

March 18, 2024

Site Control Section
Attn: Jenn Hathaway
New York State Department of Environmental Conservation
Bureau of Technical Support
625 Broadway, 11th Floor
Albany, NY 122337020

Re: Brownfield Cleanup Application Letter of Incompleteness

North Aud Block
Site No. C915406

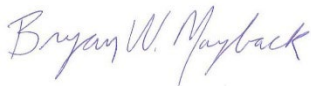
Dear : Ms. Hathaway

On behalf of our Client (North Aud Owner LLC), Roux Environmental Engineering and Geology, D.P.C. (Roux) has reviewed the March 11, 2024 Letter of Incompleteness from the New York State Department of Environmental Conservation (NYSDEC) on the Brownfield Cleanup Program (BCP) for the North Aud Block site (BCP Site No. C915406), located in Buffalo, New York.

A Phase II report (attached) has been developed summarizing the test pit investigation completed by Roux (previously Benchmark Civil/Environmental Engineering & Geology, PLLC) in May and June 2023. The BCP application has been revised to reference this document.

Sincerely,

ROUX ENVIRONMENTAL ENGINEERING AND GEOLOGY, D.P.C.



Bryan Mayback
Technical Director



Michael Lesakowski
Principal Scientist, Vice President, Co-Operations Manager

cc: E. Melnyk (NYSDEC)
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Phase II Environmental Investigation

North Aud Block Site

A Portion of 130 Main Street

Buffalo, New York

March 2024

Prepared for:

Pennrose, LLC

45 Main Street, Suite 539

Brooklyn, NY 11201

Prepared by:

**Roux Environmental Engineering
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- C. Laboratory Analytical Data Summary Package

1.0 INTRODUCTION

1.1 Background and Site Description

Roux Environmental Engineering and Geology, D.P.C. (Roux)¹ performed a Phase II Environmental Investigation for Pennrose, LLC at the North Aud Block Site, located on a portion of 130 Main Street, City of Buffalo, Erie County, New York (Site).

The Site, located in a highly developed residential and commercial area (see Figure 1), has access to all public utilities (i.e., municipal sanitary sewer, electric, natural-gas and public water).

The Site consists of a 1.87-acre portion of a greater parcel, SBL No. 111.17-14-11. The Site is mostly vacant at this time and covered with grass, light vegetation, and stone. The southern portion of the Site is developed with three structures associated with the Ice at Canalside, including a 2,012-square-foot (SF) metal & fabric building used as a ticketing office, a 143-SF metal outbuilding used as restrooms and a 156-SF metal outbuilding used as a snack shack. Small areas of the Site are covered with concrete sidewalks/stairs associated with the adjacent ice rink. A wooden/sheet pile retaining wall is located proximate to the north, east, and west boundaries of the Site and a smaller concrete wall is located near the western Site boundary. A chain link fence surrounds the majority of the Site (excluding the southern portion associated with the adjacent ice rink), which restricts access.

Information relative to the history of the Site is provided below.

1.2 Historical Research

Based on historic records and Sanborn Fire Insurance Maps, the Site was used in residential, commercial, and industrial capacities between at least 1889 and 1939. The Site was developed with numerous commercial buildings and former sections of existing streets including Pearl, Commercial, and Lloyd Streets. Noteworthy commercial and industrial uses during this time included a glue factory, a ship chandlers (including a machine shop and a rigging and sail facility), a dental manufacturer, and a paint company on the north/central portion of the Site; a tin shop, machine shop, and another paint company on the western portion of the Site, and a shoe factory on the southeastern portion of the Site. In addition, as further discussed below, portions of the Erie Canal and adjoining slips were located proximate to the Site, which have since been backfilled.

In 1939, existing buildings, streets, and portions of the former Erie Canal between Lower Terrace Street, Marine Drive, Commercial Street, and Main Street were demolished and backfilled for construction of the Buffalo Memorial Auditorium ("The Aud"). The Site itself was developed with the northern portion of the Aud. The Aud was used as an indoor athletic arena/concert venue until 1996. The Aud remained unused between 1996 and 2009, when the building was demolished.

The Site has remained mostly vacant since the Aud's demolition in 2009. Aerial photos indicate the Site has been used as a storage/contractor parking area for at least the last decade. Also records indicate that in 2014, portions of the Erie Canal were excavated/widened immediately south of the Site. The re-

¹ We note that at the time of the Phase II fieldwork, we were known as Benchmark Civil/Environmental Engineering & Geology, PLLC, prior to merging with Roux on July 24, 2023.

established canals were used as an ice rink (The Ice at Canalside) during the winter months since 2014. In 2015, three small former temporary structures, likely associated with the ice rink, were constructed in the southern portion of the Site. By 2016, the former structures were replaced by the three existing structures (one main metal building and two small metal outbuildings) associated with the ice rink. As part of this redevelopment project, the existing on-Site buildings will be removed.

Historic research documents are included in Appendix A.

1.3 Previous Investigations

The following summarizes previous investigations associated with the Site:

- Sienna Environmental Technologies (Sienna) completed an Environmental Site Review Addendum for the Site in July 2020. Sienna references a subsurface investigation with soil sampling analysis completed by SJB Services Inc. (SJB) in June 2020. Based on SJB's investigation, five soil borings (B-1 through B-5) were advanced to 36 feet below ground surface (fbgs). Fill material was encountered from depths ranging from 4 fbgs to 7 fbgs. The soil/fill was variable and consisted of silty sand, sandy silt, silty clay, and gravel, with crushed stone, cobble, brick, cinders, concrete, coal, organics, and possible fly ash. Laboratory analytical results revealed mercury at B-1 at a concentration of 0.205 milligrams per kilogram (mg/kg), exceeding its Unrestricted Soil Cleanup Objective (USCO) (0.18 mg/kg), and mercury was also identified at B-4 at a concentration of 1.62 mg/kg, exceeding the Restricted Residential Soil Cleanup Objective (RRSCO) (0.81 mg/kg).
- Hillman Consulting (Hillman) completed an Environmental Site Assessment (ESA) in the area of the Site in April 2023. Hillman Consulting identified the following recognized environmental condition (REC):
 - Based on the results of the SJB soil investigation summarized in the Sienna Environmental Site Review Addendum, Hillman concluded that the verified presence of historic fill material within the Property is considered a REC due to the detection of mercury in the fill above USCOs.[Based on an investigation figure, the soil borings by SJB used as the basis of the stated REC, were all located within the boundaries of the Site.]

Soil/fill sample results from SJB's previous investigation have been incorporated herein.

1.4 Purpose

Roux's Phase II Environmental Investigation was completed to further assess subsurface conditions across the Site. This investigation was not intended to be comprehensive in nature, but its purpose was to collect sufficient data to determine whether the Site is a potential candidate for the New York Brownfield Cleanup Program (NY BCP). Additional information relative to the work completed by Roux is provided below.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 Sampling Activities

On May 18, 2023, and June 20, 2023, Roux mobilized an excavator to the Site. As shown on Figure 2, 24 test pits, designated as TP-1 through TP-24, were completed across the Site in accessible exterior areas. The test pits were advanced to depths between 6 fbgs and 7 fbgs (the maximum reach of the excavator).

The physical characteristics of all test pits and the near surface samples were classified using the ASTM D2488 Visual-Manual Procedure Description. Soils from each investigation location were screened via headspace screening using a MiniRae 2000 Photoionization Detector (PID). Visual and/or olfactory observations were noted. All field observations, including lithology, depths, etc., at each investigation location are summarized in the attached Table 1. Photographs taken during the work are included in Appendix B.

Ten soil/fill samples selected by Roux for laboratory analysis were transported under chain-of-custody command to Eurofins Testing America (Eurofins) in Amherst, New York, for analysis of polycyclic aromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) metals, and/or polychlorinated biphenyls (PCBs). All samples were collected in laboratory provided sample bottles and were cooled to 4° C prior to transport. We note that results for four additional soil/fill samples collected by SJB were analyzed for volatile organic compounds (VOCs), PAHs, RCRA Metals, pesticides, herbicides, and PCBs. Analytical results are further discussed below.

2.2 Site Geology/Hydrogeology

The overburden geology observed during the investigation activities is generally described as follows:

- The Site generally consists of stone cover material overlying urban fill materials to depths ranging between 2 fbgs and greater than 7 fbgs and native soils beneath the fill units, as further discussed below.
- Fill materials were generally noted to include cinders, ash, and fragments of brick, coal, and concrete. Of note, black sand was observed in the northeast portion of the Site (TP-8 and TP-9), and suspected railroad ties with an unknown black material were identified within the fill on the eastern part of the Site (TP-20). In addition, this unknown black material was also identified in the northern and central portions of the Site (TP-3, TP-4, and TP-10). Cinders and ash were observed mixed with fill at several test pits throughout the Site. Fill materials were identified to the base (7 fbgs) of certain investigation locations (TP-13, TP-14, and TP-17), the maximum reach of the excavator, thus the depth of fill in these areas is deeper than initially investigated and currently unknown.
- Native soil beneath the fill units was identified as predominantly sand with layers of silty sand, clayey silt, and gravel.
- Regional groundwater flow is likely west/southwest toward the Buffalo River. Locally, groundwater may be influenced by subsurface features, such as excavations, utilities, and localized fill conditions. Standing water was encountered in test pits and soil borings at depths ranging between 4.5 fbgs and 10 fbgs.
- Additional information on lithology is provided on Table 1 and also on Figure 2.

3.0 INVESTIGATION FINDINGS

3.1 Qualitative Soil Screening

Soil/fill samples from the investigation were observed and scanned via headspace screening for volatile organics using a PID. No PID readings above background (0.0 parts per million, ppm) were identified during the work.

3.2 Soil Analytical Results

The complete laboratory analytical reports are included in Appendix C and Table 2 presents a summary of the detections for each of the soil/fill samples selected for laboratory analysis from Roux's investigation. For comparative purposes, Table 2 includes 6NYCRR Part 375 Unrestricted, Restricted-Residential, Commercial and Industrial Use Soil Cleanup Objectives (USCOs, RSCOs, RRSCOs, CSCOs, and ISCOs, respectively). As a Track 1 Unrestricted Cleanup is anticipated as part of the Site's redevelopment plan, USCOs are the most applicable SCO for the Site.

As summarized on Table 2 and on Figure 2, soil/fill samples collected by Roux yielded PAHs at concentrations exceeding USCOs, RRSCOs, CSCOs, and ISCOs at TP-12. Metals, including arsenic, barium, lead, and/or mercury, were identified exceeding USCOs, RRSCOs, CSCOs, and ISCOs at TP-4, TP-8, TP-12, TP-18, TP-19, TP-20, and TP-21. Arsenic was detected up to 107 mg/kg, exceeding its ISCO (16 mg/kg) at TP-18, barium was detected up to 9,720 mg/kg, exceeding its CSCO (400 mg/kg) at TP-21, lead was detected up to 11,400 mg/kg, exceeding its ISCO (3,900 mg/kg) at TP-18, and mercury was detected up to 6.4 mg/kg, exceeding its ISCO (5.7 mg/kg) at TP-18. PCBs were not detected at concentrations above laboratory detection limits.

Regarding soil/fill samples collected by SJB during a previous investigation, laboratory analytical results revealed mercury at B-1 at a concentration of 0.205 mg/kg, exceeding its USCO (0.18 mg/kg), and mercury was also identified at B-4 at a concentration of 1.62 mg/kg, exceeding the RRSCO (0.81 mg/kg). No VOCs, pesticides, herbicides or PCBs were detected at concentrations above laboratory detection limits.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the Phase II investigation at the Site, Roux offers the following conclusions and recommendations:

- The Site is primarily vacant underutilized land at this time.
- As per our review of Sanborn maps, the Site has a history of commercial/industrial uses most notably including a glue factory, a ship chandlers (including a machine shop and a rigging and sail facility), a dental manufacturer, paint companies, a tin shop, a machine shop, and a shoe factory. In addition, portions of the Erie Canal and adjoining slips were located proximate to the Site, which have since been backfilled.
- Fill materials were noted across the Site at depths ranging between two fbgs and at least seven fbgs (fill materials were identified to the base of certain test pits at the maximum reach of the excavator thus the depth of fill in these areas is deeper than initially investigated and currently unknown). During the work, we observed cinders, ash, black sand, an unknown black material, railroad ties, and fragments of brick, coal, and concrete.
- Laboratory analysis indicates wide-spread environmental impacts in soil/fill on-Site, as further discussed below.
- Soil/fill present across the Site is impacted by PAHs and/or metals with concentrations exceeding 6NYCRR Part 375 SCOs (the most applicable SCO is USCOs as a Track 1 Unrestricted Cleanup is anticipated as part of the Site's redevelopment plan; various USCO exceedances were identified). Of note, the metal concentrations identified (i.e., arsenic up to 107 mg/kg, barium up to 9,720 mg/kg, lead up to 11,400 mg/kg, and mercury up to 6.4 mg/kg, would require remediation if the Site were in a regulatory program.
- We understand the property is being considered for redevelopment. Based on the findings detailed above, the Site is a potential candidate for the BCP. Regardless of whether the BCP is pursued, impacted fill present on-Site will require exposure control, remediation and/or proper management either prior to or during redevelopment.

5.0 LIMITATIONS

This report has been prepared for the exclusive use of Pennrose, LLC. The contents of this report are limited to information available at the time of the Site investigation activities and to data referenced herein and assume all referenced historic information sources to be true and accurate. The findings herein may be relied upon only at the discretion of Pennrose, LLC. Use of or reliance on this report or its findings by any other person or entity is prohibited without written permission of Roux.

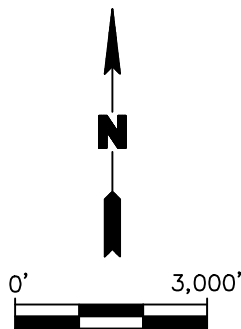
FIGURES



QUADRANGLE LOCATION



SOURCE:
BUFFALO, NY, 2023
USGS 7.5 MINUTE TOPOGRAPHIC MAP



Title: **SITE LOCATION AND VICINITY MAP**
Phase II Report
NORTH AUD BLOCK

P/O 130 MAIN STREET
BUFFALO, NEW YORK

Prepared for:

PENNROSE, LLC

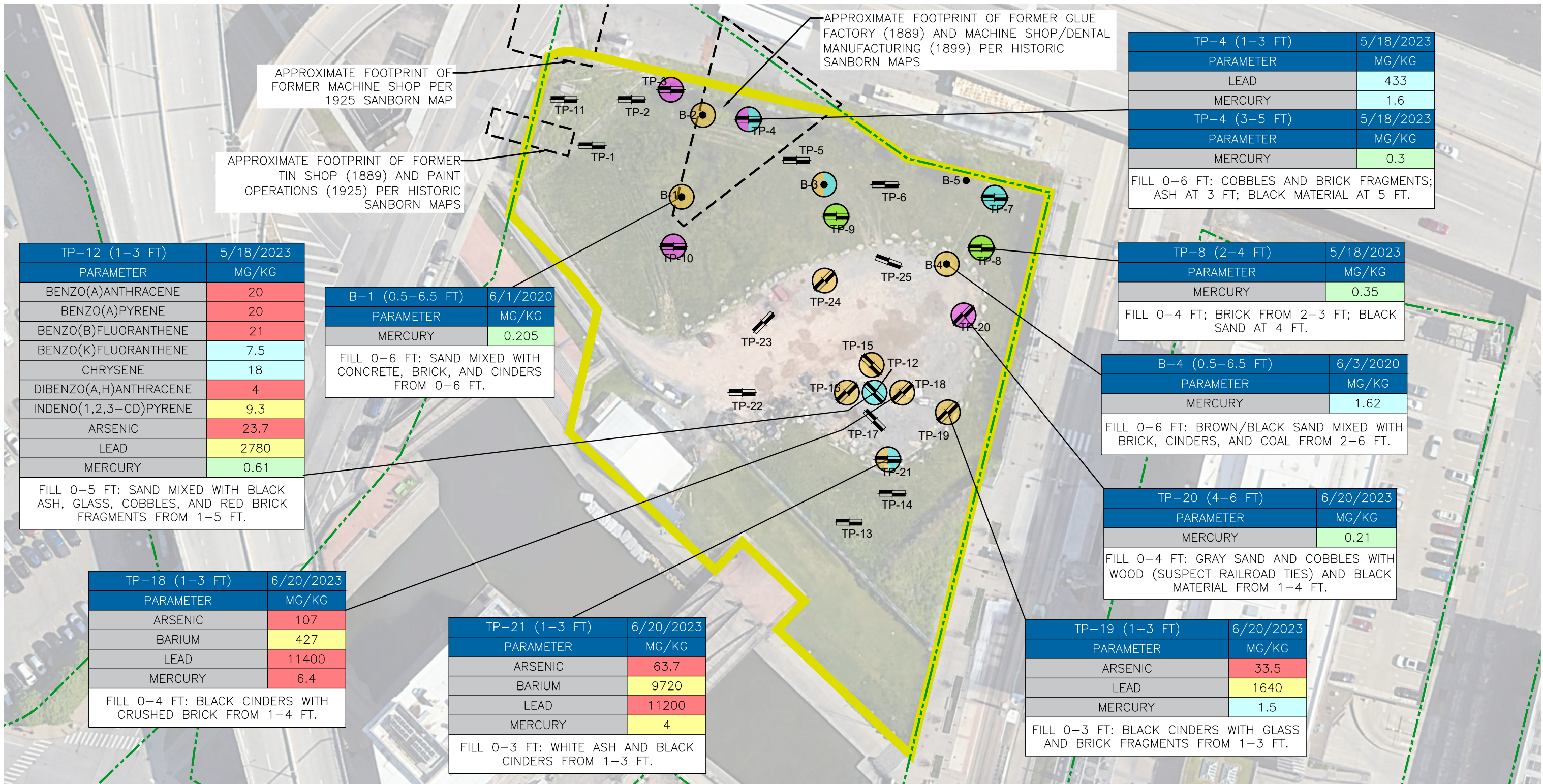


Compiled by: CNK	Date: FEBRUARY 2024
Prepared by: CNK	Scale: AS SHOWN
Project Mgr: BWM	Project: 4375.0001B000
File: FIGURE 1: SITE LOCATION AND VICINITY MAP-REV.DWG	

FIGURE

1

F:\CAD\0-ROUX\PENNR\ROSE\BCP APPLICATION\FIGURE 2: SITE PLAN (AERIAL).DWG

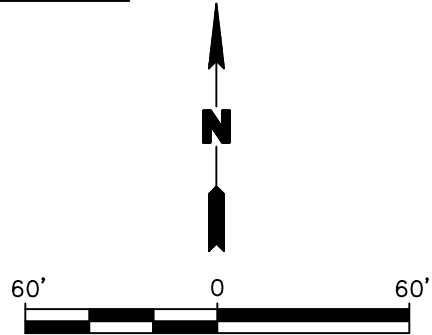


LEGEND

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- HISTORIC AREAS OF CONCERN
- SJB BORING LOCATION
- ROUX TEST PIT LOCATION
- FILL WITH BLACK SAND
- FILL WITH CINDERS
- FILL WITH ASH
- FILL WITH UNKNOWN BLACK MATERIAL
- EXCEEDS UNRESTRICTED SCOs
- EXCEEDS RESTRICTED-RESIDENTIAL SCOs
- EXCEEDS COMMERCIAL SCOs
- EXCEEDS INDUSTRIAL SCOs

NOTES

- AERIAL IMAGE SOURCE GOOGLE EARTH 2022.
- SOIL/FILL ANALYTICAL RESULTS COMPARED TO 6 NYCRR PART 375 SOIL CLEANUP OBJECTIVES (SCOs).



Title: **INVESTIGATION LOCATIONS AND AREAS OF CONCERN**

PHASE II REPORT

NORTH AUD BLOCK

P/O 130 MAIN STREET
BUFFALO, NEW YORK

Prepared for: **PENNR, LLC**

ROUX	Compiled by: CNK	Date: JANUARY 2024	FIGURE 2
	Prepared by: CNK	Scale: AS SHOWN	
	Project Mgr: BWM	Project: 4375.0001B000	
	File: FIGURE 2; SITE PLAN (AERIAL).DWG		

TABLES



TABLE 1
SUMMARY OF SUBSURFACE FIELD OBSERVATIONS

NORTH AUD BLOCK
BUFFALO, NEW YORK

Location	Fill Present	Thickness of Fill (ft)	Groundwater Present (Depth (fbgs))	Depth of Test Pit (fbgs)	Sample Depth (ft)	Depth (fbgs) and Soil Description
TP-1	Yes	1	Yes (6)	7		0 - 1'- Fill: Stone fill with brick fragments
						1'-7'- Native: Sand with gravel
TP-2	Yes	0.5	Yes (6)	7		0 - 0.5'- Fill: Stone fill with brick fragments
						1'-7'- Native: Sand
TP-3	Yes	6	Yes (6)	7		0 - 6'- Fill: Silt and sand with cobbles and brick, layer of unknown black material
						6'- 7'- Native: Sand
TP-4	Yes	5	No	6	1-3; 3-5	0 - 5'- Fill: Cobbles and brick, layer of ash at 3 fbgs, unknown black material at 5 fbgs
						5'- 6'- Native: Sand
TP-5	Yes	1	Yes (6)	7		0 - 1'- Fill: Stone fill
						1'- 7'- Native: Sand and gravel
TP-6	Yes	1	Yes (6)	7		0 - 1'- Fill: Stone fill
						1'- 7'- Native: Sand and cobbles
TP-7	Yes	4	Yes (6)	7		0 - 2'- Fill: Stone fill
					2-4	2'-4'- Fill: Cobbles and ash
						4'-7'- Native: Sand
TP-8	Yes	4	Yes (6)	7		0 - 2'- Fill: Stone fill
					2-4	2'-4'- Fill: Brick and black sand
						4'-7' - Native: Sand
TP-9	Yes	4	Yes (6)	7		0 - 1'- Fill: Stone fill
						1'-4'- Fill: Sand and stone with some black sand
						4'-7' - Native: Sand
TP-10	Yes	4	Yes (6)	7		0 - 1'- Fill: Stone fill
					2-4	1'-4'- Fill: Sand with unknown black material at 3 fbgs
						4'-7'- Native: Sand
TP-11	Yes	6	No	6		0 - 1'- Fill: Cobbles and rock
						1'-6'- Fill: Sand and gravel mixed with red brick
TP-12	Yes	5	No	6		0 - 1'- Fill: Stone fill
					1-3	1'-5'- Fill: Black ash and glass mixed with cobbles and red brick
						5'-6' - Native: Grey sand
TP-13	Yes	7	No	7		0 - 1'- Topsoil
						1'-7'- Fill: reworked clay with brick and stone
TP-14	Yes	7	No	7		0 - 0.5'- Topsoil
						0.5'-7'- Fill: Sand mixed with brick and cobbles
TP-15	Yes	4	Yes (6)	7		0 - 1'- Fill: Stone fill
						1'-3'- Fill: Dark cinders with orange brick
						3'-4'- Fill: Cobbles
						4'-7' - Native: Grey clay
TP-16	Yes	3	No	6		0 - 1'- Fill: Stone fill
						1'-3'- Fill: Dark cinders with glass and brick fragments
						3'-6' - Native: Brown to grey sand
TP-17	Yes	7	Yes (6)	7		0 - 1'- Fill: Stone fill
						1'-7'- Fill: Sand, brick, and cobbles mixed with glass fragment; equipment refusal at bottom of test pit (possible concrete slab)
TP-18	Yes	4	No	7		0 - 1'- Fill: Stone fill
					1-3	1'-4'- Fill: Black cinders and crushed brick
						4'-7' - Native: Dark grey sand
TP-19	Yes	3	No	7		0 - 1'- Fill: Stone fill
					1-3	1'-3'- Fill: Black cinders with fragments of glass and brick
						3'-7' - Native: Grey sand
TP-20	Yes	6	No	6		0 - 1'- Fill: Stone fill
					4-6	1'-6'- Fill: Grey sand and cobbles with wood (suspect railroad ties with unknown black material)



TABLE 1
SUMMARY OF SUBSURFACE FIELD OBSERVATIONS

NORTH AUD BLOCK
BUFFALO, NEW YORK

Location	Fill Present	Thickness of Fill (ft)	Groundwater Present (Depth (fbgs))	Depth of Test Pit (fbgs)	Sample Depth (ft)	Depth (fbgs) and Soil Description
TP-21	Yes	3	No	7		<u>0 - 1'- Fill:</u> Stone fill
					1-3	<u>1'-3'- Fill:</u> White ash followed by black cinders
						<u>3'-7' - Native:</u> Brown sand
TP-22	Yes	6	No	6		<u>0 - 0.5'- Fill:</u> Stone fill
						<u>0.5'-6'- Fill:</u> Cobbles and sand with red brick fragments
TP-23	Yes	6	No	6		<u>0 - 1.5'- Fill:</u> Stone fill
						<u>1.5'-6'- Fill:</u> Cobbles and sand with red brick fragments
TP-24	Yes	2	Yes (7)	7		<u>0 - 1.5'- Fill:</u> Stone fill
						<u>1.5'-2'- Fill:</u> Black cinders
						<u>2'-7' - Native:</u> Brown to grey sand
TP-25	Yes	4	Yes (7)	7		<u>0 - 1'- Fill:</u> Stone fill
						<u>1'-4'- Fill:</u> Reworked grey clay with red brick
						<u>4'-7'- Native:</u> Grey sand

Definitions:
ft = feet
fbgs = feet below ground surface



TABLE 2
SUMMARY OF SUBSURFACE SOIL/FILL ANALYTICAL RESULTS

NORTH AUD BLOCK
BUFFALO, NEW YORK

PARAMETER ¹	Unrestricted Use SCOs ²	Restricted Residential Use SCOs ²	Commercial Use SCOs ²	Industrial Use SCOs ²	2020 Subsurface Investigation ³				Roux 2023 Subsurface Investigation ³									
					B-1 0.5-6.5 FT	B-2 0.5-6.5 FT	B-3 0.5-6 FT	B-4 0.5-6.5 FT	TP-4 1-3 FT	TP-4 3-5 FT	TP-7 2-4 FT	TP-8 2-4 FT	TP-10 2-4 FT	TP-12 1-3 FT	TP-18 1-3 FT	TP-19 1-3 FT	TP-20 4-6 FT	TP-21 1-3 FT
					6/1/2020		6/2/2020	6/3/2020	5/18/2023							6/20/2023		
Volatile Organic Compounds (VOCs) - mg/Kg ⁴																		
	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (PAHs) - mg/Kg ⁴																		
Acenaphthene	20	100	500	1000	ND	ND	ND	ND	0.058 J	ND	ND	ND	ND	1.2 J	ND	ND	ND	0.049 J
Acenaphthylene	100	100	500	1000	ND	ND	ND	ND	0.032 J	ND	ND	ND	ND	7.1	ND	ND	ND	ND
Anthracene	100	100	500	1000	ND	ND	ND	ND	0.15 J	ND	ND	ND	ND	5.6	ND	ND	ND	0.11 J
Benzo(a)anthracene	1	1	5.6	11	0.344	ND	ND	ND	0.33	ND	ND	ND	ND	20	0.18 J	0.94 J	ND	0.27
Benzo(a)pyrene	1	1	1	1.1	0.306	ND	ND	ND	0.33	ND	ND	ND	ND	20	ND	0.71 J	ND	0.27
Benzo(b)fluoranthene	1	1	5.6	11	ND	ND	ND	ND	0.34	ND	ND	ND	ND	21	0.18 J	0.81 J	ND	0.29
Benzo(ghi)perylene	100	100	500	1000	ND	ND	ND	ND	0.17 J	ND	ND	ND	ND	9.6	0.12 J	0.34 J	ND	0.18 J
Benzo(k)fluoranthene	0.8	3.9	56	110	ND	ND	ND	ND	0.21	ND	ND	ND	ND	7.5	ND	0.4 J	ND	0.14 J
Chrysene	1	3.9	56	110	0.334	ND	ND	ND	0.32	ND	ND	ND	ND	18	ND	0.81 J	ND	0.28
Dibenzo(a,h)anthracene	0.33	0.33	0.56	1.1	ND	ND	ND	ND	0.063 J	ND	ND	ND	ND	4 J	ND	ND	ND	0.05 J
Fluoranthene	100	100	500	1000	0.644	ND	ND	0.528	0.75	ND	0.028 J	ND	ND	29	0.34 J	1.5 J	ND	0.63
Fluorene	30	100	500	1000	ND	ND	ND	ND	0.053 J	ND	ND	ND	ND	2.2 J	ND	ND	ND	0.037 J
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	11	ND	ND	ND	ND	0.16 J	ND	ND	ND	ND	9.3	ND	0.37 J	ND	0.15 J
Naphthalene	12	100	500	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5 J	ND	ND	ND	ND
Phenanthrene	100	100	500	1000	0.353	ND	ND	0.652	0.64	ND	ND	ND	ND	11	0.25 J	0.69 J	ND	0.52
Pyrene	100	100	500	1000	0.565	ND	ND	0.445	0.55	ND	0.024 J	ND	ND	24	0.27 J	1.1 J	ND	0.55
Metals - mg/Kg																		
Arsenic	13	16	16	16	2.64	2.41	1.7	2.67	3.7	1.6 J	1.1 J	1.4 J	3.4	23.7	107	33.5	2.2 J	63.7
Barium	350	400	400	10000	66.2	47.9	36.1	205	124	36.3	41.7	82.2	95.9	262	427	96.7	71.7	9720
Cadmium	2.5	4.3	9.3	60	0.317	ND	ND	0.311	0.17 J	0.14 J	0.2 J	0.35 J	0.33	0.59	0.61	0.43	0.22 J	0.39
Chromium	30	180	1500	6800	10.2	11.7	8.45	8.06	7.7	8.6	6.7	15.7	14.5	17.8	14	13.4	11.9	15
Copper	50	270	270	10000	11.9	9.09	6.47	19.6	--	--	--	--	--	--	--	--	--	--
Lead	63	400	1000	3900	33.9	21.1	9.17	44.2	433	28.9	33.1	20	12.9	2780	11400	1640	24.8	11200
Manganese	1600	2000	10000	10000	114	145	128	155	--	--	--	--	--	--	--	--	--	--
Mercury	0.18	0.81	2.8	5.7	0.205	0.143	0.126	1.62	1.6	0.3	0.17	0.35	0.15	0.61	6.4 F2	1.5	0.21	4
Nickel	30	310	310	10000	9.25	7.62	7.12	6.97	--	--	--	--	--	--	--	--	--	--
Selenium	3.9	180	1500	6800	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.54 J	2.4 J	ND	ND	1.2 J
Silver	2	180	1500	6800	ND	ND	ND	ND	ND	ND	0.41 J	ND	ND	ND	0.89	ND	ND	0.26 J
Pesticides & Herbicides - mg/Kg ⁴																		
Total pests/herbs	--	--	--	--	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
Polychlorinated biphenyls (PCBs) - mg/Kg ⁴																		
Total PCBs	0.1	1	1	25	ND	ND	ND	ND	ND	--	--	ND	--	ND	--	--	--	--

- Notes:
- Only those parameters detected at a minimum of one sample location are presented in this table; other compounds were reported as non-detect.
 - Values per 6NYCRR Part 375 Soil Cleanup Objectives (SCOs).
 - 2020 SJB Subsurface Investigation results included in Sienna Environmental Technologies Environmental Review Addendum (July 2020); 2023 Subsurface Investigation results froms samples collected by Roux.
 - Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs.

Definitions:

ND = Parameter not detected above laboratory detection limit.

"--" = No value available for the parameter; Parameter not analyzed for.

J = Estimated value; result is less than the sample quantitation limit but greater than zero.

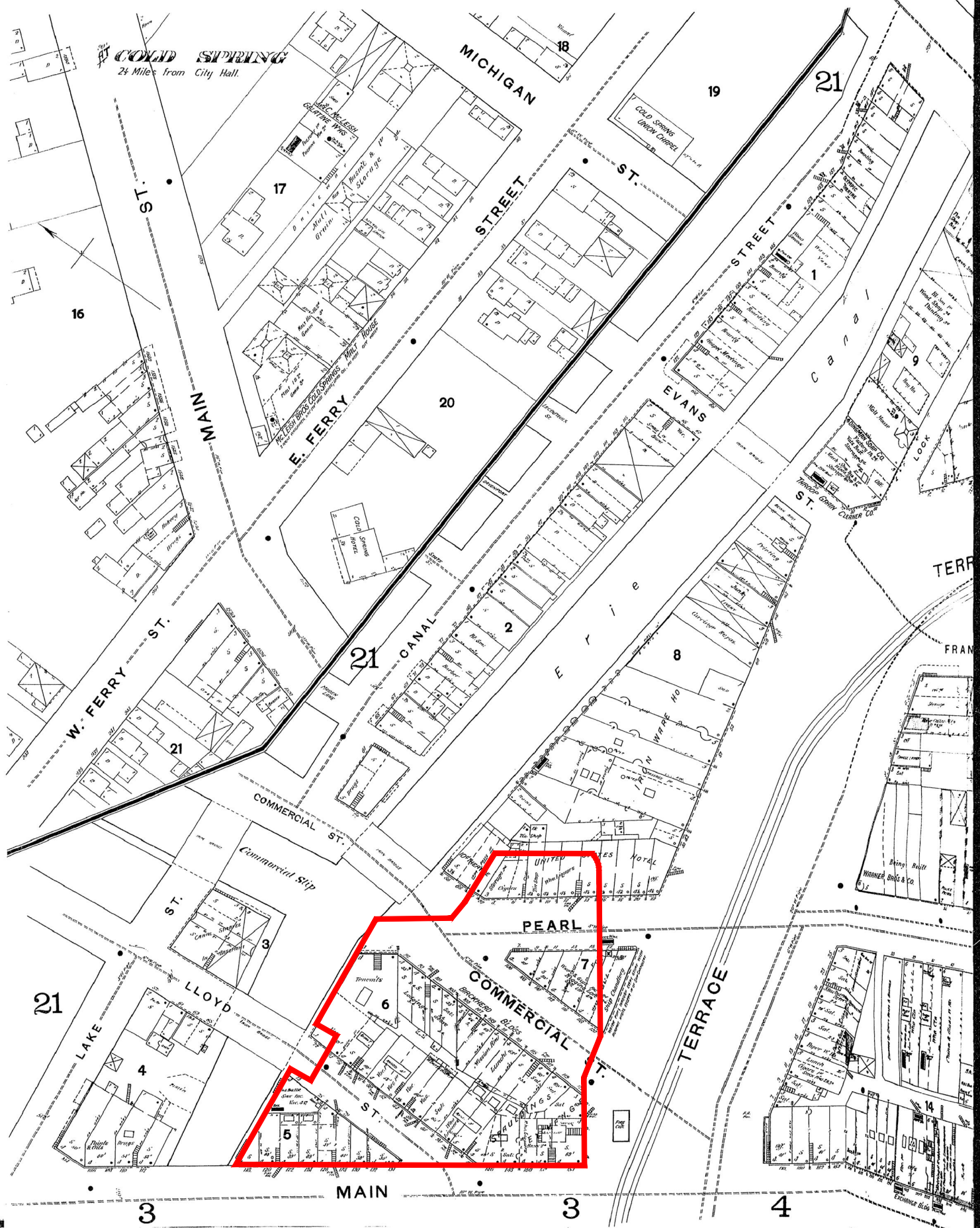
F2 = MS/ MSD RPD exceeds control limits.

Bold	= Result exceeds Unrestricted Use SCOs.
Bold	= Result exceeds Restricted Residential Use SCOs.
Bold	= Result exceeds Commercial Use SCOs.
Bold	= Result exceeds Industrial Use SCOs.

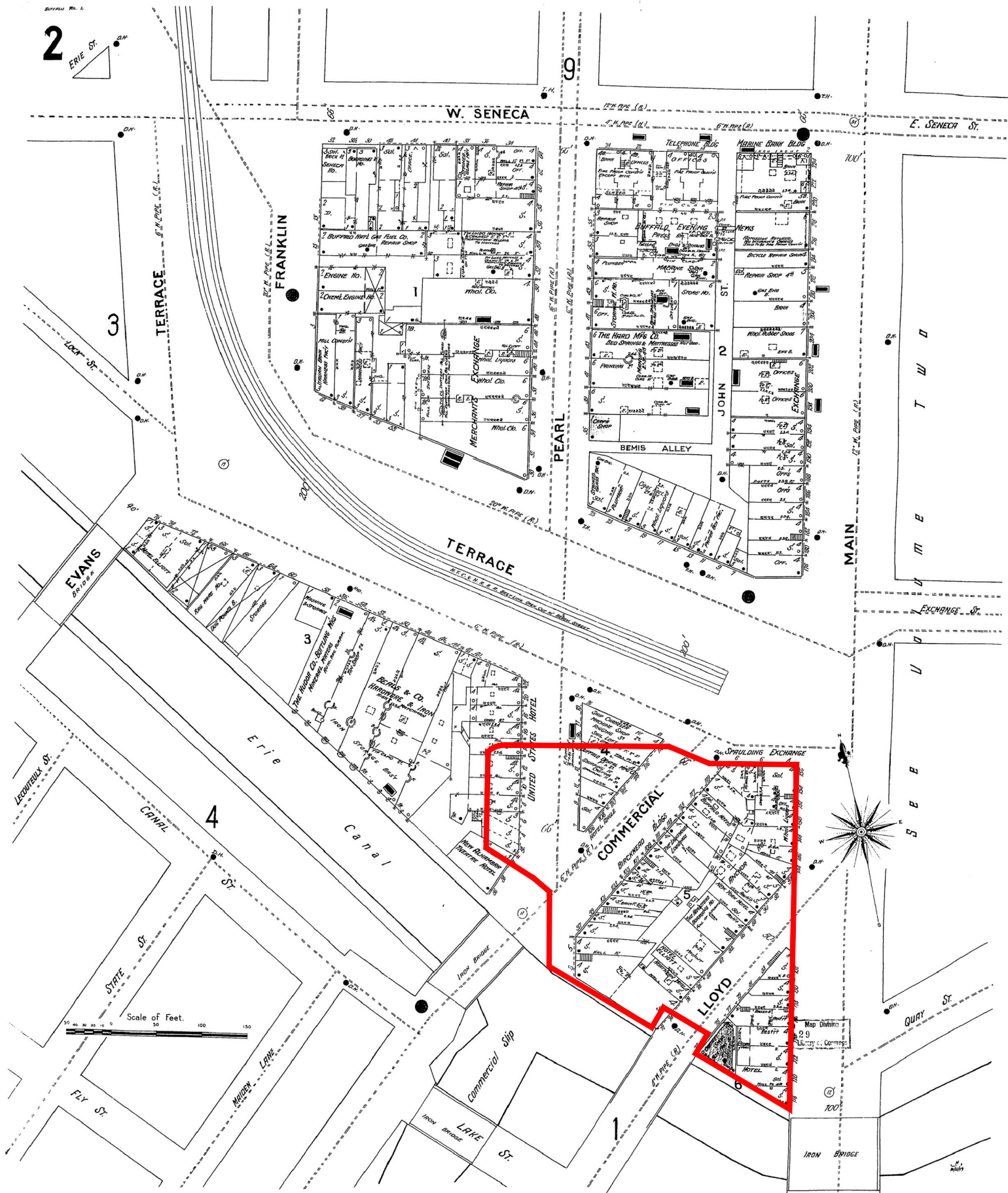
APPENDIX A

HISTORICAL RESEARCH DOCUMENTS

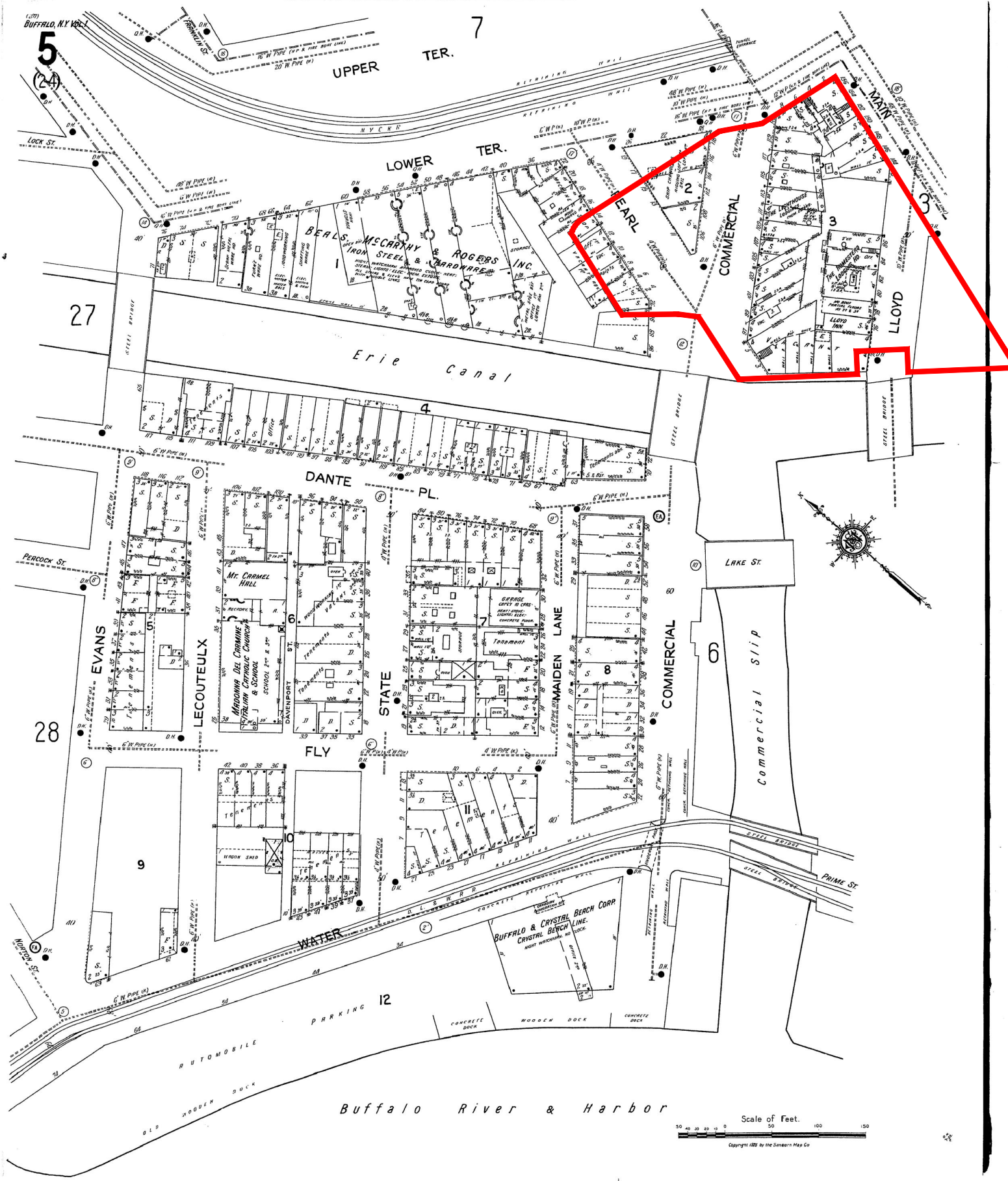
1889



1899



1925



027



APPENDIX B

PHOTO LOG

SITE PHOTOGRAPHS

Photo 1:



Photo 2:



Photo 3:



Photo 4:



Photo 1: View during the fieldwork.

Photo 2: View of typical fill materials encountered on-Site.

Photo 3: View of the black cinder fill encountered at TP-18.

Photo 4: View of the fill and wood/suspected railroad ties encountered at TP-20.

North Aud Site

Photo Date: May 18, 2023, and June 20, 2023



APPENDIX C

LABORATORY ANALYTICAL DATA SUMMARY PACKAGE

ANALYTICAL REPORT

PREPARED FOR

Attn: Bryan Mayback
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Lackawanna, New York 14218

Generated 5/25/2023 9:27:36 AM

JOB DESCRIPTION

130 Main St., Buffalo, NY

JOB NUMBER

480-209004-1

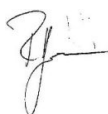
Eurofins Buffalo

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization



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Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Qualifiers

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.

Metals

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.

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

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Job ID: 480-209004-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative 480-209004-1

Comments

No additional comments.

Receipt

The samples were received on 5/18/2023 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 12.4° C.

GC/MS Semi VOA

Method 8270D: The following sample was diluted due to color, appearance, and viscosity: TP12 1-3` (480-209004-6). Elevated reporting limits (RL) are provided.

No additional analytical or quality issues were noted, other than those described above or 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

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

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP4 1-3`

Lab Sample ID: 480-209004-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	58	J	180	27	ug/Kg	1	✱	8270D	Total/NA
Acenaphthylene	32	J	180	24	ug/Kg	1	✱	8270D	Total/NA
Anthracene	150	J	180	45	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]anthracene	330		180	18	ug/Kg	1	✱	8270D	Total/NA
Benzo[a]pyrene	330		180	27	ug/Kg	1	✱	8270D	Total/NA
Benzo[b]fluoranthene	340		180	29	ug/Kg	1	✱	8270D	Total/NA
Benzo[g,h,i]perylene	170	J	180	19	ug/Kg	1	✱	8270D	Total/NA
Benzo[k]fluoranthene	210		180	24	ug/Kg	1	✱	8270D	Total/NA
Chrysene	320		180	41	ug/Kg	1	✱	8270D	Total/NA
Dibenz(a,h)anthracene	63	J	180	32	ug/Kg	1	✱	8270D	Total/NA
Fluoranthene	750		180	19	ug/Kg	1	✱	8270D	Total/NA
Fluorene	53	J	180	22	ug/Kg	1	✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	160	J	180	23	ug/Kg	1	✱	8270D	Total/NA
Phenanthrene	640		180	27	ug/Kg	1	✱	8270D	Total/NA
Pyrene	550		180	22	ug/Kg	1	✱	8270D	Total/NA
Arsenic	3.7		2.3	0.45	mg/Kg	1	✱	6010C	Total/NA
Barium	124		0.57	0.12	mg/Kg	1	✱	6010C	Total/NA
Cadmium	0.17	J	0.23	0.034	mg/Kg	1	✱	6010C	Total/NA
Chromium	7.7		0.57	0.23	mg/Kg	1	✱	6010C	Total/NA
Lead	433		1.1	0.27	mg/Kg	1	✱	6010C	Total/NA
Mercury	1.6		0.022	0.0051	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: TP4 3-5`

Lab Sample ID: 480-209004-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.6	J	2.5	0.50	mg/Kg	1	✱	6010C	Total/NA
Barium	36.3		0.62	0.14	mg/Kg	1	✱	6010C	Total/NA
Cadmium	0.14	J	0.25	0.037	mg/Kg	1	✱	6010C	Total/NA
Chromium	8.6		0.62	0.25	mg/Kg	1	✱	6010C	Total/NA
Lead	28.9		1.2	0.30	mg/Kg	1	✱	6010C	Total/NA
Mercury	0.30		0.025	0.0056	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: TP7 2-4`

Lab Sample ID: 480-209004-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	28	J	200	21	ug/Kg	1	✱	8270D	Total/NA
Pyrene	24	J	200	23	ug/Kg	1	✱	8270D	Total/NA
Arsenic	1.1	J	2.4	0.47	mg/Kg	1	✱	6010C	Total/NA
Barium	41.7		0.59	0.13	mg/Kg	1	✱	6010C	Total/NA
Cadmium	0.20	J	0.24	0.035	mg/Kg	1	✱	6010C	Total/NA
Chromium	6.7		0.59	0.24	mg/Kg	1	✱	6010C	Total/NA
Lead	33.1		1.2	0.28	mg/Kg	1	✱	6010C	Total/NA
Silver	0.41	J	0.71	0.24	mg/Kg	1	✱	6010C	Total/NA
Mercury	0.17		0.024	0.0056	mg/Kg	1	✱	7471B	Total/NA

Client Sample ID: TP8 2-4`

Lab Sample ID: 480-209004-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.4	J	3.6	0.72	mg/Kg	1	✱	6010C	Total/NA
Barium	82.2		0.90	0.20	mg/Kg	1	✱	6010C	Total/NA
Cadmium	0.35	J	0.36	0.054	mg/Kg	1	✱	6010C	Total/NA
Chromium	15.7		0.90	0.36	mg/Kg	1	✱	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP8 2-4` (Continued)

Lab Sample ID: 480-209004-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Lead	20.0		1.8	0.43	mg/Kg	1		✱	6010C	Total/NA
Mercury	0.35		0.036	0.0083	mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: TP10 2-4`

Lab Sample ID: 480-209004-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	3.4		2.7	0.54	mg/Kg	1		✱	6010C	Total/NA
Barium	95.9		0.68	0.15	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.33		0.27	0.041	mg/Kg	1		✱	6010C	Total/NA
Chromium	14.5		0.68	0.27	mg/Kg	1		✱	6010C	Total/NA
Lead	12.9		1.4	0.33	mg/Kg	1		✱	6010C	Total/NA
Mercury	0.15		0.025	0.0058	mg/Kg	1		✱	7471B	Total/NA

Client Sample ID: TP12 1-3`

Lab Sample ID: 480-209004-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	1200	J	4500	660	ug/Kg	20		✱	8270D	Total/NA
Acenaphthylene	7100		4500	580	ug/Kg	20		✱	8270D	Total/NA
Anthracene	5600		4500	1100	ug/Kg	20		✱	8270D	Total/NA
Benzo[a]anthracene	20000		4500	450	ug/Kg	20		✱	8270D	Total/NA
Benzo[a]pyrene	20000		4500	660	ug/Kg	20		✱	8270D	Total/NA
Benzo[b]fluoranthene	21000		4500	710	ug/Kg	20		✱	8270D	Total/NA
Benzo[g,h,i]perylene	9600		4500	470	ug/Kg	20		✱	8270D	Total/NA
Benzo[k]fluoranthene	7500		4500	580	ug/Kg	20		✱	8270D	Total/NA
Chrysene	18000		4500	1000	ug/Kg	20		✱	8270D	Total/NA
Dibenz(a,h)anthracene	4000	J	4500	790	ug/Kg	20		✱	8270D	Total/NA
Fluoranthene	29000		4500	470	ug/Kg	20		✱	8270D	Total/NA
Fluorene	2200	J	4500	520	ug/Kg	20		✱	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	9300		4500	550	ug/Kg	20		✱	8270D	Total/NA
Naphthalene	1500	J	4500	580	ug/Kg	20		✱	8270D	Total/NA
Phenanthrene	11000		4500	660	ug/Kg	20		✱	8270D	Total/NA
Pyrene	24000		4500	520	ug/Kg	20		✱	8270D	Total/NA
Arsenic	23.7		2.5	0.51	mg/Kg	1		✱	6010C	Total/NA
Barium	262		0.63	0.14	mg/Kg	1		✱	6010C	Total/NA
Cadmium	0.59		0.25	0.038	mg/Kg	1		✱	6010C	Total/NA
Chromium	17.8		0.63	0.25	mg/Kg	1		✱	6010C	Total/NA
Lead	2780		1.3	0.30	mg/Kg	1		✱	6010C	Total/NA
Selenium	0.54	J	5.1	0.51	mg/Kg	1		✱	6010C	Total/NA
Mercury	0.61		0.026	0.0061	mg/Kg	1		✱	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP4 1-3

Lab Sample ID: 480-209004-1

Date Collected: 05/18/23 09:00

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 91.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	58	J	180	27	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Acenaphthylene	32	J	180	24	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Anthracene	150	J	180	45	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Benzo[a]anthracene	330		180	18	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Benzo[a]pyrene	330		180	27	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Benzo[b]fluoranthene	340		180	29	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Benzo[g,h,i]perylene	170	J	180	19	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Benzo[k]fluoranthene	210		180	24	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Chrysene	320		180	41	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Dibenz[a,h]anthracene	63	J	180	32	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Fluoranthene	750		180	19	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Fluorene	53	J	180	22	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Indeno[1,2,3-cd]pyrene	160	J	180	23	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Naphthalene	ND		180	24	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Phenanthrene	640		180	27	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1
Pyrene	550		180	22	ug/Kg	☆	05/19/23 08:35	05/23/23 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	84		60 - 120	05/19/23 08:35	05/23/23 19:24	1
Nitrobenzene-d5 (Surr)	77		53 - 120	05/19/23 08:35	05/23/23 19:24	1
p-Terphenyl-d14 (Surr)	88		79 - 130	05/19/23 08:35	05/23/23 19:24	1

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.26	0.051	mg/Kg	☆	05/19/23 09:51	05/22/23 12:08	1
PCB-1221	ND		0.26	0.051	mg/Kg	☆	05/19/23 09:51	05/22/23 12:08	1
PCB-1232	ND		0.26	0.051	mg/Kg	☆	05/19/23 09:51	05/22/23 12:08	1
PCB-1242	ND		0.26	0.051	mg/Kg	☆	05/19/23 09:51	05/22/23 12:08	1
PCB-1248	ND		0.26	0.051	mg/Kg	☆	05/19/23 09:51	05/22/23 12:08	1
PCB-1254	ND		0.26	0.12	mg/Kg	☆	05/19/23 09:51	05/22/23 12:08	1
PCB-1260	ND		0.26	0.12	mg/Kg	☆	05/19/23 09:51	05/22/23 12:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	103		60 - 154	05/19/23 09:51	05/22/23 12:08	1
DCB Decachlorobiphenyl	102		65 - 174	05/19/23 09:51	05/22/23 12:08	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.7		2.3	0.45	mg/Kg	☆	05/19/23 11:18	05/22/23 22:09	1
Barium	124		0.57	0.12	mg/Kg	☆	05/19/23 11:18	05/22/23 22:09	1
Cadmium	0.17	J	0.23	0.034	mg/Kg	☆	05/19/23 11:18	05/22/23 22:09	1
Chromium	7.7		0.57	0.23	mg/Kg	☆	05/19/23 11:18	05/22/23 22:09	1
Lead	433		1.1	0.27	mg/Kg	☆	05/19/23 11:18	05/22/23 22:09	1
Selenium	ND		4.5	0.45	mg/Kg	☆	05/19/23 11:18	05/22/23 22:09	1
Silver	ND		0.68	0.23	mg/Kg	☆	05/19/23 11:18	05/22/23 22:09	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.6		0.022	0.0051	mg/Kg	☆	05/20/23 10:12	05/20/23 12:07	1

Eurofins Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP4 3-5

Lab Sample ID: 480-209004-2

Date Collected: 05/18/23 09:05

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 83.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		200	29	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Acenaphthylene	ND		200	26	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Anthracene	ND		200	49	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Benzo[a]anthracene	ND		200	20	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Benzo[a]pyrene	ND		200	29	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Benzo[b]fluoranthene	ND		200	32	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Benzo[g,h,i]perylene	ND		200	21	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Benzo[k]fluoranthene	ND		200	26	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Chrysene	ND		200	45	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Dibenz[a,h]anthracene	ND		200	35	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Fluoranthene	ND		200	21	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Fluorene	ND		200	23	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Indeno[1,2,3-cd]pyrene	ND		200	25	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Naphthalene	ND		200	26	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Phenanthrene	ND		200	29	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Pyrene	ND		200	23	ug/Kg	✱	05/19/23 08:35	05/23/23 19:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	90		60 - 120				05/19/23 08:35	05/23/23 19:50	1
Nitrobenzene-d5 (Surr)	85		53 - 120				05/19/23 08:35	05/23/23 19:50	1
p-Terphenyl-d14 (Surr)	98		79 - 130				05/19/23 08:35	05/23/23 19:50	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6	J	2.5	0.50	mg/Kg	✱	05/19/23 11:18	05/22/23 22:13	1
Barium	36.3		0.62	0.14	mg/Kg	✱	05/19/23 11:18	05/22/23 22:13	1
Cadmium	0.14	J	0.25	0.037	mg/Kg	✱	05/19/23 11:18	05/22/23 22:13	1
Chromium	8.6		0.62	0.25	mg/Kg	✱	05/19/23 11:18	05/22/23 22:13	1
Lead	28.9		1.2	0.30	mg/Kg	✱	05/19/23 11:18	05/22/23 22:13	1
Selenium	ND		5.0	0.50	mg/Kg	✱	05/19/23 11:18	05/22/23 22:13	1
Silver	ND		0.75	0.25	mg/Kg	✱	05/19/23 11:18	05/22/23 22:13	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.30		0.025	0.0056	mg/Kg	✱	05/20/23 10:12	05/20/23 12:08	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP7 2-4

Lab Sample ID: 480-209004-3

Date Collected: 05/18/23 10:00

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 85.6

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		200	29	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Acenaphthylene	ND		200	25	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Anthracene	ND		200	49	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Benzo[a]anthracene	ND		200	20	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Benzo[a]pyrene	ND		200	29	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Benzo[b]fluoranthene	ND		200	31	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Benzo[g,h,i]perylene	ND		200	21	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Benzo[k]fluoranthene	ND		200	25	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Chrysene	ND		200	44	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Dibenz(a,h)anthracene	ND		200	35	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Fluoranthene	28	J	200	21	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Fluorene	ND		200	23	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Indeno[1,2,3-cd]pyrene	ND		200	24	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Naphthalene	ND		200	25	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Phenanthrene	ND		200	29	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Pyrene	24	J	200	23	ug/Kg	✱	05/19/23 08:35	05/23/23 20:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	77		60 - 120				05/19/23 08:35	05/23/23 20:15	1
Nitrobenzene-d5 (Surr)	74		53 - 120				05/19/23 08:35	05/23/23 20:15	1
p-Terphenyl-d14 (Surr)	87		79 - 130				05/19/23 08:35	05/23/23 20:15	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1	J	2.4	0.47	mg/Kg	✱	05/19/23 11:18	05/22/23 22:17	1
Barium	41.7		0.59	0.13	mg/Kg	✱	05/19/23 11:18	05/22/23 22:17	1
Cadmium	0.20	J	0.24	0.035	mg/Kg	✱	05/19/23 11:18	05/22/23 22:17	1
Chromium	6.7		0.59	0.24	mg/Kg	✱	05/19/23 11:18	05/22/23 22:17	1
Lead	33.1		1.2	0.28	mg/Kg	✱	05/19/23 11:18	05/22/23 22:17	1
Selenium	ND		4.7	0.47	mg/Kg	✱	05/19/23 11:18	05/22/23 22:17	1
Silver	0.41	J	0.71	0.24	mg/Kg	✱	05/19/23 11:18	05/22/23 22:17	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.17		0.024	0.0056	mg/Kg	✱	05/20/23 10:12	05/20/23 12:09	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP8 2-4`

Lab Sample ID: 480-209004-4

Date Collected: 05/18/23 10:30

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 56.6

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		300	44	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Acenaphthylene	ND		300	39	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Anthracene	ND		300	74	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Benzo[a]anthracene	ND		300	30	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Benzo[a]pyrene	ND		300	44	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Benzo[b]fluoranthene	ND		300	47	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Benzo[g,h,i]perylene	ND		300	32	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Benzo[k]fluoranthene	ND		300	39	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Chrysene	ND		300	67	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Dibenz[a,h]anthracene	ND		300	53	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Fluoranthene	ND		300	32	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Fluorene	ND		300	35	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Indeno[1,2,3-cd]pyrene	ND		300	37	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Naphthalene	ND		300	39	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Phenanthrene	ND		300	44	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1
Pyrene	ND		300	35	ug/Kg	✱	05/19/23 08:35	05/23/23 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	92		60 - 120	05/19/23 08:35	05/23/23 20:41	1
Nitrobenzene-d5 (Surr)	94		53 - 120	05/19/23 08:35	05/23/23 20:41	1
p-Terphenyl-d14 (Surr)	104		79 - 130	05/19/23 08:35	05/23/23 20:41	1

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.42	0.083	mg/Kg	✱	05/19/23 09:51	05/22/23 12:22	1
PCB-1221	ND		0.42	0.083	mg/Kg	✱	05/19/23 09:51	05/22/23 12:22	1
PCB-1232	ND		0.42	0.083	mg/Kg	✱	05/19/23 09:51	05/22/23 12:22	1
PCB-1242	ND		0.42	0.083	mg/Kg	✱	05/19/23 09:51	05/22/23 12:22	1
PCB-1248	ND		0.42	0.083	mg/Kg	✱	05/19/23 09:51	05/22/23 12:22	1
PCB-1254	ND		0.42	0.20	mg/Kg	✱	05/19/23 09:51	05/22/23 12:22	1
PCB-1260	ND		0.42	0.20	mg/Kg	✱	05/19/23 09:51	05/22/23 12:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		60 - 154	05/19/23 09:51	05/22/23 12:22	1
DCB Decachlorobiphenyl	67		65 - 174	05/19/23 09:51	05/22/23 12:22	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4	J	3.6	0.72	mg/Kg	✱	05/19/23 11:18	05/22/23 22:21	1
Barium	82.2		0.90	0.20	mg/Kg	✱	05/19/23 11:18	05/22/23 22:21	1
Cadmium	0.35	J	0.36	0.054	mg/Kg	✱	05/19/23 11:18	05/22/23 22:21	1
Chromium	15.7		0.90	0.36	mg/Kg	✱	05/19/23 11:18	05/22/23 22:21	1
Lead	20.0		1.8	0.43	mg/Kg	✱	05/19/23 11:18	05/22/23 22:21	1
Selenium	ND		7.2	0.72	mg/Kg	✱	05/19/23 11:18	05/22/23 22:21	1
Silver	ND		1.1	0.36	mg/Kg	✱	05/19/23 11:18	05/22/23 22:21	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.35		0.036	0.0083	mg/Kg	✱	05/20/23 10:12	05/20/23 12:11	1

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Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP10 2-4`

Lab Sample ID: 480-209004-5

Date Collected: 05/18/23 11:00

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 75.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		220	33	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Acenaphthylene	ND		220	29	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Anthracene	ND		220	55	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Benzo[a]anthracene	ND		220	22	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Benzo[a]pyrene	ND		220	33	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Benzo[b]fluoranthene	ND		220	35	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Benzo[g,h,i]perylene	ND		220	23	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Benzo[k]fluoranthene	ND		220	29	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Chrysene	ND		220	50	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Dibenz[a,h]anthracene	ND		220	39	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Fluoranthene	ND		220	23	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Fluorene	ND		220	26	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Indeno[1,2,3-cd]pyrene	ND		220	27	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Naphthalene	ND		220	29	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Phenanthrene	ND		220	33	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Pyrene	ND		220	26	ug/Kg	✱	05/19/23 08:35	05/23/23 21:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	81		60 - 120				05/19/23 08:35	05/23/23 21:06	1
Nitrobenzene-d5 (Surr)	83		53 - 120				05/19/23 08:35	05/23/23 21:06	1
p-Terphenyl-d14 (Surr)	87		79 - 130				05/19/23 08:35	05/23/23 21:06	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.4		2.7	0.54	mg/Kg	✱	05/19/23 11:18	05/22/23 22:36	1
Barium	95.9		0.68	0.15	mg/Kg	✱	05/19/23 11:18	05/22/23 22:36	1
Cadmium	0.33		0.27	0.041	mg/Kg	✱	05/19/23 11:18	05/22/23 22:36	1
Chromium	14.5		0.68	0.27	mg/Kg	✱	05/19/23 11:18	05/22/23 22:36	1
Lead	12.9		1.4	0.33	mg/Kg	✱	05/19/23 11:18	05/22/23 22:36	1
Selenium	ND		5.4	0.54	mg/Kg	✱	05/19/23 11:18	05/22/23 22:36	1
Silver	ND		0.82	0.27	mg/Kg	✱	05/19/23 11:18	05/22/23 22:36	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.15		0.025	0.0058	mg/Kg	✱	05/20/23 10:12	05/20/23 12:12	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP12 1-3`

Lab Sample ID: 480-209004-6

Date Collected: 05/18/23 11:30

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 75.4

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	1200	J	4500	660	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Acenaphthylene	7100		4500	580	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Anthracene	5600		4500	1100	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Benzo[a]anthracene	20000		4500	450	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Benzo[a]pyrene	20000		4500	660	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Benzo[b]fluoranthene	21000		4500	710	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Benzo[g,h,i]perylene	9600		4500	470	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Benzo[k]fluoranthene	7500		4500	580	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Chrysene	18000		4500	1000	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Dibenz[a,h]anthracene	4000	J	4500	790	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Fluoranthene	29000		4500	470	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Fluorene	2200	J	4500	520	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Indeno[1,2,3-cd]pyrene	9300		4500	550	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Naphthalene	1500	J	4500	580	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Phenanthrene	11000		4500	660	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20
Pyrene	24000		4500	520	ug/Kg	☆	05/19/23 08:35	05/23/23 21:31	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		60 - 120	05/19/23 08:35	05/23/23 21:31	20
Nitrobenzene-d5 (Surr)	110		53 - 120	05/19/23 08:35	05/23/23 21:31	20
p-Terphenyl-d14 (Surr)	88		79 - 130	05/19/23 08:35	05/23/23 21:31	20

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.32	0.062	mg/Kg	☆	05/19/23 09:51	05/22/23 12:35	1
PCB-1221	ND		0.32	0.062	mg/Kg	☆	05/19/23 09:51	05/22/23 12:35	1
PCB-1232	ND		0.32	0.062	mg/Kg	☆	05/19/23 09:51	05/22/23 12:35	1
PCB-1242	ND		0.32	0.062	mg/Kg	☆	05/19/23 09:51	05/22/23 12:35	1
PCB-1248	ND		0.32	0.062	mg/Kg	☆	05/19/23 09:51	05/22/23 12:35	1
PCB-1254	ND		0.32	0.15	mg/Kg	☆	05/19/23 09:51	05/22/23 12:35	1
PCB-1260	ND		0.32	0.15	mg/Kg	☆	05/19/23 09:51	05/22/23 12:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		60 - 154	05/19/23 09:51	05/22/23 12:35	1
DCB Decachlorobiphenyl	68		65 - 174	05/19/23 09:51	05/22/23 12:35	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	23.7		2.5	0.51	mg/Kg	☆	05/19/23 11:18	05/22/23 22:40	1
Barium	262		0.63	0.14	mg/Kg	☆	05/19/23 11:18	05/22/23 22:40	1
Cadmium	0.59		0.25	0.038	mg/Kg	☆	05/19/23 11:18	05/22/23 22:40	1
Chromium	17.8		0.63	0.25	mg/Kg	☆	05/19/23 11:18	05/22/23 22:40	1
Lead	2780		1.3	0.30	mg/Kg	☆	05/19/23 11:18	05/22/23 22:40	1
Selenium	0.54	J	5.1	0.51	mg/Kg	☆	05/19/23 11:18	05/22/23 22:40	1
Silver	ND		0.76	0.25	mg/Kg	☆	05/19/23 11:18	05/22/23 22:40	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.61		0.026	0.0061	mg/Kg	☆	05/20/23 10:12	05/20/23 12:13	1

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Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		FBP (60-120)	NBZ (53-120)	TPHd14 (79-130)
480-209004-1	TP4 1-3'	84	77	88
480-209004-2	TP4 3-5'	90	85	98
480-209004-3	TP7 2-4'	77	74	87
480-209004-4	TP8 2-4'	92	94	104
480-209004-5	TP10 2-4'	81	83	87
480-209004-6	TP12 1-3'	70	110	88
LCS 480-670098/2-A	Lab Control Sample	84	87	91
MB 480-670098/1-A	Method Blank	74	77	86
Surrogate Legend				
FBP = 2-Fluorobiphenyl (Surr)				
NBZ = Nitrobenzene-d5 (Surr)				
TPHd14 = p-Terphenyl-d14 (Surr)				

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX2 (60-154)	DCBP2 (65-174)
480-209004-1	TP4 1-3'	103	102
480-209004-4	TP8 2-4'	93	67
480-209004-6	TP12 1-3'	84	68
LCS 480-670137/2-A	Lab Control Sample	119	122
MB 480-670137/1-A	Method Blank	114	110
Surrogate Legend			
TCX = Tetrachloro-m-xylene			
DCBP = DCB Decachlorobiphenyl			

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

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

Lab Sample ID: MB 480-670098/1-A

Matrix: Solid

Analysis Batch: 670368

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 670098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Acenaphthylene	ND		170	22	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Anthracene	ND		170	42	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Benzo[a]anthracene	ND		170	17	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Benzo[a]pyrene	ND		170	25	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Chrysene	ND		170	38	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Fluoranthene	ND		170	18	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Fluorene	ND		170	20	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Naphthalene	ND		170	22	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Phenanthrene	ND		170	25	ug/Kg		05/19/23 08:35	05/22/23 17:43	1
Pyrene	ND		170	20	ug/Kg		05/19/23 08:35	05/22/23 17:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	74		60 - 120	05/19/23 08:35	05/22/23 17:43	1
Nitrobenzene-d5 (Surr)	77		53 - 120	05/19/23 08:35	05/22/23 17:43	1
p-Terphenyl-d14 (Surr)	86		79 - 130	05/19/23 08:35	05/22/23 17:43	1

Lab Sample ID: LCS 480-670098/2-A

Matrix: Solid

Analysis Batch: 670368

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 670098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	1660	1540		ug/Kg		93	62 - 120
Acenaphthylene	1660	1670		ug/Kg		101	58 - 121
Anthracene	1660	1620		ug/Kg		97	62 - 120
Benzo[a]anthracene	1660	1630		ug/Kg		98	65 - 120
Benzo[a]pyrene	1660	1720		ug/Kg		103	64 - 120
Benzo[b]fluoranthene	1660	1560		ug/Kg		94	64 - 120
Benzo[g,h,i]perylene	1660	1700		ug/Kg		102	45 - 145
Benzo[k]fluoranthene	1660	1730		ug/Kg		104	65 - 120
Chrysene	1660	1550		ug/Kg		93	64 - 120
Dibenz(a,h)anthracene	1660	1770		ug/Kg		106	54 - 132
Fluoranthene	1660	1790		ug/Kg		108	62 - 120
Fluorene	1660	1630		ug/Kg		98	63 - 120
Indeno[1,2,3-cd]pyrene	1660	1710		ug/Kg		103	56 - 134
Naphthalene	1660	1490		ug/Kg		90	55 - 120
Phenanthrene	1660	1530		ug/Kg		92	60 - 120
Pyrene	1660	1590		ug/Kg		96	61 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	84		60 - 120
Nitrobenzene-d5 (Surr)	87		53 - 120
p-Terphenyl-d14 (Surr)	91		79 - 130

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QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

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

Lab Sample ID: MB 480-670137/1-A

Matrix: Solid

Analysis Batch: 670321

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 670137

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.22	0.043	mg/Kg		05/19/23 09:51	05/22/23 08:34	1
PCB-1221	ND		0.22	0.043	mg/Kg		05/19/23 09:51	05/22/23 08:34	1
PCB-1232	ND		0.22	0.043	mg/Kg		05/19/23 09:51	05/22/23 08:34	1
PCB-1242	ND		0.22	0.043	mg/Kg		05/19/23 09:51	05/22/23 08:34	1
PCB-1248	ND		0.22	0.043	mg/Kg		05/19/23 09:51	05/22/23 08:34	1
PCB-1254	ND		0.22	0.10	mg/Kg		05/19/23 09:51	05/22/23 08:34	1
PCB-1260	ND		0.22	0.10	mg/Kg		05/19/23 09:51	05/22/23 08:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	114		60 - 154	05/19/23 09:51	05/22/23 08:34	1
DCB Decachlorobiphenyl	110		65 - 174	05/19/23 09:51	05/22/23 08:34	1

Lab Sample ID: LCS 480-670137/2-A

Matrix: Solid

Analysis Batch: 670321

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 670137

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	2.43	3.23		mg/Kg		133	51 - 185
PCB-1260	2.43	2.98		mg/Kg		123	61 - 184

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	119		60 - 154
DCB Decachlorobiphenyl	122		65 - 174

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-670161/1-A

Matrix: Solid

Analysis Batch: 670509

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 670161

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.1	0.41	mg/Kg		05/19/23 11:18	05/22/23 21:03	1
Barium	ND		0.52	0.11	mg/Kg		05/19/23 11:18	05/22/23 21:03	1
Cadmium	ND		0.21	0.031	mg/Kg		05/19/23 11:18	05/22/23 21:03	1
Chromium	ND		0.52	0.21	mg/Kg		05/19/23 11:18	05/22/23 21:03	1
Lead	ND		1.0	0.25	mg/Kg		05/19/23 11:18	05/22/23 21:03	1
Selenium	ND		4.1	0.41	mg/Kg		05/19/23 11:18	05/22/23 21:03	1
Silver	ND		0.62	0.21	mg/Kg		05/19/23 11:18	05/22/23 21:03	1

Lab Sample ID: LCSSRM 480-670161/2-A

Matrix: Solid

Analysis Batch: 670509

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 670161

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	129	105.7		mg/Kg		81.9	60.9 - 113.2
Barium	169	153.3		mg/Kg		90.7	68.6 - 114.2

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QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LCSSRM 480-670161/2-A

Matrix: Solid

Analysis Batch: 670509

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 670161

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	227	186.1		mg/Kg		82.0	64.8 - 110.1
Chromium	115	100.6		mg/Kg		87.5	62.4 - 115.7
Lead	74.8	81.39		mg/Kg		108.8	67.0 - 128.9
Selenium	246	200.9		mg/Kg		81.7	60.2 - 114.6
Silver	87.5	71.39		mg/Kg		81.6	63.7 - 115.4

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-670251/1-A

Matrix: Solid

Analysis Batch: 670283

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 670251

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019	0.0044	mg/Kg		05/20/23 10:12	05/20/23 11:50	1

Lab Sample ID: LCSSRM 480-670251/2-A ^10

Matrix: Solid

Analysis Batch: 670283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 670251

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	20.7	11.82		mg/Kg		57.1	38.3 - 110.1

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

GC/MS Semi VOA

Prep Batch: 670098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	3550C	
480-209004-2	TP4 3-5'	Total/NA	Solid	3550C	
480-209004-3	TP7 2-4'	Total/NA	Solid	3550C	
480-209004-4	TP8 2-4'	Total/NA	Solid	3550C	
480-209004-5	TP10 2-4'	Total/NA	Solid	3550C	
480-209004-6	TP12 1-3'	Total/NA	Solid	3550C	
MB 480-670098/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-670098/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 670368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-670098/1-A	Method Blank	Total/NA	Solid	8270D	670098
LCS 480-670098/2-A	Lab Control Sample	Total/NA	Solid	8270D	670098

Analysis Batch: 670495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	8270D	670098
480-209004-2	TP4 3-5'	Total/NA	Solid	8270D	670098
480-209004-3	TP7 2-4'	Total/NA	Solid	8270D	670098
480-209004-4	TP8 2-4'	Total/NA	Solid	8270D	670098
480-209004-5	TP10 2-4'	Total/NA	Solid	8270D	670098
480-209004-6	TP12 1-3'	Total/NA	Solid	8270D	670098

GC Semi VOA

Prep Batch: 670137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	3550C	
480-209004-4	TP8 2-4'	Total/NA	Solid	3550C	
480-209004-6	TP12 1-3'	Total/NA	Solid	3550C	
MB 480-670137/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-670137/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 670321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	8082A	670137
480-209004-4	TP8 2-4'	Total/NA	Solid	8082A	670137
480-209004-6	TP12 1-3'	Total/NA	Solid	8082A	670137
MB 480-670137/1-A	Method Blank	Total/NA	Solid	8082A	670137
LCS 480-670137/2-A	Lab Control Sample	Total/NA	Solid	8082A	670137

Metals

Prep Batch: 670161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	3050B	
480-209004-2	TP4 3-5'	Total/NA	Solid	3050B	
480-209004-3	TP7 2-4'	Total/NA	Solid	3050B	
480-209004-4	TP8 2-4'	Total/NA	Solid	3050B	
480-209004-5	TP10 2-4'	Total/NA	Solid	3050B	
480-209004-6	TP12 1-3'	Total/NA	Solid	3050B	
MB 480-670161/1-A	Method Blank	Total/NA	Solid	3050B	

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QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Metals (Continued)

Prep Batch: 670161 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSSRM 480-670161/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 670251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	7471B	
480-209004-2	TP4 3-5'	Total/NA	Solid	7471B	
480-209004-3	TP7 2-4'	Total/NA	Solid	7471B	
480-209004-4	TP8 2-4'	Total/NA	Solid	7471B	
480-209004-5	TP10 2-4'	Total/NA	Solid	7471B	
480-209004-6	TP12 1-3'	Total/NA	Solid	7471B	
MB 480-670251/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-670251/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 670283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	7471B	670251
480-209004-2	TP4 3-5'	Total/NA	Solid	7471B	670251
480-209004-3	TP7 2-4'	Total/NA	Solid	7471B	670251
480-209004-4	TP8 2-4'	Total/NA	Solid	7471B	670251
480-209004-5	TP10 2-4'	Total/NA	Solid	7471B	670251
480-209004-6	TP12 1-3'	Total/NA	Solid	7471B	670251
MB 480-670251/1-A	Method Blank	Total/NA	Solid	7471B	670251
LCSSRM 480-670251/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	670251

Analysis Batch: 670509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	6010C	670161
480-209004-2	TP4 3-5'	Total/NA	Solid	6010C	670161
480-209004-3	TP7 2-4'	Total/NA	Solid	6010C	670161
480-209004-4	TP8 2-4'	Total/NA	Solid	6010C	670161
480-209004-5	TP10 2-4'	Total/NA	Solid	6010C	670161
480-209004-6	TP12 1-3'	Total/NA	Solid	6010C	670161
MB 480-670161/1-A	Method Blank	Total/NA	Solid	6010C	670161
LCSSRM 480-670161/2-A	Lab Control Sample	Total/NA	Solid	6010C	670161

General Chemistry

Analysis Batch: 670232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-209004-1	TP4 1-3'	Total/NA	Solid	Moisture	
480-209004-2	TP4 3-5'	Total/NA	Solid	Moisture	
480-209004-3	TP7 2-4'	Total/NA	Solid	Moisture	
480-209004-4	TP8 2-4'	Total/NA	Solid	Moisture	
480-209004-5	TP10 2-4'	Total/NA	Solid	Moisture	
480-209004-6	TP12 1-3'	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP4 1-3`

Date Collected: 05/18/23 09:00

Date Received: 05/18/23 14:15

Lab Sample ID: 480-209004-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	670232	JMM	EET BUF	05/19/23 16:39

Client Sample ID: TP4 1-3`

Date Collected: 05/18/23 09:00

Date Received: 05/18/23 14:15

Lab Sample ID: 480-209004-1

Matrix: Solid

Percent Solids: 91.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			670098	MS	EET BUF	05/19/23 08:35
Total/NA	Analysis	8270D		1	670495	JMM	EET BUF	05/23/23 19:24
Total/NA	Prep	3550C			670137	JMP	EET BUF	05/19/23 09:51
Total/NA	Analysis	8082A		1	670321	NC	EET BUF	05/22/23 12:08
Total/NA	Prep	3050B			670161	VAK	EET BUF	05/19/23 11:18
Total/NA	Analysis	6010C		1	670509	LMH	EET BUF	05/22/23 22:09
Total/NA	Prep	7471B			670251	NVK	EET BUF	05/20/23 10:12
Total/NA	Analysis	7471B		1	670283	NVK	EET BUF	05/20/23 12:07

Client Sample ID: TP4 3-5`

Date Collected: 05/18/23 09:05

Date Received: 05/18/23 14:15

Lab Sample ID: 480-209004-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	670232	JMM	EET BUF	05/19/23 16:39

Client Sample ID: TP4 3-5`

Date Collected: 05/18/23 09:05

Date Received: 05/18/23 14:15

Lab Sample ID: 480-209004-2

Matrix: Solid

Percent Solids: 83.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			670098	MS	EET BUF	05/19/23 08:35
Total/NA	Analysis	8270D		1	670495	JMM	EET BUF	05/23/23 19:50
Total/NA	Prep	3050B			670161	VAK	EET BUF	05/19/23 11:18
Total/NA	Analysis	6010C		1	670509	LMH	EET BUF	05/22/23 22:13
Total/NA	Prep	7471B			670251	NVK	EET BUF	05/20/23 10:12
Total/NA	Analysis	7471B		1	670283	NVK	EET BUF	05/20/23 12:08

Client Sample ID: TP7 2-4`

Date Collected: 05/18/23 10:00

Date Received: 05/18/23 14:15

Lab Sample ID: 480-209004-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	670232	JMM	EET BUF	05/19/23 16:39

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP7 2-4`

Lab Sample ID: 480-209004-3

Date Collected: 05/18/23 10:00

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			670098	MS	EET BUF	05/19/23 08:35
Total/NA	Analysis	8270D		1	670495	JMM	EET BUF	05/23/23 20:15
Total/NA	Prep	3050B			670161	VAK	EET BUF	05/19/23 11:18
Total/NA	Analysis	6010C		1	670509	LMH	EET BUF	05/22/23 22:17
Total/NA	Prep	7471B			670251	NVK	EET BUF	05/20/23 10:12
Total/NA	Analysis	7471B		1	670283	NVK	EET BUF	05/20/23 12:09

Client Sample ID: TP8 2-4`

Lab Sample ID: 480-209004-4

Date Collected: 05/18/23 10:30

Matrix: Solid

Date Received: 05/18/23 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	670232	JMM	EET BUF	05/19/23 16:39

Client Sample ID: TP8 2-4`

Lab Sample ID: 480-209004-4

Date Collected: 05/18/23 10:30

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 56.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			670098	MS	EET BUF	05/19/23 08:35
Total/NA	Analysis	8270D		1	670495	JMM	EET BUF	05/23/23 20:41
Total/NA	Prep	3550C			670137	JMP	EET BUF	05/19/23 09:51
Total/NA	Analysis	8082A		1	670321	NC	EET BUF	05/22/23 12:22
Total/NA	Prep	3050B			670161	VAK	EET BUF	05/19/23 11:18
Total/NA	Analysis	6010C		1	670509	LMH	EET BUF	05/22/23 22:21
Total/NA	Prep	7471B			670251	NVK	EET BUF	05/20/23 10:12
Total/NA	Analysis	7471B		1	670283	NVK	EET BUF	05/20/23 12:11

Client Sample ID: TP10 2-4`

Lab Sample ID: 480-209004-5

Date Collected: 05/18/23 11:00

Matrix: Solid

Date Received: 05/18/23 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	670232	JMM	EET BUF	05/19/23 16:39

Client Sample ID: TP10 2-4`

Lab Sample ID: 480-209004-5

Date Collected: 05/18/23 11:00

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 75.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			670098	MS	EET BUF	05/19/23 08:35
Total/NA	Analysis	8270D		1	670495	JMM	EET BUF	05/23/23 21:06
Total/NA	Prep	3050B			670161	VAK	EET BUF	05/19/23 11:18
Total/NA	Analysis	6010C		1	670509	LMH	EET BUF	05/22/23 22:36
Total/NA	Prep	7471B			670251	NVK	EET BUF	05/20/23 10:12
Total/NA	Analysis	7471B		1	670283	NVK	EET BUF	05/20/23 12:12

Eurofins Buffalo

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Client Sample ID: TP12 1-3`

Lab Sample ID: 480-209004-6

Date Collected: 05/18/23 11:30

Matrix: Solid

Date Received: 05/18/23 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	670232	JMM	EET BUF	05/19/23 16:39

Client Sample ID: TP12 1-3`

Lab Sample ID: 480-209004-6

Date Collected: 05/18/23 11:30

Matrix: Solid

Date Received: 05/18/23 14:15

Percent Solids: 75.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			670098	MS	EET BUF	05/19/23 08:35
Total/NA	Analysis	8270D		20	670495	JMM	EET BUF	05/23/23 21:31
Total/NA	Prep	3550C			670137	JMP	EET BUF	05/19/23 09:51
Total/NA	Analysis	8082A		1	670321	NC	EET BUF	05/22/23 12:35
Total/NA	Prep	3050B			670161	VAK	EET BUF	05/19/23 11:18
Total/NA	Analysis	6010C		1	670509	LMH	EET BUF	05/22/23 22:40
Total/NA	Prep	7471B			670251	NVK	EET BUF	05/20/23 10:12
Total/NA	Analysis	7471B		1	670283	NVK	EET BUF	05/20/23 12:13

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

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	03-31-24

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: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	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
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: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-209004-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-209004-1	TP4 1-3'	Solid	05/18/23 09:00	05/18/23 14:15
480-209004-2	TP4 3-5'	Solid	05/18/23 09:05	05/18/23 14:15
480-209004-3	TP7 2-4'	Solid	05/18/23 10:00	05/18/23 14:15
480-209004-4	TP8 2-4'	Solid	05/18/23 10:30	05/18/23 14:15
480-209004-5	TP10 2-4'	Solid	05/18/23 11:00	05/18/23 14:15
480-209004-6	TP12 1-3'	Solid	05/18/23 11:30	05/18/23 14:15

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-209004-1

Login Number: 209004

List Number: 1

Creator: Yeager, Brian A

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	
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.	N/A	
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	BENCHMARK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: Bryan Mayback
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Lackawanna, New York 14218

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JOB DESCRIPTION

130 Main St., Buffalo, NY

JOB NUMBER

480-210097-1

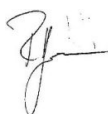
Eurofins Buffalo

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization



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Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Qualifiers

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.
S1-	Surrogate recovery exceeds control limits, low biased.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F2	MS/MSD RPD exceeds control limits
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

Case Narrative

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Job ID: 480-210097-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative 480-210097-1

Comments

No additional comments.

Receipt

The samples were received on 6/20/2023 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 16.1° C.

GC/MS Semi VOA

Method 8270D: The following samples were diluted due to color, appearance, and viscosity: TP18 1-3' (480-210097-1) and TP19 1-3' (480-210097-2). Elevated reporting limits (RL) are provided.

Method 8270D: Three surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: TP18 1-3' (480-210097-1) and TP21 1-3' (480-210097-4). These results have been reported and qualified.

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

Metals

Method 6010C: The following sample was diluted due to the presence of Total Iron which interferes with Chromium and Lead: TP21 1-3' (480-210097-4). Elevated reporting limits (RLs) are provided.

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

Organic Prep

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

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP18 1-3'

Lab Sample ID: 480-210097-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]anthracene	180	J	1100	110	ug/Kg	5	✱		8270D	Total/NA
Benzo[b]fluoranthene	180	J	1100	180	ug/Kg	5	✱		8270D	Total/NA
Benzo[g,h,i]perylene	120	J	1100	120	ug/Kg	5	✱		8270D	Total/NA
Fluoranthene	340	J	1100	120	ug/Kg	5	✱		8270D	Total/NA
Phenanthrene	250	J	1100	170	ug/Kg	5	✱		8270D	Total/NA
Pyrene	270	J	1100	130	ug/Kg	5	✱		8270D	Total/NA
Arsenic	107		2.7	0.55	mg/Kg	1	✱		6010C	Total/NA
Barium	427		0.68	0.15	mg/Kg	1	✱		6010C	Total/NA
Cadmium	0.61		0.27	0.041	mg/Kg	1	✱		6010C	Total/NA
Chromium	14.0		0.68	0.27	mg/Kg	1	✱		6010C	Total/NA
Lead	11400		1.4	0.33	mg/Kg	1	✱		6010C	Total/NA
Selenium	2.4	J	5.5	0.55	mg/Kg	1	✱		6010C	Total/NA
Silver	0.89		0.82	0.27	mg/Kg	1	✱		6010C	Total/NA
Mercury	6.4	F2	0.13	0.031	mg/Kg	5	✱		7471B	Total/NA

Client Sample ID: TP19 1-3'

Lab Sample ID: 480-210097-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[a]anthracene	940	J	2600	260	ug/Kg	10	✱		8270D	Total/NA
Benzo[a]pyrene	710	J	2600	380	ug/Kg	10	✱		8270D	Total/NA
Benzo[b]fluoranthene	810	J	2600	410	ug/Kg	10	✱		8270D	Total/NA
Benzo[g,h,i]perylene	340	J	2600	270	ug/Kg	10	✱		8270D	Total/NA
Benzo[k]fluoranthene	400	J	2600	330	ug/Kg	10	✱		8270D	Total/NA
Chrysene	810	J	2600	580	ug/Kg	10	✱		8270D	Total/NA
Fluoranthene	1500	J	2600	270	ug/Kg	10	✱		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	370	J	2600	320	ug/Kg	10	✱		8270D	Total/NA
Phenanthrene	690	J	2600	380	ug/Kg	10	✱		8270D	Total/NA
Pyrene	1100	J	2600	300	ug/Kg	10	✱		8270D	Total/NA
Arsenic	33.5		3.1	0.62	mg/Kg	1	✱		6010C	Total/NA
Barium	96.7		0.78	0.17	mg/Kg	1	✱		6010C	Total/NA
Cadmium	0.43		0.31	0.047	mg/Kg	1	✱		6010C	Total/NA
Chromium	13.4		0.78	0.31	mg/Kg	1	✱		6010C	Total/NA
Lead	1640		1.6	0.37	mg/Kg	1	✱		6010C	Total/NA
Mercury	1.5		0.032	0.0075	mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: TP20 4-6'

Lab Sample ID: 480-210097-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	2.2	J	2.5	0.50	mg/Kg	1	✱		6010C	Total/NA
Barium	71.7		0.63	0.14	mg/Kg	1	✱		6010C	Total/NA
Cadmium	0.22	J	0.25	0.038	mg/Kg	1	✱		6010C	Total/NA
Chromium	11.9		0.63	0.25	mg/Kg	1	✱		6010C	Total/NA
Lead	24.8		1.3	0.30	mg/Kg	1	✱		6010C	Total/NA
Mercury	0.21		0.025	0.0059	mg/Kg	1	✱		7471B	Total/NA

Client Sample ID: TP21 1-3'

Lab Sample ID: 480-210097-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acenaphthene	49	J	210	31	ug/Kg	1	✱		8270D	Total/NA
Anthracene	110	J	210	53	ug/Kg	1	✱		8270D	Total/NA
Benzo[a]anthracene	270		210	21	ug/Kg	1	✱		8270D	Total/NA
Benzo[a]pyrene	270		210	31	ug/Kg	1	✱		8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP21 1-3' (Continued)

Lab Sample ID: 480-210097-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzo[b]fluoranthene	290		210	34	ug/Kg	1	✱		8270D	Total/NA
Benzo[g,h,i]perylene	180	J	210	23	ug/Kg	1	✱		8270D	Total/NA
Benzo[k]fluoranthene	140	J	210	28	ug/Kg	1	✱		8270D	Total/NA
Chrysene	280		210	48	ug/Kg	1	✱		8270D	Total/NA
Dibenz(a,h)anthracene	50	J	210	38	ug/Kg	1	✱		8270D	Total/NA
Fluoranthene	630		210	23	ug/Kg	1	✱		8270D	Total/NA
Fluorene	37	J	210	25	ug/Kg	1	✱		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	150	J	210	26	ug/Kg	1	✱		8270D	Total/NA
Phenanthrene	520		210	31	ug/Kg	1	✱		8270D	Total/NA
Pyrene	550		210	25	ug/Kg	1	✱		8270D	Total/NA
Arsenic	63.7		2.6	0.53	mg/Kg	1	✱		6010C	Total/NA
Barium	9720		6.6	1.5	mg/Kg	10	✱		6010C	Total/NA
Cadmium	0.39		0.26	0.040	mg/Kg	1	✱		6010C	Total/NA
Chromium	15.0		3.3	1.3	mg/Kg	5	✱		6010C	Total/NA
Lead	11200		6.6	1.6	mg/Kg	5	✱		6010C	Total/NA
Selenium	1.2	J	5.3	0.53	mg/Kg	1	✱		6010C	Total/NA
Silver	0.26	J	0.79	0.26	mg/Kg	1	✱		6010C	Total/NA
Mercury	4.0		0.12	0.028	mg/Kg	5	✱		7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP18 1-3'

Lab Sample ID: 480-210097-1

Date Collected: 06/20/23 09:00

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 74.2

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1100	170	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Acenaphthylene	ND		1100	150	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Anthracene	ND		1100	280	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Benzo[a]anthracene	180	J	1100	110	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Benzo[a]pyrene	ND		1100	170	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Benzo[b]fluoranthene	180	J	1100	180	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Benzo[g,h,i]perylene	120	J	1100	120	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Benzo[k]fluoranthene	ND		1100	150	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Chrysene	ND		1100	260	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Dibenz(a,h)anthracene	ND		1100	200	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Fluoranthene	340	J	1100	120	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Fluorene	ND		1100	130	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Indeno[1,2,3-cd]pyrene	ND		1100	140	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Naphthalene	ND		1100	150	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Phenanthrene	250	J	1100	170	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Pyrene	270	J	1100	130	ug/Kg	✱	06/21/23 15:31	06/23/23 23:54	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	63		60 - 120				06/21/23 15:31	06/23/23 23:54	5
Nitrobenzene-d5 (Surr)	64		53 - 120				06/21/23 15:31	06/23/23 23:54	5
p-Terphenyl-d14 (Surr)	73	S1-	79 - 130				06/21/23 15:31	06/23/23 23:54	5

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	107		2.7	0.55	mg/Kg	✱	06/22/23 10:00	06/27/23 15:46	1
Barium	427		0.68	0.15	mg/Kg	✱	06/22/23 10:00	06/27/23 15:46	1
Cadmium	0.61		0.27	0.041	mg/Kg	✱	06/22/23 10:00	06/27/23 15:46	1
Chromium	14.0		0.68	0.27	mg/Kg	✱	06/22/23 10:00	06/27/23 15:46	1
Lead	11400		1.4	0.33	mg/Kg	✱	06/22/23 10:00	06/27/23 15:46	1
Selenium	2.4	J	5.5	0.55	mg/Kg	✱	06/22/23 10:00	06/27/23 15:46	1
Silver	0.89		0.82	0.27	mg/Kg	✱	06/22/23 10:00	06/27/23 15:46	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	6.4	F2	0.13	0.031	mg/Kg	✱	06/22/23 10:52	06/22/23 15:12	5

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP19 1-3'

Lab Sample ID: 480-210097-2

Date Collected: 06/20/23 09:30

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 64.6

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2600	380	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Acenaphthylene	ND		2600	330	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Anthracene	ND		2600	640	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Benzo[a]anthracene	940	J	2600	260	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Benzo[a]pyrene	710	J	2600	380	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Benzo[b]fluoranthene	810	J	2600	410	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Benzo[g,h,i]perylene	340	J	2600	270	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Benzo[k]fluoranthene	400	J	2600	330	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Chrysene	810	J	2600	580	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Dibenz(a,h)anthracene	ND		2600	460	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Fluoranthene	1500	J	2600	270	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Fluorene	ND		2600	300	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Indeno[1,2,3-cd]pyrene	370	J	2600	320	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Naphthalene	ND		2600	330	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Phenanthrene	690	J	2600	380	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Pyrene	1100	J	2600	300	ug/Kg	✱	06/21/23 15:31	06/24/23 00:18	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	85		60 - 120				06/21/23 15:31	06/24/23 00:18	10
Nitrobenzene-d5 (Surr)	77		53 - 120				06/21/23 15:31	06/24/23 00:18	10
p-Terphenyl-d14 (Surr)	85		79 - 130				06/21/23 15:31	06/24/23 00:18	10

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	33.5		3.1	0.62	mg/Kg	✱	06/22/23 10:00	06/27/23 15:50	1
Barium	96.7		0.78	0.17	mg/Kg	✱	06/22/23 10:00	06/27/23 15:50	1
Cadmium	0.43		0.31	0.047	mg/Kg	✱	06/22/23 10:00	06/27/23 15:50	1
Chromium	13.4		0.78	0.31	mg/Kg	✱	06/22/23 10:00	06/27/23 15:50	1
Lead	1640		1.6	0.37	mg/Kg	✱	06/22/23 10:00	06/27/23 15:50	1
Selenium	ND		6.2	0.62	mg/Kg	✱	06/22/23 10:00	06/27/23 15:50	1
Silver	ND		0.93	0.31	mg/Kg	✱	06/22/23 10:00	06/27/23 15:50	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.5		0.032	0.0075	mg/Kg	✱	06/22/23 10:52	06/22/23 14:06	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP20 4-6'

Lab Sample ID: 480-210097-3

Date Collected: 06/20/23 10:00

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 78.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		210	31	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Acenaphthylene	ND		210	27	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Anthracene	ND		210	52	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Benzo[a]anthracene	ND		210	21	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Benzo[a]pyrene	ND		210	31	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Benzo[b]fluoranthene	ND		210	34	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Benzo[g,h,i]perylene	ND		210	22	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Benzo[k]fluoranthene	ND		210	27	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Chrysene	ND		210	47	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Dibenz[a,h]anthracene	ND		210	37	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Fluoranthene	ND		210	22	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Fluorene	ND		210	25	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Indeno[1,2,3-cd]pyrene	ND		210	26	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Naphthalene	ND		210	27	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Phenanthrene	ND		210	31	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Pyrene	ND		210	25	ug/Kg	✱	06/21/23 15:31	06/24/23 00:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	69		60 - 120				06/21/23 15:31	06/24/23 00:42	1
Nitrobenzene-d5 (Surr)	67		53 - 120				06/21/23 15:31	06/24/23 00:42	1
p-Terphenyl-d14 (Surr)	81		79 - 130				06/21/23 15:31	06/24/23 00:42	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2	J	2.5	0.50	mg/Kg	✱	06/22/23 10:00	06/27/23 15:54	1
Barium	71.7		0.63	0.14	mg/Kg	✱	06/22/23 10:00	06/27/23 15:54	1
Cadmium	0.22	J	0.25	0.038	mg/Kg	✱	06/22/23 10:00	06/27/23 15:54	1
Chromium	11.9		0.63	0.25	mg/Kg	✱	06/22/23 10:00	06/27/23 15:54	1
Lead	24.8		1.3	0.30	mg/Kg	✱	06/22/23 10:00	06/27/23 15:54	1
Selenium	ND		5.0	0.50	mg/Kg	✱	06/22/23 10:00	06/27/23 15:54	1
Silver	ND		0.75	0.25	mg/Kg	✱	06/22/23 10:00	06/27/23 15:54	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.21		0.025	0.0059	mg/Kg	✱	06/22/23 10:52	06/22/23 14:07	1

Client Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP21 1-3'

Lab Sample ID: 480-210097-4

Date Collected: 06/20/23 10:30

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 78.0

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	49	J	210	31	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Acenaphthylene	ND		210	28	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Anthracene	110	J	210	53	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Benzo[a]anthracene	270		210	21	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Benzo[a]pyrene	270		210	31	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Benzo[b]fluoranthene	290		210	34	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Benzo[g,h,i]perylene	180	J	210	23	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Benzo[k]fluoranthene	140	J	210	28	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Chrysene	280		210	48	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Dibenz[a,h]anthracene	50	J	210	38	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Fluoranthene	630		210	23	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Fluorene	37	J	210	25	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Indeno[1,2,3-cd]pyrene	150	J	210	26	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Naphthalene	ND		210	28	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Phenanthrene	520		210	31	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Pyrene	550		210	25	ug/Kg	✱	06/21/23 15:31	06/24/23 01:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	70		60 - 120				06/21/23 15:31	06/24/23 01:06	1
Nitrobenzene-d5 (Surr)	67		53 - 120				06/21/23 15:31	06/24/23 01:06	1
p-Terphenyl-d14 (Surr)	77	S1-	79 - 130				06/21/23 15:31	06/24/23 01:06	1

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	63.7		2.6	0.53	mg/Kg	✱	06/22/23 10:00	06/27/23 16:09	1
Barium	9720		6.6	1.5	mg/Kg	✱	06/22/23 10:00	06/28/23 11:09	10
Cadmium	0.39		0.26	0.040	mg/Kg	✱	06/22/23 10:00	06/27/23 16:09	1
Chromium	15.0		3.3	1.3	mg/Kg	✱	06/22/23 10:00	06/28/23 11:17	5
Lead	11200		6.6	1.6	mg/Kg	✱	06/22/23 10:00	06/28/23 11:17	5
Selenium	1.2	J	5.3	0.53	mg/Kg	✱	06/22/23 10:00	06/27/23 16:09	1
Silver	0.26	J	0.79	0.26	mg/Kg	✱	06/22/23 10:00	06/27/23 16:09	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.0		0.12	0.028	mg/Kg	✱	06/22/23 10:52	06/22/23 15:20	5

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

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

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	FBP	NBZ	TPHd14
		(60-120)	(53-120)	(79-130)
480-210097-1	TP18 1-3'	63	64	73 S1-
480-210097-2	TP19 1-3'	85	77	85
480-210097-3	TP20 4-6'	69	67	81
480-210097-4	TP21 1-3'	70	67	77 S1-
LCS 480-673934/2-A	Lab Control Sample	80	75	89
MB 480-673934/1-A	Method Blank	84	77	100

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHd14 = p-Terphenyl-d14 (Surr)

QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

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

Lab Sample ID: MB 480-673934/1-A

Matrix: Solid

Analysis Batch: 674201

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 673934

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Acenaphthylene	ND		170	22	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Anthracene	ND		170	41	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Benzo[a]anthracene	ND		170	17	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Benzo[a]pyrene	ND		170	25	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Chrysene	ND		170	38	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Fluoranthene	ND		170	18	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Fluorene	ND		170	20	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Naphthalene	ND		170	22	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Phenanthrene	ND		170	25	ug/Kg		06/21/23 15:31	06/23/23 18:13	1
Pyrene	ND		170	20	ug/Kg		06/21/23 15:31	06/23/23 18:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	84		60 - 120	06/21/23 15:31	06/23/23 18:13	1
Nitrobenzene-d5 (Surr)	77		53 - 120	06/21/23 15:31	06/23/23 18:13	1
p-Terphenyl-d14 (Surr)	100		79 - 130	06/21/23 15:31	06/23/23 18:13	1

Lab Sample ID: LCS 480-673934/2-A

Matrix: Solid

Analysis Batch: 674201

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 673934

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	1630	1420		ug/Kg		87	62 - 120
Acenaphthylene	1630	1510		ug/Kg		93	58 - 121
Anthracene	1630	1490		ug/Kg		92	62 - 120
Benzo[a]anthracene	1630	1500		ug/Kg		92	65 - 120
Benzo[a]pyrene	1630	1530		ug/Kg		94	64 - 120
Benzo[b]fluoranthene	1630	1510		ug/Kg		93	64 - 120
Benzo[g,h,i]perylene	1630	1580		ug/Kg		97	45 - 145
Benzo[k]fluoranthene	1630	1540		ug/Kg		95	65 - 120
Chrysene	1630	1460		ug/Kg		90	64 - 120
Dibenz(a,h)anthracene	1630	1610		ug/Kg		99	54 - 132
Fluoranthene	1630	1530		ug/Kg		94	62 - 120
Fluorene	1630	1450		ug/Kg		89	63 - 120
Indeno[1,2,3-cd]pyrene	1630	1580		ug/Kg		97	56 - 134
Naphthalene	1630	1290		ug/Kg		79	55 - 120
Phenanthrene	1630	1470		ug/Kg		90	60 - 120
Pyrene	1630	1550		ug/Kg		95	61 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	80		60 - 120
Nitrobenzene-d5 (Surr)	75		53 - 120
p-Terphenyl-d14 (Surr)	89		79 - 130

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QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-673871/1-A

Matrix: Solid

Analysis Batch: 674753

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 673871

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.40	mg/Kg		06/22/23 10:00	06/27/23 15:38	1
Barium	ND		0.50	0.11	mg/Kg		06/22/23 10:00	06/27/23 15:38	1
Cadmium	ND		0.20	0.030	mg/Kg		06/22/23 10:00	06/27/23 15:38	1
Chromium	ND		0.50	0.20	mg/Kg		06/22/23 10:00	06/27/23 15:38	1
Lead	ND		1.0	0.24	mg/Kg		06/22/23 10:00	06/27/23 15:38	1
Selenium	ND		4.0	0.40	mg/Kg		06/22/23 10:00	06/27/23 15:38	1
Silver	ND		0.60	0.20	mg/Kg		06/22/23 10:00	06/27/23 15:38	1

Lab Sample ID: LCSSRM 480-673871/2-A

Matrix: Solid

Analysis Batch: 674753

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 673871

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	183	168.3		mg/Kg		91.9	69.9 - 130. 1
Barium	297	279.0		mg/Kg		93.9	75.1 - 125. 3
Cadmium	221	184.9		mg/Kg		83.7	75.1 - 124. 9
Chromium	200	180.4		mg/Kg		90.2	70.0 - 130. 0
Lead	257	294.2		mg/Kg		114.5	73.9 - 126. 1
Selenium	217	190.8		mg/Kg		87.9	69.1 - 131. 3
Silver	67.8	60.90		mg/Kg		89.8	70.6 - 129. 2

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-674006/1-A

Matrix: Solid

Analysis Batch: 674134

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 674006

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020	0.0046	mg/Kg		06/22/23 10:52	06/22/23 13:53	1

Lab Sample ID: LCDSRM 480-674006/3-A ^10

Matrix: Solid

Analysis Batch: 674134

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 674006

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	18.2	18.21		mg/Kg		100.0	59.9 - 140. 1	5	20

Lab Sample ID: LCSSRM 480-674006/2-A ^10

Matrix: Solid

Analysis Batch: 674134

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 674006

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	18.2	19.09		mg/Kg		104.9	59.9 - 140. 1

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QC Sample Results

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Method: 7471B - Mercury (CVAA)

Lab Sample ID: 480-210097-1 MS

Matrix: Solid

Analysis Batch: 674134

Client Sample ID: TP18 1-3'

Prep Type: Total/NA

Prep Batch: 674006

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	6.4	F2	0.466	6.55	4	mg/Kg	✱	40	80 - 120

Lab Sample ID: 480-210097-1 MSD

Matrix: Solid

Analysis Batch: 674134

Client Sample ID: TP18 1-3'

Prep Type: Total/NA

Prep Batch: 674006

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	6.4	F2	0.467	4.29	4 F2	mg/Kg	✱	-443	80 - 120	42	20

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

GC/MS Semi VOA

Prep Batch: 673934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-1	TP18 1-3'	Total/NA	Solid	3550C	
480-210097-2	TP19 1-3'	Total/NA	Solid	3550C	
480-210097-3	TP20 4-6'	Total/NA	Solid	3550C	
480-210097-4	TP21 1-3'	Total/NA	Solid	3550C	
MB 480-673934/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-673934/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 674201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-1	TP18 1-3'	Total/NA	Solid	8270D	673934
480-210097-2	TP19 1-3'	Total/NA	Solid	8270D	673934
480-210097-3	TP20 4-6'	Total/NA	Solid	8270D	673934
480-210097-4	TP21 1-3'	Total/NA	Solid	8270D	673934
MB 480-673934/1-A	Method Blank	Total/NA	Solid	8270D	673934
LCS 480-673934/2-A	Lab Control Sample	Total/NA	Solid	8270D	673934

Metals

Prep Batch: 673871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-1	TP18 1-3'	Total/NA	Solid	3050B	
480-210097-2	TP19 1-3'	Total/NA	Solid	3050B	
480-210097-3	TP20 4-6'	Total/NA	Solid	3050B	
480-210097-4	TP21 1-3'	Total/NA	Solid	3050B	
MB 480-673871/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-673871/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 674006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-1	TP18 1-3'	Total/NA	Solid	7471B	
480-210097-2	TP19 1-3'	Total/NA	Solid	7471B	
480-210097-3	TP20 4-6'	Total/NA	Solid	7471B	
480-210097-4	TP21 1-3'	Total/NA	Solid	7471B	
MB 480-674006/1-A	Method Blank	Total/NA	Solid	7471B	
LCDSRM 480-674006/3-A ^10	Lab Control Sample Dup	Total/NA	Solid	7471B	
LCSSRM 480-674006/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	
480-210097-1 MS	TP18 1-3'	Total/NA	Solid	7471B	
480-210097-1 MSD	TP18 1-3'	Total/NA	Solid	7471B	

Analysis Batch: 674134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-1	TP18 1-3'	Total/NA	Solid	7471B	674006
480-210097-2	TP19 1-3'	Total/NA	Solid	7471B	674006
480-210097-3	TP20 4-6'	Total/NA	Solid	7471B	674006
480-210097-4	TP21 1-3'	Total/NA	Solid	7471B	674006
MB 480-674006/1-A	Method Blank	Total/NA	Solid	7471B	674006
LCDSRM 480-674006/3-A ^10	Lab Control Sample Dup	Total/NA	Solid	7471B	674006
LCSSRM 480-674006/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	674006
480-210097-1 MS	TP18 1-3'	Total/NA	Solid	7471B	674006
480-210097-1 MSD	TP18 1-3'	Total/NA	Solid	7471B	674006

Eurofins Buffalo

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Metals

Analysis Batch: 674753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-1	TP18 1-3'	Total/NA	Solid	6010C	673871
480-210097-2	TP19 1-3'	Total/NA	Solid	6010C	673871
480-210097-3	TP20 4-6'	Total/NA	Solid	6010C	673871
480-210097-4	TP21 1-3'	Total/NA	Solid	6010C	673871
MB 480-673871/1-A	Method Blank	Total/NA	Solid	6010C	673871
LCSSRM 480-673871/2-A	Lab Control Sample	Total/NA	Solid	6010C	673871

Analysis Batch: 674777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-4	TP21 1-3'	Total/NA	Solid	6010C	673871
480-210097-4	TP21 1-3'	Total/NA	Solid	6010C	673871

General Chemistry

Analysis Batch: 673942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-210097-1	TP18 1-3'	Total/NA	Solid	Moisture	
480-210097-2	TP19 1-3'	Total/NA	Solid	Moisture	
480-210097-3	TP20 4-6'	Total/NA	Solid	Moisture	
480-210097-4	TP21 1-3'	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP18 1-3'

Lab Sample ID: 480-210097-1

Date Collected: 06/20/23 09:00

Matrix: Solid

Date Received: 06/20/23 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	673942	JMM	EET BUF	06/21/23 16:05

Client Sample ID: TP18 1-3'

Lab Sample ID: 480-210097-1

Date Collected: 06/20/23 09:00

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 74.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			673934	SJM	EET BUF	06/21/23 15:31
Total/NA	Analysis	8270D		5	674201	JMM	EET BUF	06/23/23 23:54
Total/NA	Prep	3050B			673871	VAK	EET BUF	06/22/23 10:00
Total/NA	Analysis	6010C		1	674753	LMH	EET BUF	06/27/23 15:46
Total/NA	Prep	7471B			674006	NVK	EET BUF	06/22/23 10:52
Total/NA	Analysis	7471B		5	674134	NVK	EET BUF	06/22/23 15:12

Client Sample ID: TP19 1-3'

Lab Sample ID: 480-210097-2

Date Collected: 06/20/23 09:30

Matrix: Solid

Date Received: 06/20/23 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	673942	JMM	EET BUF	06/21/23 16:05

Client Sample ID: TP19 1-3'

Lab Sample ID: 480-210097-2

Date Collected: 06/20/23 09:30

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 64.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			673934	SJM	EET BUF	06/21/23 15:31
Total/NA	Analysis	8270D		10	674201	JMM	EET BUF	06/24/23 00:18
Total/NA	Prep	3050B			673871	VAK	EET BUF	06/22/23 10:00
Total/NA	Analysis	6010C		1	674753	LMH	EET BUF	06/27/23 15:50
Total/NA	Prep	7471B			674006	NVK	EET BUF	06/22/23 10:52
Total/NA	Analysis	7471B		1	674134	NVK	EET BUF	06/22/23 14:06

Client Sample ID: TP20 4-6'

Lab Sample ID: 480-210097-3

Date Collected: 06/20/23 10:00

Matrix: Solid

Date Received: 06/20/23 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	673942	JMM	EET BUF	06/21/23 16:05

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Client Sample ID: TP20 4-6'

Lab Sample ID: 480-210097-3

Date Collected: 06/20/23 10:00

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 78.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			673934	SJM	EET BUF	06/21/23 15:31
Total/NA	Analysis	8270D		1	674201	JMM	EET BUF	06/24/23 00:42
Total/NA	Prep	3050B			673871	VAK	EET BUF	06/22/23 10:00
Total/NA	Analysis	6010C		1	674753	LMH	EET BUF	06/27/23 15:54
Total/NA	Prep	7471B			674006	NVK	EET BUF	06/22/23 10:52
Total/NA	Analysis	7471B		1	674134	NVK	EET BUF	06/22/23 14:07

Client Sample ID: TP21 1-3'

Lab Sample ID: 480-210097-4

Date Collected: 06/20/23 10:30

Matrix: Solid

Date Received: 06/20/23 14:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	673942	JMM	EET BUF	06/21/23 16:05

Client Sample ID: TP21 1-3'

Lab Sample ID: 480-210097-4

Date Collected: 06/20/23 10:30

Matrix: Solid

Date Received: 06/20/23 14:15

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			673934	SJM	EET BUF	06/21/23 15:31
Total/NA	Analysis	8270D		1	674201	JMM	EET BUF	06/24/23 01:06
Total/NA	Prep	3050B			673871	VAK	EET BUF	06/22/23 10:00
Total/NA	Analysis	6010C		1	674753	LMH	EET BUF	06/27/23 16:09
Total/NA	Prep	3050B			673871	VAK	EET BUF	06/22/23 10:00
Total/NA	Analysis	6010C		10	674777	LMH	EET BUF	06/28/23 11:09
Total/NA	Prep	3050B			673871	VAK	EET BUF	06/22/23 10:00
Total/NA	Analysis	6010C		5	674777	LMH	EET BUF	06/28/23 11:17
Total/NA	Prep	7471B			674006	NVK	EET BUF	06/22/23 10:52
Total/NA	Analysis	7471B		5	674134	NVK	EET BUF	06/22/23 15:20

Laboratory References:

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

Accreditation/Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

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	03-31-24

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: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	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
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: Benchmark Env. Eng. & Science, PLLC
Project/Site: 130 Main St., Buffalo, NY

Job ID: 480-210097-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-210097-1	TP18 1-3'	Solid	06/20/23 09:00	06/20/23 14:15
480-210097-2	TP19 1-3'	Solid	06/20/23 09:30	06/20/23 14:15
480-210097-3	TP20 4-6'	Solid	06/20/23 10:00	06/20/23 14:15
480-210097-4	TP21 1-3'	Solid	06/20/23 10:30	06/20/23 14:15

Address:

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact		Project Manager: <i>Bryan McGeehan</i>		Site Contact:		Date:		COC No:	
Company Name: <i>Benchmark Turnkey</i>		Tel/Email: <i>Benchmark@BM-TK.com</i>		Lab Contact:		Carrier:		COCs	
Address: <i>2558 Hamburg Turnpike</i>		Analysis Turnaround Time		TAT if different from Below		For Lab Use Only:		Sampler:	
City/State/Zip: <i>Buffalo NY 14218</i>		☐ CALENDAR DAYS ☐ WORKING DAYS		2 weeks		Walk-in Client:		Lab Sampling:	
Phone: <i>(716) 844 1699</i>		☐ 2 weeks		1 week		Job / SDG No.:			
Fax:		☐ 1 day		2 days					
Project Name: <i>Powder 130 Main St</i>									
Site:									
P O # <i>BOC-0023-001-002</i>									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sample Specific Notes:
TP18	1-3'	6/20/23	9:00A	G	Soil	2	X	X	Sample Specific Notes:  480-210097 Chain of Custody
TP19	1-3'	↓	9:30A	↓	↓	2	X	X	
TP20	4-6'	↓	10:00A	↓	↓	2	X	X	
TP21	1-3'	↓	10:30A	↓	↓	2	X	X	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other									
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.									
Special Instructions/QC Requirements & Comments:									
Custody Seal No.:		Custody Seal No.:		Custody Seal No.:		Custody Seal No.:		Custody Seal No.:	
Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:	
Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:	
Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:		Relinquished by:	

Address:

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact		Project Manager: <u>Bryan Maybank</u>		Site Contact:		Date:		COC No:	
Company Name: <u>Benchmark Turkeys</u>		Tel/Email: <u>B.Maybank@BMT-TK.COM</u>		Lab Contact:		Carrier:		COCs	
Address: <u>2558 Hamburg Turnpike</u>		Analysis Turnaround Time		Perform MS / MSD (Y / N)		Sample Specific Notes:		Sampler:	
City/State/Zip: <u>Buffalo NY 14218</u>		TAT if different from Below		Filtered Sample (Y / N)		For Lab Use Only:		Walk-in Client:	
Phone: <u>(716) 844 1699</u>		☐ CALENDAR DAYS ☐ WORKING DAYS		Sample Type (C=Comp, G=Grab)		Lab Sampling:		Job / SDG No.:	
Fax:		2 weeks		Sample Time		Date			
Project Name: <u>Pewee 130 Main St</u>		1 week		Sample Date		Date			
Site:		2 days		Sample Matrix		Date			
P O # <u>80600 - 023 - 001 - 002</u>		1 day		# of Cont.		Date			
TP17	1-3'	6/20/23	8:35A	G	Sal	2			
TP17	5-7'	↓	8:30A	↓	↓	2			
TP16	1-3'	↓	8:00A	↓	↓	2			
TP15	1-3'	↓	7:30A	↓	↓	2			
Preservation Used: 1=Ice; 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other									
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.									
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown									
Special Instructions/QC Requirements & Comments:									
Custody Seal Intact: ☐ Yes ☐ No									
Relinquished by: <u>[Signature]</u>									
Relinquished by: <u>[Signature]</u>									
Relinquished by: <u>[Signature]</u>									
Cooler Temp. (°C): Obs'd: <u>6.11 # (TLC)</u>									
Therm ID No.:									
Received by: <u>[Signature]</u>									
Company: <u>TIA</u>									
Date/Time: <u>6-20-23 14:15</u>									
Received by: <u>[Signature]</u>									
Company:									
Date/Time:									
Received in Laboratory by:									
Company:									
Date/Time:									

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-210097-1

Login Number: 210097

List Source: Eurofins Buffalo

List Number: 1

Creator: Kolb, Chris M

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	Yes: Received same day of collection; chilling process has begun
Cooler Temperature is recorded.	True	
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.	N/A	
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	BENCHMARK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	