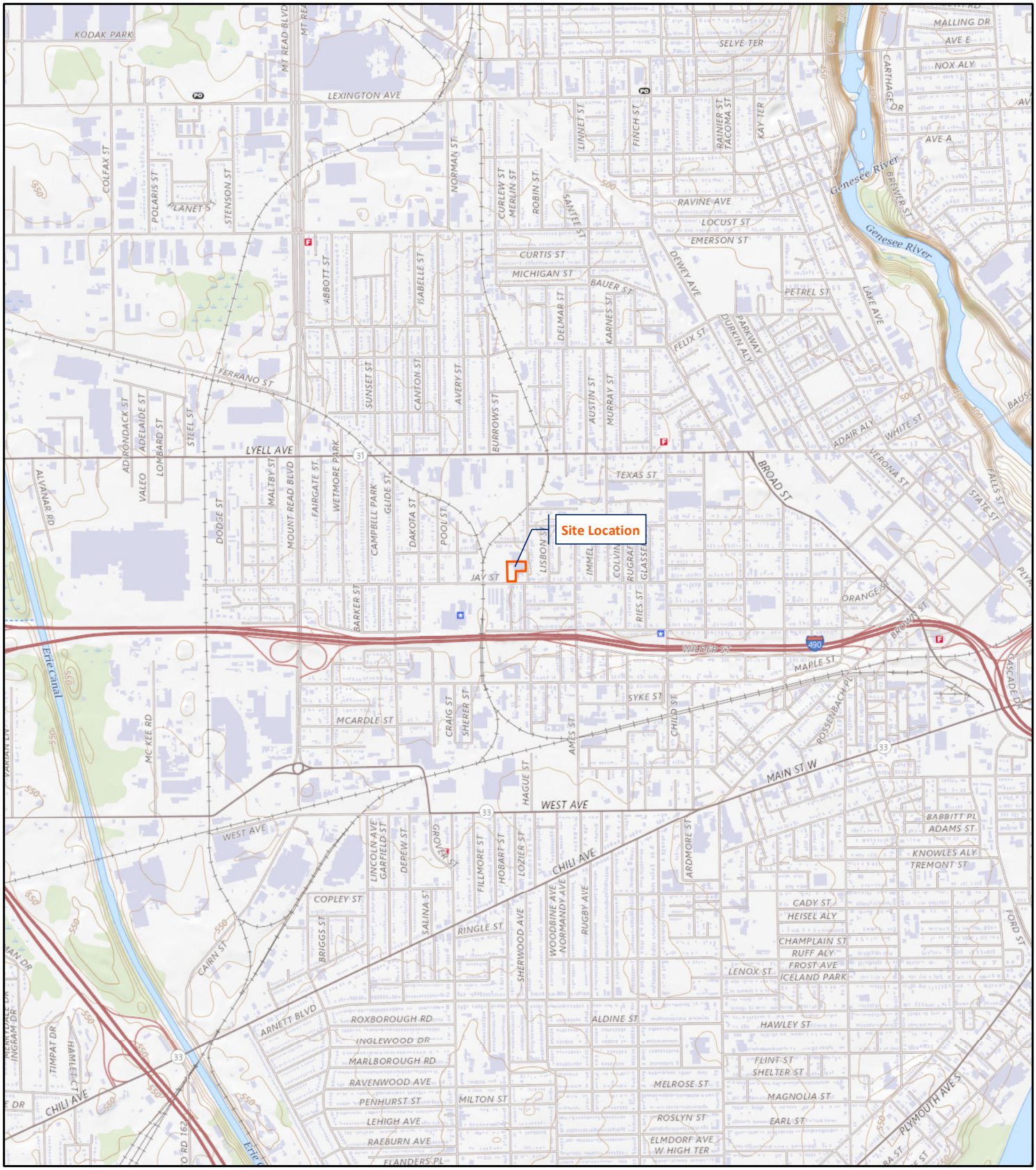
As described in Section 5.1, due to the presence of the trees and their associated roots, excavation and placement of 1-foot of cover system was not practicable across the entirety of the IRM work areas. After attaining the maximum permissible excavation depth as agreed upon by Lu Engineers and NYSDEC field personnel, the average soil cover system thickness was calculated to range between 6 and 12-inches. Based on observations made by Lu Engineers and NYSDEC field personnel, it was concluded that additional excavation would require the complete removal of all trees and roots within the work areas.

It was determined by project stakeholders that the proximity of the trees to Site buildings and overhead electrical power lines, as well as the potential for sidewalk uplift and damage to nearby gas lines during root extraction, would present hazards to Site workers that do not justify the added risk or additional associated costs. Additionally, removal of the trees would not conform with NYSDEC green remediation principles and objectives, as discussed in the RI Report.

7.0 Conclusions

The IRM efforts described herein have achieved RAOs outlined in Section 3.0. The Site remedy requires that an environmental easement be placed on the property to (1) implement, maintain and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to commercial and industrial uses only.

Additionally, a Site Management Plan is being developed and will outline requirements for periodic monitoring and inspection of the Site and soil cover system.



Scale 1: 24,000

Contour Interval: 10-feet

1,000 0 1,000 2,000 4,000

Feet

N

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Figure 1. Site Location Map Jay-Hague Site (#C828216)
RAA Report
485 Hague Street, Rochester NY

DATE: May 2022
PROJECT #: 50380
DRAWN/CHECKED: BGS/GLA
DATA SOURCE: USGS Topo Basemap from ArcGIS Online

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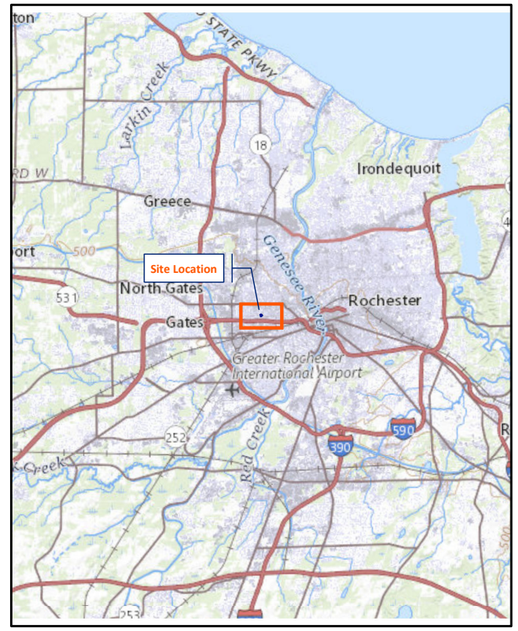

Figure 2.
Site Plan

Project:
Jay-Hague Site (#C828216)
IRM CCR

Location:
485 Hague Street
City of Rochester, Monroe County, NY

Legend

- Site Boundary
- Parcel Boundary
- Former Paint Storage Building
- Extraction Well
- Monitoring Well
- Mini-well

N

1 inch=40 feet

0 20 40 80 Feet

Drawn/Checked By: BGS/GLA
Lu Project Number: 50380
Date: January 2023
General: 1. Coordinate System: NAD 1983 State Plane NY West FIPS 3103 Feet 2. Orthoimagery (April 2021) downloaded from Pictometry 3. Scale: 1:480 (original document size 11"x17")

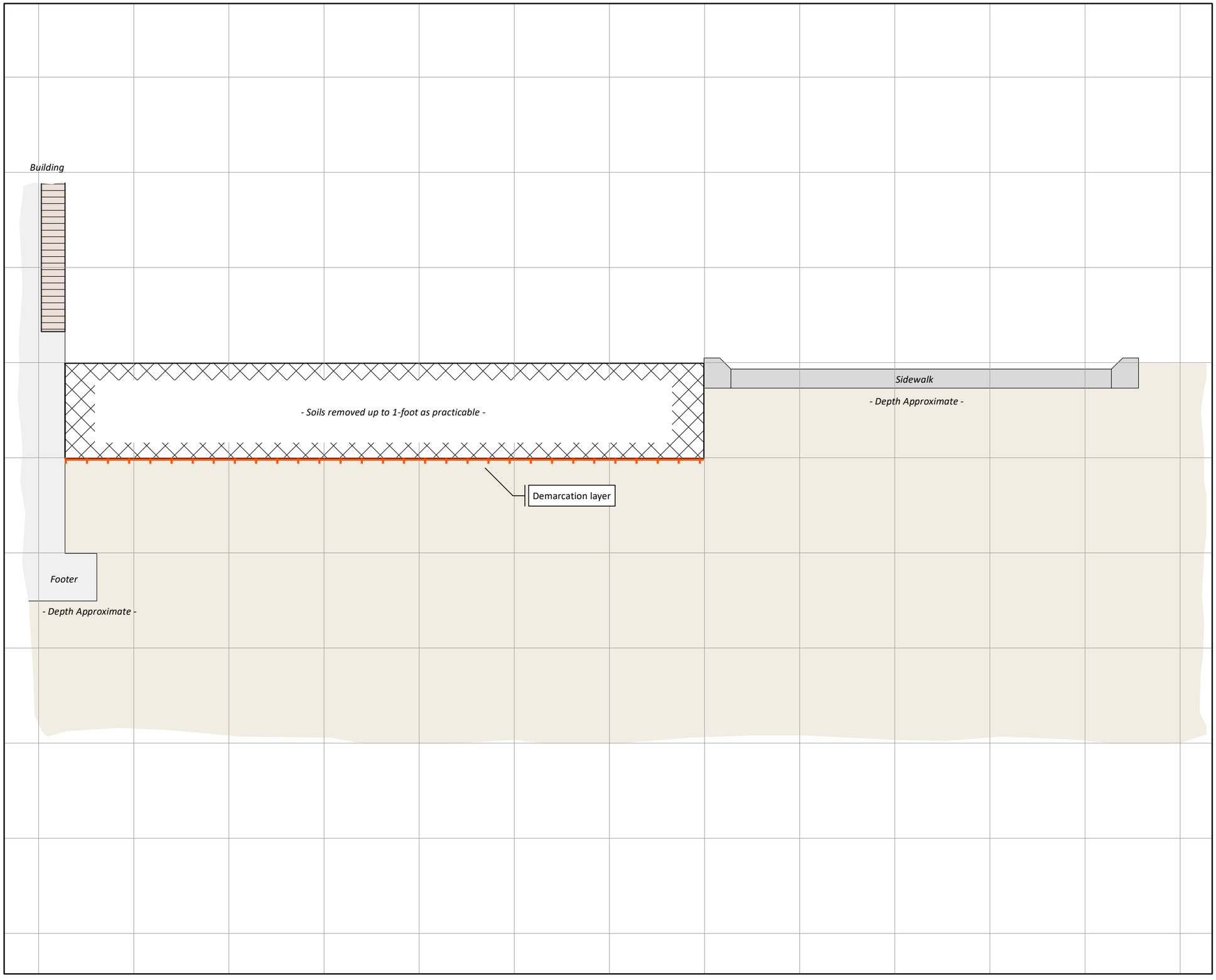

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Figure 3.
Typical Soil Cover System Detail

Project:
Jay-Hague Site (#C828216)
IRM CCR

Location:
485 Hague Street
City of Rochester, Monroe County, NY

0.5'

Vertical Scale: 1" = 1'

Horizontal Scale: 1" = 1'

1'

Drawn/Checked By:	BGS/GLA
Lu Project Number:	50380
Date:	January 2023

General:
- Refer to soil boring logs for stratigraphic changes

Jay-Hague Site (#C828216)
Construction Completion Report
Imported Topsoil Analytical Results

Table 1-1: VOC Soil Sample Analytical Results

Detected Parameters[1]	Unrestricted Use[2]	Residential Use[3]	Restricted-Residential Use[3]	Commercial Use[3]	Industrial Use[3]	Protection of Groundwater[4]	Sample ID:	Topsoil-01
							Sample Depth:	--
							Sample Date:	8/19/2022
Volatile Organic Compounds (VOCs)								
1,1,1-Trichloroethane (TCA)	0.68	100	100	500	1,000	0.68	ppm	< 0.0065
1,1,2,2-Tetrachloroethane	--	--	--	--	--	--	--	< 0.0065
1,1,2-Trichloroethane	--	--	--	--	--	--	--	< 0.0065
1,1,2-Trichloro-1,2,2-trifluoroethane	--	--	--	--	--	--	--	< 0.0065
1,1-Dichloroethane (1,1-DCA)	0.27	19.0	26.0	240	480	0.27	ppm	< 0.0065
1,1-Dichloroethene (1,1-DCE)	0.33	100	100	500	1,000	0.33	ppm	< 0.0065
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	< 0.0065
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	< 0.0065
1,2-Dibromo-3-chloropropane (DBCP)	--	--	--	--	--	--	--	< 0.0065
1,2-Dibromoethane	--	--	--	--	--	--	--	< 0.0065
1,2-Dichlorobenzene	1.10	100	100	500	1,000	1.10	ppm	< 0.0065
1,2-Dichloroethane	0.02	2.30	3.10	30	60	0.02	ppm	< 0.0065
1,2-Dichloropropane	--	--	--	--	--	--	--	< 0.0065
1,3-Dichlorobenzene	2.40	17.0	49.0	280	560	2.40	ppm	< 0.0065
1,4-Dichlorobenzene	1.80	9.8	13.0	130	250	1.80	ppm	< 0.0065
1,4-Dioxane	0.10	9.8	13.0	130	250	0.10	ppm	< 0.0065
2-Butanone (MEK)	0.12	100	100	500	1,000	0.12	ppm	< 0.0330
2-Hexanone	--	--	--	--	--	--	--	< 0.0330
4-Methyl-2-pentanone	--	--	--	--	--	--	--	< 0.0330
Acetone	0.05	100	100	500	1,000	0.05	ppm	< 0.0330
Benzene	0.06	2.90	4.80	44.0	89.0	0.06	ppm	< 0.0065
Bromochloromethane	--	--	--	--	--	--	--	< 0.0065
Bromodichloromethane	--	--	--	--	--	--	--	< 0.0065
Bromoform	--	--	--	--	--	--	--	< 0.0065
Bromomethane	--	--	--	--	--	--	--	< 0.0065
Carbon Disulfide	--	--	--	--	--	--	--	< 0.0065
Carbon Tetrachloride	0.76	1.40	2.40	22.0	44.0	0.76	ppm	< 0.0065
Chlorobenzene	1.10	100	100	500	1,000	1.10	ppm	< 0.0065
Chloroethane	--	--	--	--	--	--	--	< 0.0065
Chloroform	0.37	10.0	49.0	350	700	0.37	ppm	**0.0013**
Chloromethane	--	--	--	--	--	--	--	< 0.0065
Cyclohexane	--	--	--	--	--	--	--	< 0.0065
Dibromochloromethane	--	--	--	--	--	--	--	< 0.0065
Dichlorodifluoromethane (CFC 12)	--	--	--	--	--	--	--	< 0.0065
Dichloromethane	--	--	--	--	--	--	--	< 0.0065
Ethylbenzene	1.00	30.0	41.0	390	780	1.00	ppm	< 0.0065
Isopropylbenzene (Cumene)	--	--	--	--	--	--	--	< 0.0065
Methyl Acetate	--	--	--	--	--	--	--	< 0.0330
Methyl tert-Butyl Ether	0.93	62.0	100	500	1,000	0.93	ppm	< 0.0065
Methylcyclohexane	--	--	--	--	--	--	--	< 0.0065
Styrene	--	--	--	--	--	--	--	< 0.0065
Tetrachloroethene (PCE)	1.30	10.0	21.0	150	300	1.30	ppm	< 0.0065
Toluene	0.70	100	100	500	1,000	0.70	ppm	< 0.0065
Trichloroethene (TCE)	0.47	10.0	21.0	200	400	0.47	ppm	< 0.0065
Trichlorofluoromethane (CFC 11)	--	--	--	--	--	--	--	< 0.0065
Vinyl Chloride	0.02	0.21	0.90	13.0	27.0	0.02	ppm	< 0.0065
cis-1,2-Dichloroethene	0.25	59	100	500	1,000	0.25	ppm	< 0.0065
cis-1,3-Dichloropropene	--	--	--	--	--	--	--	< 0.0065
m,p-Xylenes	0.26	100	100	500	1,000	1.60	ppm	< 0.0130
o-Xylene	0.26	100	100	500	1,000	1.60	ppm	< 0.0130
trans-1,2-Dichloroethene	0.19	100	100	500	1,000	0.19	ppm	< 0.0065
trans-1,3-Dichloropropene	--	--	--	--	--	--	--	< 0.0065

Notes

1 – Results compared to *'6 NYCRR Part 375 Environmental Remedial Programs'* Soil Cleanup Objectives (SCOs)

2 – Table 6.8(a) Unrestricted Use SCOs

3 – Table 6.8(b) Restricted Use SCOs: Industrial Use

4 – Table 6.8(b) Restricted Use SCOs: Protection of Groundwater

ppm: Parts per million

< : Results not detected above minimum laboratory quantitation limit

	Results exceed Unrestricted Use SCOs
	Results exceed Industrial Use SCOs
*	Results exceed Protection of Groundwater SCOs

J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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Jay-Hague Site (#C828216)
Construction Completion Report
Imported Topsoil Analytical Results

Table 1-2. SVOC Soil Sample Analytical Results

Detected Parameters[1]	Unrestricted Use[2]	Residential Use[3]	Restricted-Residential Use[3]	Commercial Use[3]	Industrial Use[3]	Protection of Groundwater[4]	Sample ID:	Topsoil-01
							Sample Depth:	--
							Sample Date:	8/19/2022
Semi-Volatile Organic Compounds (SVOCs)								
1,2,4,5-Tetrachlorobenzene	--	--	--	--	--	--	--	< 0.220
1,4-Dioxane	--	--	--	--	--	--	--	< 0.220
2,3,4,6-Tetrachlorophenol	--	--	--	--	--	--	--	< 0.220
2,4,5-Trichlorophenol	--	--	--	--	--	--	--	< 0.220
2,4,6-Trichlorophenol	--	--	--	--	--	--	--	< 0.220
2,4-Dichlorophenol	--	--	--	--	--	--	--	< 0.220
2,4-Dimethylphenol	--	--	--	--	--	--	--	< 0.220
2,4-Dinitrophenol	--	--	--	--	--	--	--	< 0.220
2,4-Dinitrotoluene	--	--	--	--	--	--	--	< 0.220
2,6-Dinitrotoluene	--	--	--	--	--	--	--	< 0.220
2-Chloronaphthalene	--	--	--	--	--	--	--	< 0.220
2-Chlorophenol	--	--	--	--	--	--	--	< 0.220
2-Methylnaphthalene	--	--	--	--	--	--	--	< 0.220
2-Methylphenol	--	--	--	--	--	--	--	< 0.220
2-Nitroaniline	--	--	--	--	--	--	--	< 0.220
2-Nitrophenol	--	--	--	--	--	--	--	< 0.220
3,3'-Dichlorobenzidine	--	--	--	--	--	--	--	< 0.220
3- and 4-Methylphenol Coelution	--	--	--	--	--	--	--	< 0.220
3-Nitroaniline	--	--	--	--	--	--	--	< 0.220
4,6-Dinitro-2-methylphenol	--	--	--	--	--	--	--	< 0.220
4-Bromophenyl Phenyl Ether	--	--	--	--	--	--	--	< 0.220
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	< 0.220
4-Chloroaniline	--	--	--	--	--	--	--	< 0.220
4-Chlorophenyl Phenyl Ether	--	--	--	--	--	--	--	< 0.220
4-Nitroaniline	--	--	--	--	--	--	--	< 0.220
4-Nitrophenol	--	--	--	--	--	--	--	< 0.220
Acenaphthene	20.0	100	100	500	1,000	98	ppm	< 0.220
Acenaphthylene	100	100	100	500	1,000	107	ppm	< 0.220
Acetophenone	--	--	--	--	--	--	--	< 0.220
Anthracene	100	100	100	500	1,000	1,000	ppm	< 0.220
Atrazine	--	--	--	--	--	--	--	< 0.220
Benz(a)anthracene	1.00	1.00	1.00	5.60	11.0	1.00	ppm	**0.190 J**
Benzaldehyde	--	--	--	--	--	--	--	< 0.220
Benzo(a)pyrene	1.00	1.00	1.00	1.00	1.10	22.0	ppm	**0.220**
Benzo(b)fluoranthene	1.00	1.00	1.00	5.60	11.0	1.70	ppm	**0.260**
Benzo(g,h,i)perylene	100	100	100	500	1,000	1,000	ppm	**0.140 J**
Benzo(k)fluoranthene	0.80	1.00	3.90	56.0	110	1.70	ppm	**0.140 J**
Biphenyl	--	--	--	--	--	--	--	< 0.220
2,2'-Oxybis(1-chloropropane)	--	--	--	--	--	--	--	< 0.220
Bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	< 0.220
Bis(2-chloroethyl) Ether	--	--	--	--	--	--	--	< 0.220
Bis(2-ethylhexyl) Phthalate	--	--	--	--	--	--	--	< 0.220
Butyl Benzyl Phthalate	--	--	--	--	--	--	--	< 0.220
Caprolactam	--	--	--	--	--	--	--	< 0.220
Carbazole	--	--	--	--	--	--	--	**0.028 J**
Chrysene	1.00	1.00	3.90	56.0	110	1.00	ppm	**0.250**
Di-n-butyl Phthalate	--	--	--	--	--	--	--	< 0.220
Di-n-octyl Phthalate	--	--	--	--	--	--	--	< 0.220
Dibenz(a,h)anthracene	0.33	0.33	0.33	0.56	1.10	1,000	ppm	**0.047 J**
Dibenzofuran	--	--	--	--	--	--	--	< 0.220
Diethyl Phthalate	--	--	--	--	--	--	--	< 0.220
Dimethyl Phthalate	--	--	--	--	--	--	--	< 0.220
Fluoranthene	100	100	100	500	1,000	1,000	ppm	**0.520**
Fluorene	30.0	100	100	500	1,000	386	ppm	< 0.220
Hexachlorobenzene	--	--	--	--	--	--	--	< 0.220
Hexachlorobutadiene	--	--	--	--	--	--	--	< 0.220
Hexachlorocyclopentadiene	--	--	--	--	--	--	--	< 0.220
Hexachloroethane	--	--	--	--	--	--	--	< 0.220
Indeno(1,2,3-cd)pyrene	0.50	0.50	0.50	5.60	11.0	8.20	ppm	**0.130 J**
Isophorone	--	--	--	--	--	--	--	< 0.220
N-Nitrosodi-n-propylamine	--	--	--	--	--	--	--	< 0.220
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	< 0.220
Naphthalene	12.0	100	100	500	1,000	12.0	ppm	< 0.220
Nitrobenzene	--	--	--	--	--	--	--	< 0.220
Pentachlorophenol (PCP)	0.80	2.40	6.70	6.70	55.0	0.80	ppm	< 0.220
Phenanthrene	100	100	100	500	1,000	1,000	ppm	**0.280**
Phenol	0.33	100	100	500	1,000	3.30	ppm	< 0.220
Pyrene	100	100	100	500	1,000	1,000	ppm	**0.390**

Notes

1 – Results compared to *'6 NYCRR Part 375 Environmental Remedial Programs'* Soil Cleanup Objectives (SCOs)

2 – Table 6.8(a) Unrestricted Use SCOs

3 – Table 6.8(b) Restricted Use SCOs: Industrial Use

4 – Table 6.8(b) Restricted Use SCOs: Protection of Groundwater

ppm: Parts per million

< : Results not detected above minimum laboratory quantitation limit

	Results exceed Unrestricted Use SCOs
	Results exceed Industrial Use SCOs
*	Results exceed Protection of Groundwater SCOs

J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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Jay-Hague Site (#C828216)
Construction Completion Report
Imported Topsoil Analytical Results

Table 1-3. RCRA Metal, Pesticide, Herbicide & PCB Soil Sample Analytical Results

Detected Parameters[1]	Unrestricted Use[2]	Residential Use[3]	Restricted-Residential Use[3]	Commercial Use[3]	Industrial Use[3]	Protection of Groundwater[4]	Sample ID: / Sample Depth: / Sample Date:	Topsoil-01 / -- / 8/19/2022
RCRA Metals								
Arsenic	13.0	16.0	16.0	16.0	16.0	16.0	ppm	**4.90**
Barium	350	350	400	400	10,000	820	ppm	**64.5**
Cadmium	2.50	2.50	4.30	9.30	60.0	7.50	ppm	**0.30**
Mercury	0.18	0.81	0.81	2.80	5.70	0.73	ppm	**0.0490**
Chromium[X]	1.00	22.0	110	400	800	19.0	ppm	**15.1**
Lead	63.0	400	400	1,000	3,900	450	ppm	**19.3**
Selenium	3.90	36.0	180	1,500	6,800	4.00	ppm	< 5.40
Silver	2.00	36.0	180	1,500	6,800	8.30	ppm	< 0.81
Pesticides								
4,4'-DDD	0.0033	2.60	13.0	92.0	180	14.0	ppm	< 0.0021
4,4'-DDE	0.0033	1.80	8.90	62.0	120	17.0	ppm	**0.0020 J**
4,4'-DDT	0.0033	1.70	7.90	47.0	94.0	136	ppm	**0.00081 J**
Aldrin	0.005	0.019	0.097	0.68	1.40	0.19	ppm	< 0.0021
Chlordane	--	--	--	--	--	--	--	**0.0016 J**
Dieldrin	0.005	0.039	0.20	1.40	2.80	0.10	ppm	**0.0023**
Endosulfan I	2.40	4.80	24.0	200	920	102	ppm	< 0.0021
Endosulfan II	2.40	4.80	24.0	200	920	102	ppm	< 0.0021
Endosulfan Sulfate	2.40	4.80	24.0	200	920	1,000	ppm	< 0.0021
Endrin	0.01	2.20	11.0	89.0	410	0.06	ppm	< 0.0021
Endrin Aldehyde	--	--	--	--	--	--	--	< 0.0021
Endrin Ketone	--	--	--	--	--	--	--	< 0.0021
Heptachlor	0.042	0.42	2.10	15.0	29.0	0.38	ppm	< 0.0021
Heptachlor Epoxide	--	--	--	--	--	--	--	< 0.0021
Methoxychlor	--	--	--	--	--	--	--	< 0.0021
Mirex	--	--	--	--	--	--	--	< 0.0021
Toxaphene	--	--	--	--	--	--	--	< 0.0210
alpha-BHC	0.02	0.097	0.48	3.40	6.80	0.02	ppm	< 0.0021
alpha-Chlordane	0.094	0.91	4.20	24.0	47.0	2.90	ppm	**0.0035**
beta-BHC	0.036	0.072	0.36	3.00	14.0	0.09	ppm	< 0.0021
delta-BHC	0.04	100	100	500	1,000	0.25	ppm	< 0.0021
gamma-BHC (Lindane)	0.10	0.28	1.30	9.20	23.0	0.10	ppm	< 0.0021
gamma-Chlordane	--	--	--	--	--	--	--	< 0.0021
Polychlorinated Biphenyls								
Aroclor 1016	0.10	1.00	1.00	1.00	25.0	3.20	ppm	< 0.25
Aroclor 1221	0.10	1.00	1.00	1.00	25.0	3.20	ppm	< 0.25
Aroclor 1232	0.10	1.00	1.00	1.00	25.0	3.20	ppm	< 0.25
Aroclor 1242	0.10	1.00	1.00	1.00	25.0	3.20	ppm	< 0.25
Aroclor 1248	0.10	1.00	1.00	1.00	25.0	3.20	ppm	< 0.25
Aroclor 1254	0.10	1.00	1.00	1.00	25.0	3.20	ppm	< 0.25
Aroclor 1260	0.10	1.00	1.00	1.00	25.0	3.20	ppm	< 0.25

Notes

1 – Results compared to *'6 NYCRR Part 375 Environmental Remedial Programs'* Soil Cleanup Objectives (SCOs)

2 – Table 6.8(a) Unrestricted Use SCOs

3 – Table 6.8(b) Restricted Use SCOs: Industrial Use

4 – Table 6.8(b) Restricted Use SCOs: Protection of Groundwater

ppm: Parts per million

< : Results not detected above minimum laboratory quantitation limit

Results exceed Unrestricted Use SCOs

Results exceed Industrial Use SCOs

* Results exceed Protection of Groundwater SCOs

J: Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530113802
Firmware Version	3.9
Calibration Date	7/12/2022
Test Name	MANUAL_001
Test Start Time	10:26:46 AM
Test Start Date	9/2/2022
Test Length [D:H:M]	0:05:09
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.011
Mass Minimum [mg/m3]	0.0085
Mass Maximum [mg/m3]	0.0155
Mass TWA [mg/m3]	0.011
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	20

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.0155		
1800	0.013		
2700	0.0125		
3600	0.012		
4500	0.014		
5400	0.0095		
6300	0.0095		
7200	0.0095		
8100	0.01		
9000	0.012		
9900	0.0105		
10800	0.0085		
11700	0.0085		
12600	0.0085		
13500	0.0085		
14400	0.0125		
15300	0.01		
16200	0.0085		
17100	0.0085		
18000	0.009		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530120703
Firmware Version	3.9
Calibration Date	5/27/2022
Test Name	MANUAL_001
Test Start Time	10:24:13 AM
Test Start Date	9/2/2022
Test Length [D:H:M]	0:05:17
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.023
Mass Minimum [mg/m3]	0.0105
Mass Maximum [mg/m3]	0.042
Mass TWA [mg/m3]	0.023
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	21

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.034		
1800	0.033		
2700	0.036		
3600	0.042		
4500	0.03		
5400	0.0245		
6300	0.024		
7200	0.024		
8100	0.022		
9000	0.0215		
9900	0.0195		
10800	0.0165		
11700	0.017		
12600	0.0205		
13500	0.02		
14400	0.0195		
15300	0.021		
16200	0.0135		
17100	0.012		
18000	0.0105		
18900	0.0135		

Photo No. 1 Mobilization to the IRM Work Areas

Photo No. 2 Vac Truck Mobilization

Photo No. 3 Vacuum Extraction of Surface Soils

Photo No. 4 Tree Root System Exposed

Photo No. 5 Stockpiling Topsoil Prior to Disposal

Photo No. 6 Placement of Imported Topsoil Over Demarcation Barrier

Photo No. 7 Imported Topsoil Prior to Grading

Photo No. 8 Raked and Graded Cover System

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ANALYTICAL REPORT

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-200909-1
Client Project/Site: Jay Hague #50380

For:
Joseph C. Lu Eng & Land Surveying PC
339 East Avenue
Suite 200
Rochester, New York 14604

Attn: Mr. Ben Seifert

Authorized for release by:
8/29/2022 12:53:33 PM
Rebecca Jones, Project Management Assistant I
(716)504-9884
Rebecca.Jones@et.eurofinsus.com

Designee for

Brian Fischer, Manager of Project Management
(716)504-9835
Brian.Fischer@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
vs	Reported analyte concentrations are below 200 ug/kg and may be biased low due to the sample not being collected according to 5035A-L low-level specifications.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 480-200909-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-200909-1

Comments
No additional comments.

Receipt
The sample was received on 8/22/2022 9:10 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.4º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 480-638753 recovered above the upper control limit for Cyclohexane, Methylcyclohexane, Trichlorofluoromethane and Vinyl chloride. The sample(s) associated with this CCV were non-detects above the reporting limit for the affected analytes; therefore, the data have been reported. The associated sample is impacted: Topsoil - 01 (480-200909-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
Method 3550C: The following sample required a Florisil clean-up, via EPA Method 3620C, to reduce matrix interferences: Topsoil - 01 (480-200909-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Client Sample ID: Topsoil - 01
Lab Sample ID: 480-200909-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.3	J vs	6.5	0.40	ug/Kg	1	☼	8260C	Total/NA
Benzo[a]anthracene	190	J	220	22	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	220		220	33	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	260		220	35	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	140	J	220	24	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	140	J	220	29	ug/Kg	1	☼	8270D	Total/NA
Carbazole	28	J	220	26	ug/Kg	1	☼	8270D	Total/NA
Chrysene	250		220	50	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	47	J	220	39	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	520		220	24	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	130	J	220	27	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	280		220	33	ug/Kg	1	☼	8270D	Total/NA
Pyrene	390		220	26	ug/Kg	1	☼	8270D	Total/NA
4,4'-DDE	2.0	J	2.1	0.45	ug/Kg	1	☼	8081B	Total/NA
4,4'-DDT	0.81	J	2.1	0.50	ug/Kg	1	☼	8081B	Total/NA
cis-Chlordane	3.5		2.1	1.1	ug/Kg	1	☼	8081B	Total/NA
Dieldrin	2.3		2.1	0.51	ug/Kg	1	☼	8081B	Total/NA
trans-Chlordane	1.6	J	2.1	0.68	ug/Kg	1	☼	8081B	Total/NA
Arsenic	4.9	B	2.7	0.54	mg/Kg	1	☼	6010C	Total/NA
Barium	64.5		0.68	0.15	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.30		0.27	0.041	mg/Kg	1	☼	6010C	Total/NA
Chromium	15.1		0.68	0.27	mg/Kg	1	☼	6010C	Total/NA
Lead	19.3		1.4	0.32	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.049		0.027	0.0061	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Client Sample ID: Topsoil - 01
Lab Sample ID: 480-200909-1

Date Collected: 08/19/22 14:05
Matrix: Solid
Date Received: 08/22/22 09:10
Percent Solids: 76.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND	vs	6.5	0.47	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,1,2,2-Tetrachloroethane	ND	vs	6.5	1.1	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,1,2-Trichloroethane	ND	vs	6.5	0.85	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	vs	6.5	1.5	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,1-Dichloroethane	ND	vs	6.5	0.80	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,1-Dichloroethene	ND	vs	6.5	0.80	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,2,4-Trichlorobenzene	ND	vs	6.5	0.40	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,2-Dibromo-3-Chloropropane	ND	vs	6.5	3.3	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,2-Dichlorobenzene	ND	vs	6.5	0.51	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,2-Dichloroethane	ND	vs	6.5	0.33	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,2-Dichloropropane	ND	vs	6.5	3.3	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,3-Dichlorobenzene	ND	vs	6.5	0.34	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,4-Dichlorobenzene	ND	vs	6.5	0.92	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
2-Butanone (MEK)	ND	vs	33	2.4	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
2-Hexanone	ND	vs	33	3.3	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
4-Methyl-2-pentanone (MIBK)	ND	vs	33	2.1	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Acetone	ND	vs	33	5.5	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Benzene	ND	vs	6.5	0.32	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Bromodichloromethane	ND	vs	6.5	0.88	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Bromoform	ND	vs	6.5	3.3	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Bromomethane	ND	vs	6.5	0.59	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Carbon disulfide	ND	vs	6.5	3.3	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Carbon tetrachloride	ND	vs	6.5	0.63	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Chlorobenzene	ND	vs	6.5	0.86	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Dibromochloromethane	ND	vs	6.5	0.84	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Chloroethane	ND	vs	6.5	1.5	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Chloroform	**1.3**	**J vs**	6.5	0.40	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Chloromethane	ND	vs	6.5	0.39	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
cis-1,2-Dichloroethene	ND	vs	6.5	0.84	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
cis-1,3-Dichloropropene	ND	vs	6.5	0.94	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Cyclohexane	ND	vs	6.5	0.92	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Dichlorodifluoromethane	ND	vs	6.5	0.54	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Ethylbenzene	ND	vs	6.5	0.45	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
1,2-Dibromoethane	ND	vs	6.5	0.84	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Isopropylbenzene	ND	vs	6.5	0.99	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Methyl acetate	ND	vs	33	3.9	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Methyl tert-butyl ether	ND	vs	6.5	0.64	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Methylcyclohexane	ND	vs	6.5	0.99	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Methylene Chloride	ND	vs	6.5	3.0	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Styrene	ND	vs	6.5	0.33	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Tetrachloroethene	ND	vs	6.5	0.88	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Toluene	ND	vs	6.5	0.49	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
trans-1,2-Dichloroethene	ND	vs	6.5	0.67	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
trans-1,3-Dichloropropene	ND	vs	6.5	2.9	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Trichloroethene	ND	vs	6.5	1.4	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Trichlorofluoromethane	ND	vs	6.5	0.62	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Vinyl chloride	ND	vs	6.5	0.80	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1
Xylenes, Total	ND	vs	13	1.1	ug/Kg	☼	08/23/22 17:50	08/24/22 04:31	1

Client: Joseph C. Lu Eng & Land Surveying PC
Project/Site: Jay Hague #50380

Job ID: 480-200909-1

Client Sample ID: Topsoil - 01
Date Collected: 08/19/22 14:05
Date Received: 08/22/22 09:10

Lab Sample ID: 480-200909-1
Matrix: Solid
Percent Solids: 76.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		71 - 125	08/23/22 17:50	08/24/22 04:31	1
1,2-Dichloroethane-d4 (Surr)	105		64 - 126	08/23/22 17:50	08/24/22 04:31	1
4-Bromofluorobenzene (Surr)	84		72 - 126	08/23/22 17:50	08/24/22 04:31	1
Dibromofluoromethane (Surr)	103		60 - 140	08/23/22 17:50	08/24/22 04:31	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		220	33	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
bis (2-chloroisopropyl) ether	ND		220	44	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2,4,5-Trichlorophenol	ND		220	60	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2,4,6-Trichlorophenol	ND		220	44	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2,4-Dichlorophenol	ND		220	24	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2,4-Dimethylphenol	ND		220	54	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2,4-Dinitrophenol	ND		2200	1000	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2,4-Dinitrotoluene	ND		220	46	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2,6-Dinitrotoluene	ND		220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2-Chloronaphthalene	ND		220	37	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2-Chlorophenol	ND		430	41	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2-Methylphenol	ND		220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2-Methylnaphthalene	ND		220	44	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2-Nitroaniline	ND		430	33	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
2-Nitrophenol	ND		220	63	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
3,3'-Dichlorobenzidine	ND		430	260	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
3-Nitroaniline	ND		430	61	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4,6-Dinitro-2-methylphenol	ND		430	220	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4-Bromophenyl phenyl ether	ND		220	31	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4-Chloro-3-methylphenol	ND		220	55	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4-Chloroaniline	ND		220	55	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4-Chlorophenyl phenyl ether	ND		220	27	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4-Methylphenol	ND		430	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4-Nitroaniline	ND		430	120	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
4-Nitrophenol	ND		430	160	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Acenaphthene	ND		220	33	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Acenaphthylene	ND		220	29	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Acetophenone	ND		220	30	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Anthracene	ND		220	55	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Atrazine	ND		220	77	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Benzaldehyde	ND		220	180	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Benzo[a]anthracene	**190**	**J**	220	22	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Benzo[a]pyrene	**220**		220	33	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Benzo[b]fluoranthene	**260**		220	35	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Benzo[g,h,i]perylene	**140**	**J**	220	24	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Benzo[k]fluoranthene	**140**	**J**	220	29	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Bis(2-chloroethoxy)methane	ND		220	47	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Bis(2-chloroethyl)ether	ND		220	29	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Bis(2-ethylhexyl) phthalate	ND		220	76	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Butyl benzyl phthalate	ND		220	37	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Caprolactam	ND		220	67	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Carbazole	**28**	**J**	220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Chrysene	**250**		220	50	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1

Client Sample ID: Topsoil - 01
Lab Sample ID: 480-200909-1
Date Collected: 08/19/22 14:05
Matrix: Solid
Date Received: 08/22/22 09:10
Percent Solids: 76.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	**47**	**J**	220	39	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Di-n-butyl phthalate	ND		220	38	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Di-n-octyl phthalate	ND		220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Dibenzofuran	ND		220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Diethyl phthalate	ND		220	29	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Dimethyl phthalate	ND		220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Fluoranthene	**520**		220	24	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Fluorene	ND		220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Hexachlorobenzene	ND		220	30	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Hexachlorobutadiene	ND		220	33	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Hexachlorocyclopentadiene	ND		220	30	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Hexachloroethane	ND		220	29	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Indeno[1,2,3-cd]pyrene	**130**	**J**	220	27	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Isophorone	ND		220	47	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
N-Nitrosodi-n-propylamine	ND		220	38	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
N-Nitrosodiphenylamine	ND		220	180	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Naphthalene	ND		220	29	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Nitrobenzene	ND		220	25	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Pentachlorophenol	ND		430	220	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Phenanthrene	**280**		220	33	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Phenol	ND		220	34	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1
Pyrene	**390**		220	26	ug/Kg	☼	08/24/22 16:01	08/25/22 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*	*08/24/22 16:01*	*08/25/22 22:01*	*1*
Phenol-d5 (Surr)	*84*		*54 - 120*	*08/24/22 16:01*	*08/25/22 22:01*	*1*
p-Terphenyl-d14 (Surr)	*104*		*79 - 130*	*08/24/22 16:01*	*08/25/22 22:01*	*1*
2,4,6-Tribromophenol (Surr)	*103*		*54 - 120*	*08/24/22 16:01*	*08/25/22 22:01*	*1*
2-Fluorobiphenyl (Surr)	*89*		*60 - 120*	*08/24/22 16:01*	*08/25/22 22:01*	*1*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*08/24/22 16:01*	*08/25/22 22:01*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		2.1	0.42	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
4,4'-DDE	**2.0**	**J**	2.1	0.45	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
4,4'-DDT	**0.81**	**J**	2.1	0.50	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Aldrin	ND		2.1	0.53	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
alpha-BHC	ND		2.1	0.39	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
cis-Chlordane	**3.5**		2.1	1.1	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
beta-BHC	ND		2.1	0.39	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
delta-BHC	ND		2.1	0.40	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Dieldrin	**2.3**		2.1	0.51	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Endosulfan I	ND		2.1	0.41	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Endosulfan II	ND		2.1	0.39	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Endosulfan sulfate	ND		2.1	0.40	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Endrin	ND		2.1	0.42	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Endrin aldehyde	ND		2.1	0.55	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Endrin ketone	ND		2.1	0.53	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
gamma-BHC (Lindane)	ND		2.1	0.39	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
trans-Chlordane	**1.6**	**J**	2.1	0.68	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1

Client Sample ID: Topsoil - 01
Lab Sample ID: 480-200909-1

Date Collected: 08/19/22 14:05
Matrix: Solid
Date Received: 08/22/22 09:10
Percent Solids: 76.0

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor	ND		2.1	0.46	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Heptachlor epoxide	ND		2.1	0.55	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Methoxychlor	ND		2.1	0.44	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1
Toxaphene	ND		21	12	ug/Kg	☼	08/23/22 15:40	08/24/22 10:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*55*		*45 - 120*	*08/23/22 15:40*	*08/24/22 10:43*	*1*
DCB Decachlorobiphenyl	*67*		*45 - 120*	*08/23/22 15:40*	*08/24/22 10:43*	*1*
Tetrachloro-m-xylene	*53*		*30 - 124*	*08/23/22 15:40*	*08/24/22 10:43*	*1*
Tetrachloro-m-xylene	*42*		*30 - 124*	*08/23/22 15:40*	*08/24/22 10:43*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.25	0.049	mg/Kg	☼	08/23/22 15:51	08/24/22 21:48	1
PCB-1221	ND		0.25	0.049	mg/Kg	☼	08/23/22 15:51	08/24/22 21:48	1
PCB-1232	ND		0.25	0.049	mg/Kg	☼	08/23/22 15:51	08/24/22 21:48	1
PCB-1242	ND		0.25	0.049	mg/Kg	☼	08/23/22 15:51	08/24/22 21:48	1
PCB-1248	ND		0.25	0.049	mg/Kg	☼	08/23/22 15:51	08/24/22 21:48	1
PCB-1254	ND		0.25	0.12	mg/Kg	☼	08/23/22 15:51	08/24/22 21:48	1
PCB-1260	ND		0.25	0.12	mg/Kg	☼	08/23/22 15:51	08/24/22 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*102*		*60 - 154*	*08/23/22 15:51*	*08/24/22 21:48*	*1*
Tetrachloro-m-xylene	*124*		*60 - 154*	*08/23/22 15:51*	*08/24/22 21:48*	*1*
DCB Decachlorobiphenyl	*102*		*65 - 174*	*08/23/22 15:51*	*08/24/22 21:48*	*1*
DCB Decachlorobiphenyl	*137*		*65 - 174*	*08/23/22 15:51*	*08/24/22 21:48*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.9**	**B**	2.7	0.54	mg/Kg	☼	08/24/22 12:15	08/26/22 01:45	1
Barium	**64.5**		0.68	0.15	mg/Kg	☼	08/24/22 12:15	08/26/22 01:45	1
Cadmium	**0.30**		0.27	0.041	mg/Kg	☼	08/24/22 12:15	08/26/22 01:45	1
Chromium	**15.1**		0.68	0.27	mg/Kg	☼	08/24/22 12:15	08/26/22 01:45	1
Lead	**19.3**		1.4	0.32	mg/Kg	☼	08/24/22 12:15	08/26/22 01:45	1
Selenium	ND		5.4	0.54	mg/Kg	☼	08/24/22 12:15	08/26/22 01:45	1
Silver	ND		0.81	0.27	mg/Kg	☼	08/24/22 12:15	08/26/22 01:45	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.049**		0.027	0.0061	mg/Kg	☼	08/24/22 09:48	08/24/22 12:43	1

Surrogate Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	DCA	BFB	DBFM
Lab Sample ID	Client Sample ID	(71-125)	(64-126)	(72-126)	(60-140)
480-200909-1	Topsoil - 01	105	105	84	103
LCS 480-638751/1-A	Lab Control Sample	100	104	97	102
MB 480-638751/2-A	Method Blank	96	107	99	103

Surrogate Legend

TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		NBZ	PHL	TPHd14	TBP	FBP	2FP
Lab Sample ID	Client Sample ID	(53-120)	(54-120)	(79-130)	(54-120)	(60-120)	(52-120)
480-200909-1	Topsoil - 01	80	84	104	103	89	80
LCS 480-638955/2-A	Lab Control Sample	82	81	98	93	87	77
MB 480-638955/1-A	Method Blank	89	88	100	82	91	87

Surrogate Legend

NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCBP1	DCBP2	TCX1	TCX2
Lab Sample ID	Client Sample ID	(45-120)	(45-120)	(30-124)	(30-124)
480-200909-1	Topsoil - 01	55	67	53	42
LCS 480-638733/2-A	Lab Control Sample	59	66	59	46
LCSD 480-638733/3-A	Lab Control Sample Dup	62	70	63	48
MB 480-638733/1-A	Method Blank	71	78	70	54

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCBP1	DCBP2
Lab Sample ID	Client Sample ID	(60-154)	(60-154)	(65-174)	(65-174)
480-200909-1	Topsoil - 01	102	124	102	137
LCS 480-638737/2-A	Lab Control Sample	109	133	112	151
MB 480-638737/1-A	Method Blank	95	112	100	137

Surrogate Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Project/Site: Jay Hague #50380

Job ID: 480-200909-1

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

Client: Joseph C. Lu Eng & Land Surveying PC
Project/Site: Jay Hague #50380

Job ID: 480-200909-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-638751/2-A
Matrix: Solid
Analysis Batch: 638753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.36	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.81	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,1,2-Trichloroethane	ND		5.0	0.65	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	1.1	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,1-Dichloroethane	ND		5.0	0.61	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,1-Dichloroethene	ND		5.0	0.61	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,2,4-Trichlorobenzene	ND		5.0	0.30	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,2-Dichlorobenzene	ND		5.0	0.39	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,2-Dichloroethane	ND		5.0	0.25	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,2-Dichloropropane	ND		5.0	2.5	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,3-Dichlorobenzene	ND		5.0	0.26	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,4-Dichlorobenzene	ND		5.0	0.70	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
2-Butanone (MEK)	ND		25	1.8	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
2-Hexanone	ND		25	2.5	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
4-Methyl-2-pentanone (MIBK)	ND		25	1.6	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Acetone	ND		25	4.2	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Benzene	ND		5.0	0.25	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Bromodichloromethane	ND		5.0	0.67	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Bromoform	ND		5.0	2.5	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Bromomethane	ND		5.0	0.45	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Carbon disulfide	ND		5.0	2.5	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Carbon tetrachloride	ND		5.0	0.48	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Chlorobenzene	ND		5.0	0.66	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Dibromochloromethane	ND		5.0	0.64	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Chloroethane	ND		5.0	1.1	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Chloroform	ND		5.0	0.31	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Chloromethane	ND		5.0	0.30	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
cis-1,2-Dichloroethene	ND		5.0	0.64	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
cis-1,3-Dichloropropene	ND		5.0	0.72	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Cyclohexane	ND		5.0	0.70	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Dichlorodifluoromethane	ND		5.0	0.41	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Ethylbenzene	ND		5.0	0.35	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
1,2-Dibromoethane	ND		5.0	0.64	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Isopropylbenzene	ND		5.0	0.75	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Methyl acetate	ND		25	3.0	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Methyl tert-butyl ether	ND		5.0	0.49	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Methylcyclohexane	ND		5.0	0.76	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Methylene Chloride	ND		5.0	2.3	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Styrene	ND		5.0	0.25	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Toluene	ND		5.0	0.38	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
trans-1,2-Dichloroethene	ND		5.0	0.52	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
trans-1,3-Dichloropropene	ND		5.0	2.2	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Trichloroethene	ND		5.0	1.1	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Trichlorofluoromethane	ND		5.0	0.47	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Vinyl chloride	ND		5.0	0.61	ug/Kg		08/23/22 17:50	08/23/22 21:31	1
Xylenes, Total	ND		10	0.84	ug/Kg		08/23/22 17:50	08/23/22 21:31	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-638751/2-A
Matrix: Solid
Analysis Batch: 638753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638751

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*96*		*71 - 125*	*08/23/22 17:50*	*08/23/22 21:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*64 - 126*	*08/23/22 17:50*	*08/23/22 21:31*	*1*
4-Bromofluorobenzene (Surr)	*99*		*72 - 126*	*08/23/22 17:50*	*08/23/22 21:31*	*1*
Dibromofluoromethane (Surr)	*103*		*60 - 140*	*08/23/22 17:50*	*08/23/22 21:31*	*1*

Lab Sample ID: LCS 480-638751/1-A
Matrix: Solid
Analysis Batch: 638753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	50.0	49.9		ug/Kg		100	77 - 121
1,1,2,2-Tetrachloroethane	50.0	47.3		ug/Kg		95	80 - 120
1,1,2-Trichloroethane	50.0	46.7		ug/Kg		93	78 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	45.5		ug/Kg		91	60 - 140
1,1-Dichloroethane	50.0	48.9		ug/Kg		98	73 - 126
1,1-Dichloroethene	50.0	48.6		ug/Kg		97	59 - 125
1,2,4-Trichlorobenzene	50.0	42.4		ug/Kg		85	64 - 120
1,2-Dibromo-3-Chloropropane	50.0	47.9		ug/Kg		96	63 - 124
1,2-Dichlorobenzene	50.0	46.5		ug/Kg		93	75 - 120
1,2-Dichloroethane	50.0	48.4		ug/Kg		97	77 - 122
1,2-Dichloropropane	50.0	48.9		ug/Kg		98	75 - 124
1,3-Dichlorobenzene	50.0	47.2		ug/Kg		94	74 - 120
1,4-Dichlorobenzene	50.0	45.9		ug/Kg		92	73 - 120
2-Butanone (MEK)	250	253		ug/Kg		101	70 - 134
2-Hexanone	250	257		ug/Kg		103	59 - 130
4-Methyl-2-pentanone (MIBK)	250	258		ug/Kg		103	65 - 133
Acetone	250	245		ug/Kg		98	61 - 137
Benzene	50.0	47.9		ug/Kg		96	79 - 127
Bromodichloromethane	50.0	48.5		ug/Kg		97	80 - 122
Bromoform	50.0	46.6		ug/Kg		93	68 - 126
Bromomethane	50.0	57.1		ug/Kg		114	37 - 149
Carbon disulfide	50.0	47.4		ug/Kg		95	64 - 131
Carbon tetrachloride	50.0	51.4		ug/Kg		103	75 - 135
Chlorobenzene	50.0	45.6		ug/Kg		91	76 - 124
Dibromochloromethane	50.0	48.0		ug/Kg		96	76 - 125
Chloroethane	50.0	57.7		ug/Kg		115	69 - 135
Chloroform	50.0	47.6		ug/Kg		95	80 - 120
Chloromethane	50.0	51.8		ug/Kg		104	63 - 127
cis-1,2-Dichloroethene	50.0	47.5		ug/Kg		95	81 - 120
cis-1,3-Dichloropropene	50.0	50.0		ug/Kg		100	80 - 120
Cyclohexane	50.0	53.2		ug/Kg		106	65 - 120
Dichlorodifluoromethane	50.0	54.2		ug/Kg		108	57 - 142
Ethylbenzene	50.0	48.1		ug/Kg		96	80 - 120
1,2-Dibromoethane	50.0	45.4		ug/Kg		91	78 - 120
Isopropylbenzene	50.0	50.6		ug/Kg		101	72 - 120
Methyl acetate	100	99.9		ug/Kg		100	55 - 136
Methyl tert-butyl ether	50.0	47.5		ug/Kg		95	63 - 125
Methylcyclohexane	50.0	52.0		ug/Kg		104	60 - 140

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-638751/1-A
Matrix: Solid
Analysis Batch: 638753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Chloride	50.0	49.3		ug/Kg		99	61 - 127
Styrene	50.0	47.1		ug/Kg		94	80 - 120
Tetrachloroethene	50.0	47.7		ug/Kg		95	74 - 122
Toluene	50.0	47.1		ug/Kg		94	74 - 128
trans-1,2-Dichloroethene	50.0	47.9		ug/Kg		96	78 - 126
trans-1,3-Dichloropropene	50.0	47.9		ug/Kg		96	73 - 123
Trichloroethene	50.0	48.6		ug/Kg		97	77 - 129
Trichlorofluoromethane	50.0	56.3		ug/Kg		113	65 - 146
Vinyl chloride	50.0	52.7		ug/Kg		105	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*71 - 125*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 126*
4-Bromofluorobenzene (Surr)	*97*		*72 - 126*
Dibromofluoromethane (Surr)	*102*		*60 - 140*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-638955/1-A
Matrix: Solid
Analysis Batch: 639118

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638955

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		170	25	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
bis (2-chloroisopropyl) ether	ND		170	34	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2,4,5-Trichlorophenol	ND		170	45	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2,4,6-Trichlorophenol	ND		170	34	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2,4-Dichlorophenol	ND		170	18	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2,4-Dimethylphenol	ND		170	40	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2,4-Dinitrophenol	ND		1600	770	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2,4-Dinitrotoluene	ND		170	35	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2,6-Dinitrotoluene	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2-Chloronaphthalene	ND		170	28	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2-Chlorophenol	ND		330	31	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2-Methylphenol	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2-Methylnaphthalene	ND		170	34	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2-Nitroaniline	ND		330	25	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
2-Nitrophenol	ND		170	47	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
3,3'-Dichlorobenzidine	ND		330	200	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
3-Nitroaniline	ND		330	46	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4,6-Dinitro-2-methylphenol	ND		330	170	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4-Bromophenyl phenyl ether	ND		170	24	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4-Chloro-3-methylphenol	ND		170	41	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4-Chloroaniline	ND		170	41	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4-Chlorophenyl phenyl ether	ND		170	21	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4-Methylphenol	ND		330	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4-Nitroaniline	ND		330	88	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
4-Nitrophenol	ND		330	120	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Acenaphthene	ND		170	25	ug/Kg		08/24/22 16:01	08/25/22 16:20	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-638955/1-A
Matrix: Solid
Analysis Batch: 639118

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638955

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		170	22	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Acetophenone	ND		170	23	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Anthracene	ND		170	41	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Atrazine	ND		170	58	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Benzaldehyde	ND		170	130	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Benzo[a]anthracene	ND		170	17	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Benzo[a]pyrene	ND		170	25	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Bis(2-chloroethoxy)methane	ND		170	36	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Bis(2-chloroethyl)ether	ND		170	22	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Bis(2-ethylhexyl) phthalate	ND		170	57	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Butyl benzyl phthalate	ND		170	28	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Caprolactam	ND		170	50	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Carbazole	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Chrysene	ND		170	38	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Di-n-butyl phthalate	ND		170	29	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Di-n-octyl phthalate	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Dibenzofuran	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Diethyl phthalate	ND		170	22	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Dimethyl phthalate	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Fluoranthene	ND		170	18	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Fluorene	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Hexachlorobenzene	ND		170	23	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Hexachlorobutadiene	ND		170	25	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Hexachlorocyclopentadiene	ND		170	23	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Hexachloroethane	ND		170	22	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Isophorone	ND		170	36	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
N-Nitrosodi-n-propylamine	ND		170	29	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
N-Nitrosodiphenylamine	ND		170	140	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Naphthalene	ND		170	22	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Nitrobenzene	ND		170	19	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Pentachlorophenol	ND		330	170	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Phenanthrene	ND		170	25	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Phenol	ND		170	26	ug/Kg		08/24/22 16:01	08/25/22 16:20	1
Pyrene	ND		170	20	ug/Kg		08/24/22 16:01	08/25/22 16:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*89*		*53 - 120*	*08/24/22 16:01*	*08/25/22 16:20*	*1*
Phenol-d5 (Surr)	*88*		*54 - 120*	*08/24/22 16:01*	*08/25/22 16:20*	*1*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*	*08/24/22 16:01*	*08/25/22 16:20*	*1*
2,4,6-Tribromophenol (Surr)	*82*		*54 - 120*	*08/24/22 16:01*	*08/25/22 16:20*	*1*
2-Fluorobiphenyl (Surr)	*91*		*60 - 120*	*08/24/22 16:01*	*08/25/22 16:20*	*1*
2-Fluorophenol (Surr)	*87*		*52 - 120*	*08/24/22 16:01*	*08/25/22 16:20*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-638955/2-A
Matrix: Solid
Analysis Batch: 639118

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biphenyl	1630	1420		ug/Kg		87	59 - 120
bis (2-chloroisopropyl) ether	1630	1210		ug/Kg		74	44 - 120
2,4,5-Trichlorophenol	1630	1560		ug/Kg		96	59 - 126
2,4,6-Trichlorophenol	1630	1550		ug/Kg		95	59 - 123
2,4-Dichlorophenol	1630	1470		ug/Kg		90	61 - 120
2,4-Dimethylphenol	1630	1460		ug/Kg		89	59 - 120
2,4-Dinitrophenol	3260	2750		ug/Kg		84	41 - 146
2,4-Dinitrotoluene	1630	1580		ug/Kg		97	63 - 120
2,6-Dinitrotoluene	1630	1620		ug/Kg		99	66 - 120
2-Chloronaphthalene	1630	1440		ug/Kg		88	57 - 120
2-Chlorophenol	1630	1310		ug/Kg		80	53 - 120
2-Methylphenol	1630	1320		ug/Kg		81	54 - 120
2-Methylnaphthalene	1630	1290		ug/Kg		79	59 - 120
2-Nitroaniline	1630	1560		ug/Kg		96	61 - 120
2-Nitrophenol	1630	1340		ug/Kg		82	56 - 120
3,3'-Dichlorobenzidine	3260	2800		ug/Kg		86	54 - 120
3-Nitroaniline	1630	1430		ug/Kg		88	48 - 120
4,6-Dinitro-2-methylphenol	3260	2980		ug/Kg		91	49 - 122
4-Bromophenyl phenyl ether	1630	1560		ug/Kg		95	58 - 120
4-Chloro-3-methylphenol	1630	1540		ug/Kg		94	61 - 120
4-Chloroaniline	1630	1260		ug/Kg		77	38 - 120
4-Chlorophenyl phenyl ether	1630	1500		ug/Kg		92	63 - 124
4-Methylphenol	1630	1380		ug/Kg		84	55 - 120
4-Nitroaniline	1630	1500		ug/Kg		92	56 - 120
4-Nitrophenol	3260	3350		ug/Kg		103	43 - 147
Acenaphthene	1630	1460		ug/Kg		89	62 - 120
Acenaphthylene	1630	1450		ug/Kg		89	58 - 121
Acetophenone	1630	1290		ug/Kg		79	54 - 120
Anthracene	1630	1520		ug/Kg		93	62 - 120
Atrazine	3260	3130		ug/Kg		96	60 - 127
Benzaldehyde	3260	2500		ug/Kg		76	10 - 150
Benzo[a]anthracene	1630	1530		ug/Kg		94	65 - 120
Benzo[a]pyrene	1630	1610		ug/Kg		99	64 - 120
Benzo[b]fluoranthene	1630	1530		ug/Kg		93	64 - 120
Benzo[g,h,i]perylene	1630	1530		ug/Kg		94	45 - 145
Benzo[k]fluoranthene	1630	1690		ug/Kg		103	65 - 120
Bis(2-chloroethoxy)methane	1630	1370		ug/Kg		84	55 - 120
Bis(2-chloroethyl)ether	1630	1270		ug/Kg		78	45 - 120
Bis(2-ethylhexyl) phthalate	1630	1520		ug/Kg		93	61 - 133
Butyl benzyl phthalate	1630	1550		ug/Kg		95	61 - 129
Caprolactam	3260	3090		ug/Kg		95	47 - 120
Carbazole	1630	1610		ug/Kg		99	65 - 120
Chrysene	1630	1540		ug/Kg		94	64 - 120
Dibenz(a,h)anthracene	1630	1600		ug/Kg		98	54 - 132
Di-n-butyl phthalate	1630	1560		ug/Kg		96	58 - 130
Di-n-octyl phthalate	1630	1530		ug/Kg		94	57 - 133
Dibenzofuran	1630	1450		ug/Kg		89	63 - 120
Diethyl phthalate	1630	1540		ug/Kg		94	66 - 120

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-638955/2-A
Matrix: Solid
Analysis Batch: 639118

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dimethyl phthalate	1630	1520		ug/Kg		93	65 - 124
Fluoranthene	1630	1560		ug/Kg		96	62 - 120
Fluorene	1630	1500		ug/Kg		92	63 - 120
Hexachlorobenzene	1630	1580		ug/Kg		97	60 - 120
Hexachlorobutadiene	1630	1320		ug/Kg		81	45 - 120
Hexachlorocyclopentadiene	1630	1180		ug/Kg		72	47 - 120
Hexachloroethane	1630	1160		ug/Kg		71	41 - 120
Indeno[1,2,3-cd]pyrene	1630	1540		ug/Kg		94	56 - 134
Isophorone	1630	1350		ug/Kg		83	56 - 120
N-Nitrosodi-n-propylamine	1630	1320		ug/Kg		81	52 - 120
N-Nitrosodiphenylamine	1630	1550		ug/Kg		95	51 - 128
Naphthalene	1630	1320		ug/Kg		81	55 - 120
Nitrobenzene	1630	1340		ug/Kg		82	54 - 120
Pentachlorophenol	3260	2790		ug/Kg		85	51 - 120
Phenanthrene	1630	1520		ug/Kg		93	60 - 120
Phenol	1630	1360		ug/Kg		83	53 - 120
Pyrene	1630	1590		ug/Kg		98	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*82*		*53 - 120*
Phenol-d5 (Surr)	*81*		*54 - 120*
p-Terphenyl-d14 (Surr)	*98*		*79 - 130*
2,4,6-Tribromophenol (Surr)	*93*		*54 - 120*
2-Fluorobiphenyl (Surr)	*87*		*60 - 120*
2-Fluorophenol (Surr)	*77*		*52 - 120*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 480-638733/1-A
Matrix: Solid
Analysis Batch: 638776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638733

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		1.6	0.32	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
4,4'-DDE	ND		1.6	0.34	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
4,4'-DDT	ND		1.6	0.38	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Aldrin	ND		1.6	0.40	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
alpha-BHC	ND		1.6	0.29	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
cis-Chlordane	ND		1.6	0.81	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
beta-BHC	ND		1.6	0.29	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
delta-BHC	ND		1.6	0.30	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Dieldrin	ND		1.6	0.39	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Endosulfan I	ND		1.6	0.31	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Endosulfan II	ND		1.6	0.29	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Endosulfan sulfate	ND		1.6	0.30	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Endrin	ND		1.6	0.32	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Endrin aldehyde	ND		1.6	0.41	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Endrin ketone	ND		1.6	0.40	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
gamma-BHC (Lindane)	ND		1.6	0.30	ug/Kg		08/23/22 15:40	08/24/22 09:24	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 480-638733/1-A
Matrix: Solid
Analysis Batch: 638776

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638733

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-Chlordane	ND		1.6	0.52	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Heptachlor	ND		1.6	0.35	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Heptachlor epoxide	ND		1.6	0.42	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Methoxychlor	ND		1.6	0.33	ug/Kg		08/23/22 15:40	08/24/22 09:24	1
Toxaphene	ND		16	9.4	ug/Kg		08/23/22 15:40	08/24/22 09:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*71*		*45 - 120*	*08/23/22 15:40*	*08/24/22 09:24*	*1*
DCB Decachlorobiphenyl	*78*		*45 - 120*	*08/23/22 15:40*	*08/24/22 09:24*	*1*
Tetrachloro-m-xylene	*70*		*30 - 124*	*08/23/22 15:40*	*08/24/22 09:24*	*1*
Tetrachloro-m-xylene	*54*		*30 - 124*	*08/23/22 15:40*	*08/24/22 09:24*	*1*

Lab Sample ID: LCS 480-638733/2-A
Matrix: Solid
Analysis Batch: 638776

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638733

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	16.4	10.3		ug/Kg		63	56 - 120
4,4'-DDE	16.4	9.59		ug/Kg		59	44 - 120
4,4'-DDT	16.4	9.87		ug/Kg		60	38 - 120
Aldrin	16.4	8.73		ug/Kg		53	38 - 120
alpha-BHC	16.4	8.52		ug/Kg		52	39 - 120
cis-Chlordane	16.4	9.50		ug/Kg		58	47 - 120
beta-BHC	16.4	9.83		ug/Kg		60	40 - 120
delta-BHC	16.4	8.96		ug/Kg		55	45 - 120
Dieldrin	16.4	9.62		ug/Kg		59	58 - 120
Endosulfan I	16.4	10.5		ug/Kg		64	49 - 120
Endosulfan II	16.4	9.94		ug/Kg		61	55 - 120
Endosulfan sulfate	16.4	9.74		ug/Kg		60	49 - 124
Endrin	16.4	9.96		ug/Kg		61	58 - 120
Endrin aldehyde	16.4	8.96		ug/Kg		55	37 - 121
Endrin ketone	16.4	10.0		ug/Kg		61	46 - 123
gamma-BHC (Lindane)	16.4	8.53		ug/Kg		52	50 - 120
trans-Chlordane	16.4	9.65		ug/Kg		59	48 - 120
Heptachlor	16.4	9.50		ug/Kg		58	50 - 120
Heptachlor epoxide	16.4	10.0		ug/Kg		61	50 - 120
Methoxychlor	16.4	10.3		ug/Kg		63	58 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*59*		*45 - 120*
DCB Decachlorobiphenyl	*66*		*45 - 120*
Tetrachloro-m-xylene	*59*		*30 - 124*
Tetrachloro-m-xylene	*46*		*30 - 124*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 480-638733/3-A
Matrix: Solid
Analysis Batch: 638776

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 638733

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDD			16.2	11.1		ug/Kg		68	56 - 120	7	18
4,4'-DDE			16.2	10.3		ug/Kg		63	44 - 120	7	16
4,4'-DDT			16.2	10.7		ug/Kg		66	38 - 120	8	17
Aldrin			16.2	9.24		ug/Kg		57	38 - 120	6	24
alpha-BHC			16.2	9.19		ug/Kg		57	39 - 120	8	19
cis-Chlordane			16.2	10.0		ug/Kg		62	47 - 120	5	13
beta-BHC			16.2	10.6		ug/Kg		65	40 - 120	8	17
delta-BHC			16.2	9.73		ug/Kg		60	45 - 120	8	14
Dieldrin			16.2	10.6		ug/Kg		65	58 - 120	10	13
Endosulfan I			16.2	11.2		ug/Kg		69	49 - 120	6	16
Endosulfan II			16.2	10.7		ug/Kg		66	55 - 120	7	17
Endosulfan sulfate			16.2	10.8		ug/Kg		66	49 - 124	10	14
Endrin			16.2	10.7		ug/Kg		66	58 - 120	7	19
Endrin aldehyde			16.2	10.0		ug/Kg		62	37 - 121	11	23
Endrin ketone			16.2	10.8		ug/Kg		67	46 - 123	8	14
gamma-BHC (Lindane)			16.2	9.13		ug/Kg		56	50 - 120	7	20
trans-Chlordane			16.2	10.2		ug/Kg		63	48 - 120	5	14
Heptachlor			16.2	10.1		ug/Kg		62	50 - 120	6	16
Heptachlor epoxide			16.2	10.6		ug/Kg		66	50 - 120	6	17
Methoxychlor			16.2	11.2		ug/Kg		69	58 - 133	9	14

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*62*		*45 - 120*
DCB Decachlorobiphenyl	*70*		*45 - 120*
Tetrachloro-m-xylene	*63*		*30 - 124*
Tetrachloro-m-xylene	*48*		*30 - 124*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-638737/1-A
Matrix: Solid
Analysis Batch: 638934

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.22	0.043	mg/Kg		08/23/22 15:51	08/24/22 16:53	1
PCB-1221	ND		0.22	0.043	mg/Kg		08/23/22 15:51	08/24/22 16:53	1
PCB-1232	ND		0.22	0.043	mg/Kg		08/23/22 15:51	08/24/22 16:53	1
PCB-1242	ND		0.22	0.043	mg/Kg		08/23/22 15:51	08/24/22 16:53	1
PCB-1248	ND		0.22	0.043	mg/Kg		08/23/22 15:51	08/24/22 16:53	1
PCB-1254	ND		0.22	0.10	mg/Kg		08/23/22 15:51	08/24/22 16:53	1
PCB-1260	ND		0.22	0.10	mg/Kg		08/23/22 15:51	08/24/22 16:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*95*		*60 - 154*	*08/23/22 15:51*	*08/24/22 16:53*	*1*
Tetrachloro-m-xylene	*112*		*60 - 154*	*08/23/22 15:51*	*08/24/22 16:53*	*1*
DCB Decachlorobiphenyl	*100*		*65 - 174*	*08/23/22 15:51*	*08/24/22 16:53*	*1*
DCB Decachlorobiphenyl	*137*		*65 - 174*	*08/23/22 15:51*	*08/24/22 16:53*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 480-638737/2-A
Matrix: Solid
Analysis Batch: 638934

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638737

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016			1.85	2.17		mg/Kg		117	51 - 185		
PCB-1260			1.85	1.96		mg/Kg		106	61 - 184		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*109*		*60 - 154*
Tetrachloro-m-xylene	*133*		*60 - 154*
DCB Decachlorobiphenyl	*112*		*65 - 174*
DCB Decachlorobiphenyl	*151*		*65 - 174*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-638872/1-A
Matrix: Solid
Analysis Batch: 639272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638872

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.411	J	2.0	0.40	mg/Kg		08/24/22 12:15	08/26/22 01:10	1
Barium	ND		0.50	0.11	mg/Kg		08/24/22 12:15	08/26/22 01:10	1
Cadmium	ND		0.20	0.030	mg/Kg		08/24/22 12:15	08/26/22 01:10	1
Chromium	ND		0.50	0.20	mg/Kg		08/24/22 12:15	08/26/22 01:10	1
Lead	ND		1.0	0.24	mg/Kg		08/24/22 12:15	08/26/22 01:10	1
Selenium	ND		4.0	0.40	mg/Kg		08/24/22 12:15	08/26/22 01:10	1
Silver	ND		0.60	0.20	mg/Kg		08/24/22 12:15	08/26/22 01:10	1

Lab Sample ID: LCSSRM 480-638872/2-A
Matrix: Solid
Analysis Batch: 639272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638872

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			84.5	70.16		mg/Kg		83.0	70.1 - 130.2		
Barium			249	201.2		mg/Kg		80.8	75.1 - 124.9		
Cadmium			99.0	75.54		mg/Kg		76.3	74.9 - 125.3		
Chromium			122	103.1		mg/Kg		84.5	70.2 - 130.3		
Lead			123	115.4		mg/Kg		93.8	71.8 - 128.5		
Selenium			121	98.62		mg/Kg		81.5	66.4 - 133.9		
Silver			33.6	33.85		mg/Kg		100.7	68.5 - 131.3		

QC Sample Results

Client: Joseph C. Lu Eng & Land Surveying PC
Project/Site: Jay Hague #50380

Job ID: 480-200909-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-638806/1-A
Matrix: Solid
Analysis Batch: 638905

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 638806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.0047	mg/Kg		08/24/22 09:48	08/24/22 12:39	1

Lab Sample ID: LCSSRM 480-638806/2-A ^10
Matrix: Solid
Analysis Batch: 638905

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 638806

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			18.9	17.13		mg/Kg		90.6	59.8 - 139.7		

Lab Sample ID: 480-200909-1 MS
Matrix: Solid
Analysis Batch: 638905

Client Sample ID: Topsoil - 01
Prep Type: Total/NA
Prep Batch: 638806

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	0.049		0.428	0.469		mg/Kg	☼	98	80 - 120		

Lab Sample ID: 480-200909-1 MSD
Matrix: Solid
Analysis Batch: 638905

Client Sample ID: Topsoil - 01
Prep Type: Total/NA
Prep Batch: 638806

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.049		0.442	0.484		mg/Kg	☼	98	80 - 120	3	20

QC Association Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

GC/MS VOA

Prep Batch: 638751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	5035A_L	
MB 480-638751/2-A	Method Blank	Total/NA	Solid	5035A_L	
LCS 480-638751/1-A	Lab Control Sample	Total/NA	Solid	5035A_L	

Analysis Batch: 638753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	8260C	638751
MB 480-638751/2-A	Method Blank	Total/NA	Solid	8260C	638751
LCS 480-638751/1-A	Lab Control Sample	Total/NA	Solid	8260C	638751

GC/MS Semi VOA

Prep Batch: 638955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	3550C	
MB 480-638955/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-638955/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 639118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	8270D	638955
MB 480-638955/1-A	Method Blank	Total/NA	Solid	8270D	638955
LCS 480-638955/2-A	Lab Control Sample	Total/NA	Solid	8270D	638955

GC Semi VOA

Prep Batch: 638733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	3550C	
MB 480-638733/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-638733/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 480-638733/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

Prep Batch: 638737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	3550C	
MB 480-638737/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-638737/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 638776

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	8081B	638733
MB 480-638733/1-A	Method Blank	Total/NA	Solid	8081B	638733
LCS 480-638733/2-A	Lab Control Sample	Total/NA	Solid	8081B	638733
LCSD 480-638733/3-A	Lab Control Sample Dup	Total/NA	Solid	8081B	638733

Analysis Batch: 638934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	8082A	638737
MB 480-638737/1-A	Method Blank	Total/NA	Solid	8082A	638737
LCS 480-638737/2-A	Lab Control Sample	Total/NA	Solid	8082A	638737

QC Association Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Metals

Prep Batch: 638806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	7471B	
MB 480-638806/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-638806/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	
480-200909-1 MS	Topsoil - 01	Total/NA	Solid	7471B	
480-200909-1 MSD	Topsoil - 01	Total/NA	Solid	7471B	

Prep Batch: 638872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	3050B	
MB 480-638872/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-638872/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 638905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	7471B	638806
MB 480-638806/1-A	Method Blank	Total/NA	Solid	7471B	638806
LCSSRM 480-638806/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	638806
480-200909-1 MS	Topsoil - 01	Total/NA	Solid	7471B	638806
480-200909-1 MSD	Topsoil - 01	Total/NA	Solid	7471B	638806

Analysis Batch: 639272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	6010C	638872
MB 480-638872/1-A	Method Blank	Total/NA	Solid	6010C	638872
LCSSRM 480-638872/2-A	Lab Control Sample	Total/NA	Solid	6010C	638872

General Chemistry

Analysis Batch: 638745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-200909-1	Topsoil - 01	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Client Sample ID: Topsoil - 01
Lab Sample ID: 480-200909-1
Date Collected: 08/19/22 14:05
Matrix: Solid
Date Received: 08/22/22 09:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	638745	JMM	EET BUF	08/23/22 16:18

Client Sample ID: Topsoil - 01
Lab Sample ID: 480-200909-1
Date Collected: 08/19/22 14:05
Matrix: Solid
Date Received: 08/22/22 09:10
Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035A_L			638751	CDC	EET BUF	08/23/22 17:50
Total/NA	Analysis	8260C		1	638753	CDC	EET BUF	08/24/22 04:31
Total/NA	Prep	3550C			638955	SJM	EET BUF	08/24/22 16:01
Total/NA	Analysis	8270D		1	639118	PJQ	EET BUF	08/25/22 22:01
Total/NA	Prep	3550C			638733	SJM	EET BUF	08/23/22 15:40
Total/NA	Analysis	8081B		1	638776	JLS	EET BUF	08/24/22 10:43
Total/NA	Prep	3550C			638737	SJM	EET BUF	08/23/22 15:51
Total/NA	Analysis	8082A		1	638934	NC	EET BUF	08/24/22 21:48
Total/NA	Prep	3050B			638872	NZG	EET BUF	08/24/22 12:15
Total/NA	Analysis	6010C		1	639272	BMB	EET BUF	08/26/22 01:45
Total/NA	Prep	7471B			638806	NVK	EET BUF	08/24/22 09:48
Total/NA	Analysis	7471B		1	638905	NVK	EET BUF	08/24/22 12:43

Laboratory References:
EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Laboratory: Eurofins Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Job ID: 480-200909-1
Project/Site: Jay Hague #50380

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
8081B	Organochlorine Pesticides (GC)	SW846	EET BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET BUF
6010C	Metals (ICP)	SW846	EET BUF
7471B	Mercury (CVAA)	SW846	EET BUF
Moisture	Percent Moisture	EPA	EET BUF
3050B	Preparation, Metals	SW846	EET BUF
3550C	Ultrasonic Extraction	SW846	EET BUF
5035A_L	Closed System Purge and Trap	SW846	EET BUF
7471B	Preparation, Mercury	SW846	EET BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Joseph C. Lu Eng & Land Surveying PC
Project/Site: Jay Hague #50380

Job ID: 480-200909-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-200909-1	Topsoil - 01	Solid	08/19/22 14:05	08/22/22 09:10

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler: Ben Seifert	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Ben Seifert	Phone: 585-385-7417	E-Mail:	State of Origin:	Page:
Company: LU Engineers		Accreditations Required (See note):		Job #:
Address: 339 East Ave Suite 200	Due Date Requested: 08/29/22 if possible			
City: Rochester NY	TAT Requested (days): standard. Prelim results by 08/29 if possible			
State, Zip: 14604	PO #: 50380-01			
Phone: 585-385-7417	WO #:			
Email: bseifert@luengineers.com	Project #:			
Project Name: 50380	SSOW#:			
Site: Jay Hague				

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Y - Trizma; Z - other (specify); Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TCL VOC 8260	SVOC (8/N) 8270	Pest. 8081	PCBs 8082	RCRA Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
Topsoil - @1	08/19/22	14:05	C/G	So:1			✓	✓	✓	✓	✓		VOC grab, all other comp.

480-200909 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☑ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Cat B; Primary Deliverable Rank: 2	Special Instructions/QC Requirements: NYSDEC EDD
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Ben Seifert	08/22/22 09:10	LU	[illegible]	8-22-22 910	TRB
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No; Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3.4 IR

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Joseph C. Lu Eng & Land Surveying PC

Job Number: 480-200909-1

Login Number: 200909
List Number: 1
Creator: Sabuda, Brendan D

List Source: Eurofins Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.4 #1 ice
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

SITE NIAGARA FALLS LANDFILL 716-282-6381
5600 Niagara Falls Blvd -Niagara Falls, NY 14304

CUSTOMER 392119
LU ENGINEERS
BEN SEIFERT
ROCHESTER, NY 14604
Contract:42152214736
Generator:Jay Hague Properties LLC

SITE 5B	TICKET # 1228845	CELL	
WEIGHMASTER	Albert S.		
DATE/TIME IN	12/2/22 11:54 am	DATE/TIME OUT	12/2/22 12:35 pm
VEHICLE	TRIPI102	CONTAINER	
REFERENCE			
BILL OF LADING			

SCALE IN GROSS WEIGHT 41,980 NET TONS 6.16
SCALE OUT TARE WEIGHT 29,660 NET WEIGHT 12,320

INBOUND
INVOICE

QTY	UNIT	ID	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
12.00			Tracking QTY				
6.16	tn		SW-CONT SOIL Origin:NY-MONROE 100%				
1.00			ENVIRONMENTAL FEE 1				

Have a nice day. Thank you for your business!

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

SIGNATURE

RS-F042UPR (04/19)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number

GENERATOR

5. Generator's Name and Mailing Address

Jay Hague Properties, LLC
339 East Ave Suite 200
Rochester, NY 14604

Generator's Phone:

Generator's Site Address (if different than mailing address)

485 Hague St
Rochester, NY 14606

6. Transporter 1 Company Name — U.S. EPA ID Number

Tripi Transportation

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Republic Services
5600 Niagara Fall Blvd
Niagara Falls, NY 14304

Facility's Phone: 716-285-3364

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non - Haz Soil	001	DT	20	T	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

Profile # 42152214736 102

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: Ben Seifert (by Engineers) — Signature — Month: 12 — Day: 22 — Year: 22

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: x Robert Likus — Signature — Month: 12 — Day: 2 — Year: 22

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

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

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Al Smith — Signature — Month: 12 — Day: 22 — Year: 22

SITE NIAGARA FALLS LANDFILL 716-282-6381
5600 Niagara Falls Blvd -Niagara Falls, NY 14304

CUSTOMER 392119
LU ENGINEERS
BEN SEIFERT
ROCHESTER, NY 14604
Contract:42152214736
Generator:Jay Hague Properties LLC

SITE 5B | TICKET # 1228831 | CELL
WEIGHMASTER Albert S.
DATE/TIME IN 12/2/22 11:10 am | DATE/TIME OUT 12/2/22 12:02 pm
VEHICLE TRIPI113 | CONTAINER
REFERENCE
BILL OF LADING

SCALE IN GROSS WEIGHT 43,700 NET TONS 6.29 INBOUND
SCALE OUT TARE WEIGHT 31,120 NET WEIGHT 12,580 INVOICE

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
20.00	YD	Tracking QTY				
6.29	tn	SW-CONT SOIL Origin:NY-MONROE 100%				
1.00		ENVIRONMENTAL FEE 1				

Have a nice day. Thank you for your business!

NET AMOUNT
TENDERED
CHANGE
CHECK#

The undersigned individual signing this document on behalf of Customer acknowledges that he or she has read and understands the terms and conditions on the reverse side and that he or she has the authority to sign this document on behalf of the customer.

SIGNATURE

RS-F042UPR (04/19)

113

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number

5. Generator's Name and Mailing Address: Jay Hague Properties, LLC, 339 East Ave Suite 200, Rochester, NY 14604

Generator's Site Address (if different than mailing address): 485 Hague St, Rochester, NY 14606

Generator's Phone: 585-594-5545

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name: Tripi Transportation — U.S. EPA ID Number

8. Designated Facility Name and Site Address: Republic Services, 5600 Niagara Fall Blvd, Niagara Falls, NY 14304 — U.S. EPA ID Number

Facility's Phone: 716-285-5344

9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
1. Non - Haz Soil	001	DT	20	T
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information

P.O. #

42152214735

SWAN

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: Ben Seifert (LU Engineers) — Signature: [signature] — Month 12 Day 02 Year 22

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: ____

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Anthony Scipione — Signature: [signature] — Month 12 Day 2 Year 22

Transporter 2 Printed/Typed Name — Signature — Month Day Year

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

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Al Smith — Signature: [signature] — Month 12 Day 2 Year 22

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1