Phase II Environmental Investigation Report

619 EXCHANGE STREET
BUFFALO, NEW YORK

October 2023 T0455-023-001

Prepared For: Park Grove Realty
46 Prince Street, Suite 2003
Rochester, New York 14607

Prepared By:

TurnKey Environmental Restoration, LLC

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PHASE II ENVIRONMENTAL INVESTIGATION REPORT

619 Exchange Street
Buffalo, New York

October 2023 T0455-023-001

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Buffalo, New York 14218

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

619 Exchange Street
Buffalo, New York

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1.0 INTRODUCTION

1.1 Background and Site Description

TurnKey Environmental Restoration, LLC (TurnKey) performed a Phase II Environmental Investigation for Park Grove Realty at the property addressed as 619 Exchange Street, City of Buffalo, Erie County, New York (Site).

The Site is located in a highly developed commercial/ industrial area of the City of Buffalo (see Figure 1). As shown on Figure 2, one (1) structure is present on the Site. Per municipal records the existing building is split into three (3) sections with Section 3 previously demolished with the concrete slab-on-grade remaining.

The Site consists of one (1) parcel totaling approximately 0.72-acres and is supplied with/has access to municipal sanitary sewer, electric, natural-gas and public water.

We understand that the Site is slated for redevelopment. The purpose of this investigation was to assess recognized environmental conditions (RECs) identified for the Site in a Phase I Environmental Site Assessment completed by TurnKey in July 2018. The specific RECs identified for the Site included the following:

- The building has a long history of woodworking, planing, and milling operations. Such activities could result in environmental impacts beneath the building slab due to the reasonably anticipated use of woodworking machinery and chemicals such as wood preservatives, stains, paints, etc.
- Evidence of historic fuel oil heat including cut copper lines and a suspect 5,000-gallon fuel gauge. Tank-related information is unavailable. TurnKey suspects, but could not confirm, that an AST was formerly present within a vault proximate to the boiler room within the basement of Section 1.
- The threaded suspect vent pipe observed protruding from the south wall of the building is considered a REC as the nature of the pipe is unknown.
- Prior to the current on-Site development, railroad tracks bisected the Site.

Additional information relative to the work completed at the Site by TurnKey is provided below.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 Soil Boring and Hand Auger Investigation

On May 23, 2023, Trec Environmental (Trec) completed seven (7) soil borings, identified as SB-1 through SB-7, using a direct-push Geoprobe drill rig throughout Section 1 (basement) and Section 2 (slab on grade) of the existing building. To facilitate drilling activities, the existing concrete slab was cored at all investigation locations on May 5, 2023. During drilling activities, the drill rig experienced equipment failure at SB-6. As such, only fill material was collected from SB-6 to approximately 1 foot/feet below ground surface (fbgs) and the exterior investigation locations (HA-1 through HA-3) were completed using a hand auger. The majority of the soil borings were completed at least three (3) feet into native soils where equipment refusal was encountered due to very tight clay. Hand augers HA-1 and HA-3 encountered refusal due to brick and wood at approximately 1 fbgs, respectively. Hand Auger HA-2 was completed to approximately 4 fbgs where clayey sand was encountered. Groundwater was encountered at three (3) investigation locations ranging from 2.5 fbgs (western portion of the Site) and 5 fbgs (eastern portion of the Site). It should be noted that soil borings SB-1 through SB-5 were completed within the basement of the existing building which is approximately 10 feet below the existing ground surface. See Appendix A for boring logs.

To supplement the previous subsurface investigation, additional fill samples were collected on August 22, 2023 from within the western portion of Section 1 (central portion of the building) of the existing building and are identified as SB-8 through SB-10. Samples were collected from previously excavated and accessible locations proximate to building columns (apparent structural investigation locations) using a pre-cleaned stainless steel spoon, which was cleaned and decontaminated between each sample location. Fill material was observed from directly below the concrete slab to approximately 1 fbgs. Standing water/groundwater was also observed within each excavation location at approximately 1 fbgs.

The physical characteristics of all soil borings and hand augers 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 also noted. All field observations, including lithology, depths, PID scan results, etc., at each investigation location are summarized in the

Boring Log sheets provided in Appendix A. Photographs taken during the work are included in Appendix B.

Thirteen (13) soil samples selected for laboratory analysis were transported under chain-of custody command to Alpha Analytical, Inc. (Alpha) for analysis of polycyclic aromatic hydrocarbons (PAHs) and Resource Conservation and Recovery Act (RCRA) metals via United States Environmental Protection Agency (USEPA) Methods 8270D and 6010C/7471B, respectively. All samples were collected in laboratory provided sample bottles and were cooled to 4^0 C prior to transport.

3.0 INVESTIGATION FINDINGS

3.1 Site Geology/Hydrogeology

The overburden geology observed during the investigation activities is generally described as fill materials overlying native clay or combinations of sand and clay to at least 6 fbgs.

Fill was encountered across the Site at all of the investigation locations at depths ranging between 1 fbgs and 3 fbgs. Specifically, fill materials within the eastern portion of the Site consisted of black gravel and sand with black fines and black granular material to approximately 1 fbgs. Fill material within the western portion of the Site consisted of black sand with varying mixtures of white ash, cinders/black fines, wood, and gravel.

Groundwater was encountered at three (3) investigation locations at depths ranging between 2.5 and 5 fbgs. Standing water/groundwater was also observed at each supplemental investigation location (SB-8 through SB-10) at approximately 1 fbgs. It should be noted that water encountered within the eastern portion of the Site was determined from the top of the concrete basement slab which is approximately 10 fbgs.

Groundwater flow is likely to the west/southwest toward the Buffalo River. Local groundwater flow, however, may be influenced by subsurface features, such as excavations, utilities, and localized fill-conditions.

3.2 Field Observations

Soil samples from TurnKey's soil boring and hand auger investigation were observed and field screened for volatile organics using a PID. No elevated PIDs were observed. Additional information relative to TurnKey's investigation is provided in the table below.

Investigation Location ID	Environmental Concern Assessed	Highest PID reading (parts per million, ppm) and depth (fbgs)	Other Observations
SB-1	Interior floor drain and three (3) exterior suspect brackets.	0.0 ppm throughout.	Fill to approximately 1 fbgs
SB-2	Sheen observed on concrete slab.		
SB-3	Interior sump with standing water.		
SB-4	Interior sump and two (2) exterior suspect brackets.		
SB-5	Site coverage		
SB-6	Former electrical panel.		
SB-7	Interior trench drain and Site coverage.		
SB-8	Site coverage		
SB-9	Site coverage		
SB-10	Site coverage		
HA-1	Black staining on concrete slab.		Fill to approximately 1 fbgs, black sand with black granular material, wood, white ash, gravel, and brick.
HA-2	Black staining on concrete slab.		Fill to approximately 3 fbgs, black sand with black granular material and white ash, trace wood and gravel.
HA-3	Black tar on concrete slab.		Fill to approximately 1 fbgs, black sand with trace black granular material, wood, white ash, gravel, and brick.

3.3 Soil Analytical Results

Table 1 presents a summary of the detected PAHs and metals for each of the thirteen (13) soil/fill samples selected for laboratory analysis from the investigation. For comparative purposes, Table 1 includes 6NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs) and Restricted-Residential Use Soil Cleanup Objectives (RRSCOs). RRSCOs are the most applicable SCO based on the anticipated future intended use of the Site. Appendix C contains a copy of the laboratory analytical data package.

As summarized on Table 1, individual PAHs exceeded Part 375 RRSCOs at two (2) investigation locations (SB-3 and HC-1) located in the eastern and western portions of the Site. Specifically, benzo(a)anthracene, benzo(a)pyrene), benzo(b)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene exceeded their respective RRSCOs at both locations (SB-3 and HC-1). Chrysene exceeded its RRSCO at HC-1.

Metals were identified at concentrations exceeding Part 375 SCOs at nine (9) soil/fill samples analyzed from across the Site. Specifically, in regard to RRSCO exceedances, arsenic exceeded its respective RRSCO of 16 ppm (concentration is consistent with its Industrial SCO) at SB-1 (22.5 ppm), SB-2 (64.4 ppm), SB-7 (18 ppm), HC-1 (16.8 ppm), and HC-3 (22.1 ppm). Barium significantly exceeded its RRSCO of 400 ppm at SB-10 (1,850 ppm). Lead exceeded its respective RRSCO of 400 ppm at HC-1 (525 ppm). Mercury exceeded its respective RRSCO of 0.81 ppm at HC-1 (12.2 ppm) and HC-2 (2.53 ppm).

Analytical exceedances are shown on Figure 2.

4.0 CONCLUSIONS AND RECOMMENDATIONS

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

- The Site is currently vacant and underutilized and is located within an historic industrial area. Specific uses at the Site formerly included woodworking, planing, and milling. TurnKey suspects that the existing building was heated by fuel oil as evidenced by cut copper lines, a 5,000-gallon fuel gauge, and a suspect vault where we suspect a fuel oil AST was previously located. A threaded suspect vent pipe, which may have been a vent pipe for a fuel oil tank, was noted protruding from the south exterior wall of the existing building.

- Fill material, consisting of mixtures of black fines, granular material, ash, cinders, and/or fragments of wood and brick, was encountered across the Site at all of the investigation locations at depths ranging between 1 fbgs and 3 fbgs. As further detailed below and on Figure 2, chemical analysis indicates the presence of impacted fill materials across the Site.

- PAHs and metals were detected at concentrations above Part 375 SCOs, including USCOs and RRSCOs, across the Site. The highest PAH concentrations were identified on the eastern and western portions of the Site. Elevated metals were identified across the Site, in the eastern, western, and central areas, with the highest concentrations associated with arsenic (up to 64.4 milligrams per kilogram, mg/kg), barium (up to 1,850 mg/kg), lead (up to 525 mg/kg), and mercury (up to 12.2 mg/kg).

- We understand the property is being considered for redevelopment. Based on the findings detailed above, the Site is a potential candidate for the Brownfield Cleanup Program (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 Park Grove Realty. 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 Park Grove Realty. Use of or reliance on this report or its findings by any other person or entity is prohibited without written permission of TurnKey Environmental Restoration, LLC.

TABLE

TABLE 1
SUMMARY OF SOIL/FILL SAMPLE ANALYTICAL RESULTS
PHASE II ENVIRONMENTAL INVESTIGATION REPORT
619 EXCHANGE STREET
BUFFALO, NEW YORK

Parameter [1]	Unrestricted UseSCOs[2] (mg/kg)	Restricted-Residential Use SCOs[2] (mg/kg)	Sample Location (Depth)												
			SB-1 (0-1 FT)	SB-2 (0-1 FT)	SB-3 (0-1 FT)	SB-4 (0-1 FT)	SB-5 (0-1 FT)	SB-6 (0-1 FT)	SB-7 (0-1 FT)	SB-8 (0-1 FT)	SB-9 (0-1 FT)	SB-10 (0-1 FT)	HC-1 (0-1 FT)	HC-2 (0.5-2 FT)	HC-3 (0-1 FT)
			5/23/2023							8/22/2023			5/23/2023		
Polycyclic Aromatic Hydrocarbons (PAHs) - mg/kg [3]															
2-Methylnaphthalene	--	--	0.095 J	0.096 J	0.14 J	ND	ND	ND	0.06 J	--	--	--	0.38	0.2 J	0.11 J
Acenaphthene	**20**	**100**	ND	ND	0.054 J	ND	ND	ND	0.026 J	ND	ND	ND	0.11 J	0.061 J	0.16
Acenaphthylene	**100**	**100**	ND	ND	0.15 J	ND	ND	ND	0.054 J	ND	ND	ND	0.72	0.046 J	0.037 J
Anthracene	**100**	**100**	ND	ND	0.58	ND	ND	ND	0.12 J	ND	ND	ND	1.8	0.16	0.28
Benzo(a)anthracene	**1**	**1**	0.064 J	0.037 J	**2.7**	ND	0.048 J	0.024 J	0.22	ND	ND	0.3 J	**5**	0.28	0.54
Benzo(a)pyrene	**1**	**1**	0.12 J	ND	**2.9**	ND	ND	ND	0.18	ND	ND	0.39 J	**3.9**	0.18	0.46
Benzo(b)fluoranthene	**1**	**1**	0.12 J	0.044 J	**2.9**	ND	0.051 J	ND	0.2	ND	ND	0.55 J	**4.3**	0.26	0.55
Benzo(g,h,i)perylene	**100**	**100**	0.09 J	0.027 J	1.6	ND	ND	ND	0.09 J	ND	ND	0.33 J	1.6	0.12 J	0.23
Benzo(k)fluoranthene	**0.8**	**3.9**	0.043 J	ND	**0.86**	ND	ND	ND	0.07 J	ND	ND	0.2 J	**2.2**	0.082 J	0.15
Chrysene	**1**	**3.9**	0.062 J	0.035 J	**2.3**	ND	0.046 J	0.024 J	0.19	ND	ND	0.35 J	**4.4**	0.28	0.52
Dibenzo(a,h)anthracene	**0.33**	**0.33**	ND	ND	**0.48**	ND	ND	ND	ND	ND	ND	ND	**0.62**	0.028 J	0.057 J
Fluoranthene	**100**	**100**	0.058 J	0.037 J	2.1	ND	0.11 J	0.036 J	ND	ND	ND	0.64 J	8.6	0.54	1.3
Fluorene	**30**	**100**	ND	ND	0.082 J	ND	ND	ND	0.074 J	ND	ND	ND	0.44	0.095 J	0.16 J
Indeno(1,2,3-cd)pyrene	**0.5**	**0.5**	0.077 J	0.03 J	**2.1**	ND	ND	ND	0.11 J	ND	ND	0.25 J	**1.7**	0.13 J	0.29
Naphthalene	**12**	**100**	0.12 J	0.086 J	0.19 J	ND	ND	0.052 J	0.073 J	0.029 J	ND	ND	0.55	0.24	0.1 J
Phenanthrene	**100**	**100**	0.056 J	0.052 J	1.3	ND	0.094 J	0.034 J	0.51	0.051 J	ND	0.41 J	7.8	0.64	1.2
Pyrene	**100**	**100**	0.06 J	0.043 J	2.3	ND	0.082 J	0.034 J	0.4	ND	ND	0.49 J	7.2	0.42	1.1
RCRA Metals - mg/kg															
Arsenic	**13**	**16**	**22.5**	**64.4**	6.3	8.53	11.5	5.61	**18**	**13.3**	**15.3**	11.6	**16.8**	**14.8**	**22.1**
Barium	**350**	**400**	72.9	91.7	87	161	99.7	28.1	86.3	265	255	**1850**	127	68.5	64.6
Cadmium	**2.5**	**4.3**	0.414 J	0.331 J	0.124 J	0.214 J	0.218 J	0.233 J	0.322 J	0.13 J	0.18 J	0.38	0.341 J	0.324 J	0.636
Chromium	**30**	**180**	11.3	7.77	10.5	16	10.2	6.38	20.1	9.7	8.3	12.4	10.5	10.6	7.57
Lead	**63**	**400**	21.4	**67.6**	16.8	45.3	56.1	24.3	**237**	24.3	20.5	**69**	**525**	**286**	**98.3**
Mercury	**0.18**	**0.81**	ND	0.088 J	ND	ND	ND	0.088	**0.453**	0.059	0.029	0.073	**12.2**	**2.53**	**0.214**
Selenium	**3.9**	**180**	ND	1.44	0.277 J	0.394 J	0.399 J	0.386 J	**4.02**	ND	ND	ND	1.76	**4.03**	1.21
Silver	**2**	**180**	ND	ND	ND	ND	0.192 J	0.173 J	ND	ND	ND	ND	0.688	0.298	ND

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per 6NYCRR Part 375 Unrestricted Soil Cleanup Objectives (SCOs).
3. Sample results were reported by the laboratory in micograms per kilogram (ug/kg) and converted to milligram per kilogram (mg/kg) for comparison to SCOs.

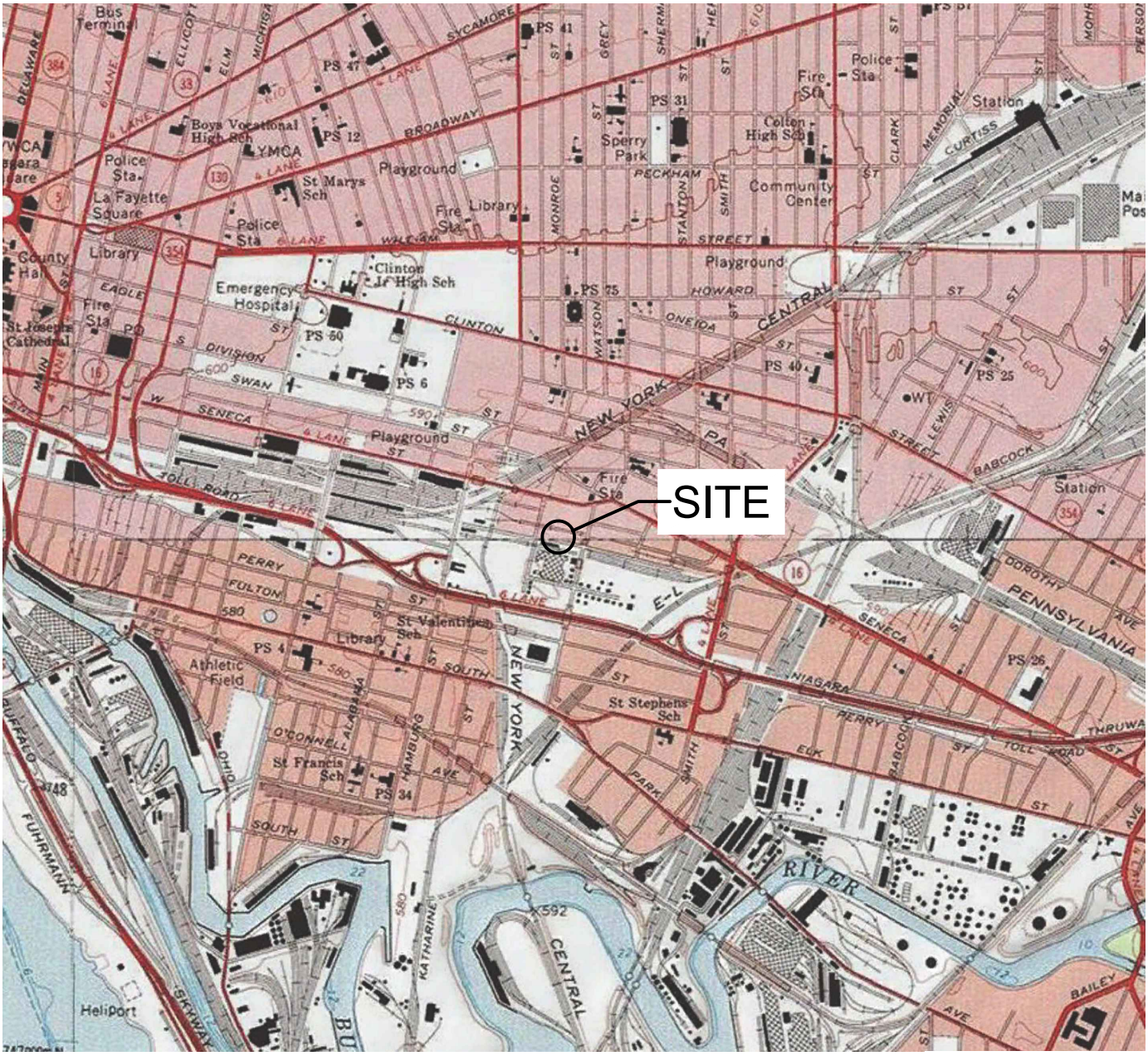
Definitions:

ND = Parameter not detected above laboratory detection limit.
-- = Sample not analyzed for parameter and/or no SCO available.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.

Bold	= Result exceeds Unrestricted Use SCOs
Bold	= Result exceeds Restricted-Residential Use SCOs

FIGURES

FIGURE 1



TurnKey Environmental Restoration, LLC

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PROJECT NO.: T0455-023-001

DATE: MAY 2023

DRAFTED BY: CMS

SITE LOCATION AND VICINITY MAP

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

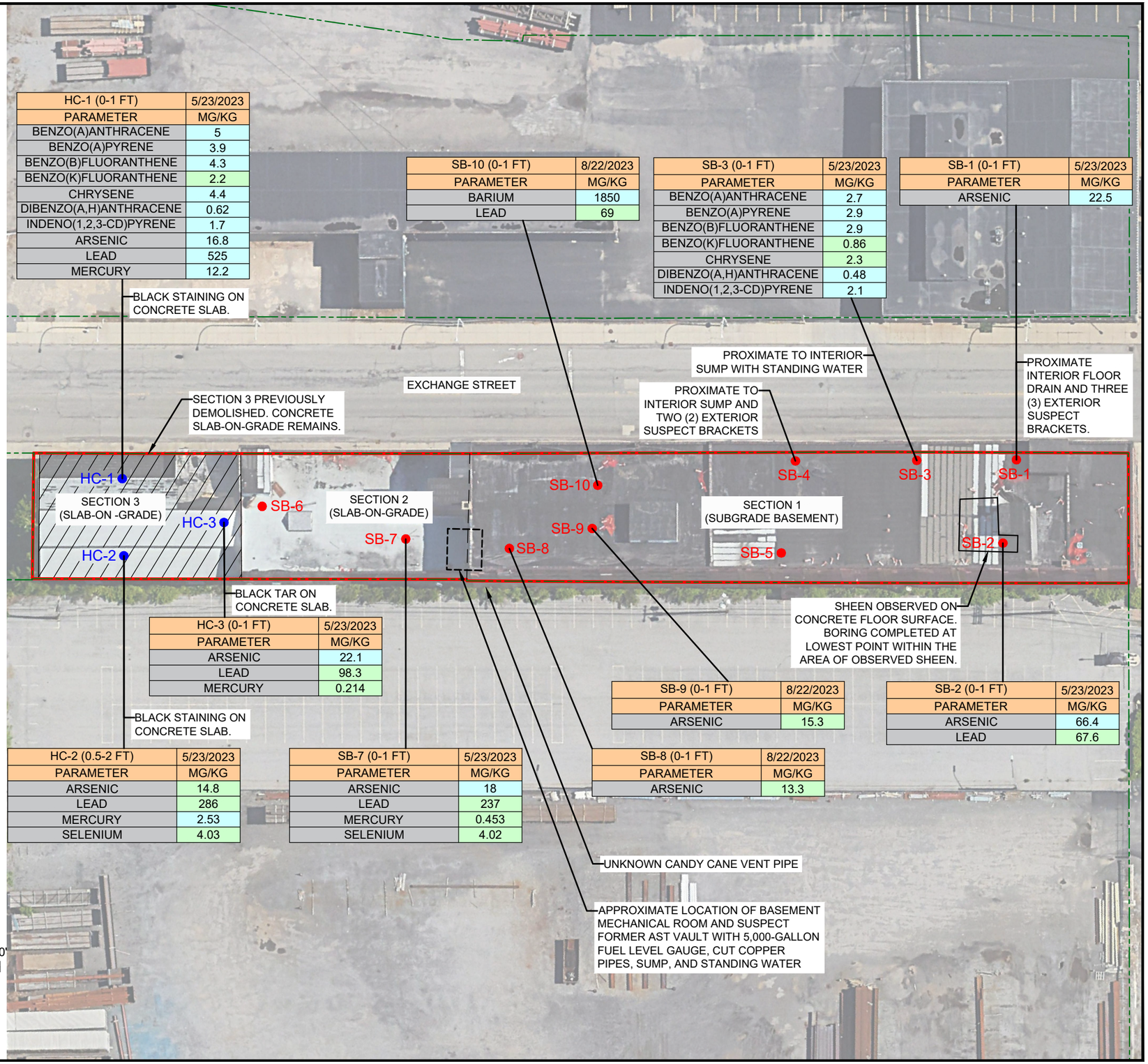
619 EXCHANGE STREET
BUFFALO, NEW YORK

PREPARED FOR
PARK GROVE REALTY

LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SB-1 ● SOIL BORING
- HC-1 ● HAND CORE/AUGER
- EXCEEDS UNRESTRICTED USE SCOs[2]
- EXCEEDS RESTRICTED-RESIDENTIAL USE SCOs[2]
- BUILDING SECTION PREVIOUSLY DEMOLISHED

NOTES:
1. IMAGE TAKEN FROM GOOGLE EARTH 2022.
2. RESULTS COMPARED TO 6 NYCRR PART 375 SOIL CLEANUP OBJECTIVES (SCOs).



HC-1 (0-1 FT)	5/23/2023
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	5
BENZO(A)PYRENE	3.9
BENZO(B)FLUORANTHENE	4.3
BENZO(K)FLUORANTHENE	2.2
CHRYSENE	4.4
DIBENZO(A,H)ANTHRACENE	0.62
INDENO(1,2,3-CD)PYRENE	1.7
ARSENIC	16.8
LEAD	525
MERCURY	12.2

SB-10 (0-1 FT)	8/22/2023
PARAMETER	MG/KG
BARIUM	1850
LEAD	69

SB-3 (0-1 FT)	5/23/2023
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	2.7
BENZO(A)PYRENE	2.9
BENZO(B)FLUORANTHENE	2.9
BENZO(K)FLUORANTHENE	0.86
CHRYSENE	2.3
DIBENZO(A,H)ANTHRACENE	0.48
INDENO(1,2,3-CD)PYRENE	2.1

SB-1 (0-1 FT)	5/23/2023
PARAMETER	MG/KG
ARSENIC	22.5

HC-3 (0-1 FT)	5/23/2023
PARAMETER	MG/KG
ARSENIC	22.1
LEAD	98.3
MERCURY	0.214

SB-9 (0-1 FT)	8/22/2023
PARAMETER	MG/KG
ARSENIC	15.3

SB-2 (0-1 FT)	5/23/2023
PARAMETER	MG/KG
ARSENIC	66.4
LEAD	67.6

HC-2 (0.5-2 FT)	5/23/2023
PARAMETER	MG/KG
ARSENIC	14.8
LEAD	286
MERCURY	2.53
SELENIUM	4.03

SB-7 (0-1 FT)	5/23/2023
PARAMETER	MG/KG
ARSENIC	18
LEAD	237
MERCURY	0.453
SELENIUM	4.02

SB-8 (0-1 FT)	8/22/2023
PARAMETER	MG/KG
ARSENIC	13.3

N

50' 0' 50' 100'

SCALE: 1 INCH = 50 FEET
SCALE IN FEET
(approximate)

DATE: MAY 2023
DRAFTED BY: CMS

INVESTIGATION LOCATIONS AND AREAS OF CONCERN

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

619 EXCHANGE STREET
BUFFALO, NEW YORK

PREPARED FOR
PARK GROVE REALTY

TURNKEY ENVIRONMENTAL RESTORATION, LLC
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(716) 856-0599

JOB NO.: T0455-023-001

FIGURE 2

APPENDIX A

SOIL BORING AND HAND AUGER LOGS

Project No: T0455-023-001

Borehole Number: HC-1

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface ***Concrete Slab***					0.0		
	-0.3 / 0.3	***Fill*** Black, mostly fine sand, some black fines, some black granulars, trace wood, trace white ash, trace gravel, trace red brick, no odors.							
	-1.0 / 1.0	End of Borehole							

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: HC-2

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface							
		Concrete Slab							
	-0.5 / 0.5	***Fill*** Black, mostly fine sand, some black fines, some black granulars, some white ash, trace wood, trace gravel, no odors. Wet at 2.5 fbgs.					0.0	Sample Location	
	-3.0 / 3.0	***Clayey Sand*** Black to dark brown, wet, mostly fine sand, some medium plastic fines, low density, no odor.					0.0		
	-4.0 / 4.0	End of Borehole					0.0		Observed water

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: HC-3

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface ***Concrete Slab***							
	-0.5 / 0.5	***Fill*** Black, mostly fine sand, some black fines, some black granulars, some white ash, some wood, trace gravel, no odors.					0.0	Sample Location	
	-1.0 / 1.0	***Clayey Sand*** Black to dark brown, wet, mostly fine sand, some medium plastic fines, low density, no odor.					0.0		
	-2.0 / 2.0	End of Borehole							

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: SB-1

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface							
		Concrete Slab							
	-0.3 / 0.3	***Fill*** Black, mostly crushed gravel, some black fines, some black granulars, no odors.					0.0		
	-1.0 / 1.0	***Lean Clay*** Reddish brown, moist, mostly medium plastic fines, trace fine sand and gravel, very dense, no odors.					0.0		
		Equipment refusal due to tight clay.					0.0		
							0.0		
							0.0		
5.0							0.0		
	-6.0 / 6.0	End of Borehole					0.0		

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: SB-2

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete Slab***							
	-0.3								
	0.3	***Fill*** Black, mostly crushed gravel, some black fines, some black granulars, no odors.						Sample Location	
	-1.0						0.0		
	1.0	***Lean Clay*** Reddish brown, moist, mostly medium plastic fines, trace fine sand and gravel, very dense, no odors. Equipment refusal due to tight clay.					0.0		
							0.0		
							0.0		
	-4.0								
	4.0	End of Borehole							

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: SB-3

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete Slab***							
	-0.3								
	0.3	***Fill*** Black, mostly crushed gravel, some black fines, some black granulars, no odors.						Sample Location	
	-1.0						0.0		
	1.0	***Lean Clay*** Reddish brown, moist, mostly medium plastic fines, trace fine sand and gravel, very dense, no odors. Equipment refusal due to tight clay.					0.0		
							0.0		
							0.0		
	-4.0								
	4.0	End of Borehole							

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: SB-4

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete Slab***							
	-0.3 / 0.3	***Fill*** Black, mostly crushed gravel, some black fines, some black granulars, no odors.					0.0		
	-1.0 / 1.0	***Lean Clay*** Reddish brown, moist, mostly medium plastic fines, trace fine sand and gravel, very dense, wet at 3.75 fbgs, no odors. Equipment refusal due to tight clay.					0.0		
							0.0		*Observed water*
	-4.0 / 4.0	End of Borehole					0.0		

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: SB-5

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Concrete Slab***							
	-0.3								
	0.3	***Fill*** Black, mostly crushed gravel, some black fines, some black granulars, no odors.					0.0	Sample Location	
	-1.0								
	1.0	***Lean Clay*** Reddish brown, moist, mostly medium plastic fines, trace fine sand and gravel, very dense, wet at 5 fbgs, no odors.					0.0		
		Equipment refusal due to tight clay.					0.0		
							0.0		
							0.0		
5.0							0.0		▼ Observed water
	-6.0								
	6.0	End of Borehole							

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: SB-6

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface ***Concrete Slab***					0.0		
	-0.5 / 0.5	***Fill*** Brown and black, mostly fine sand, some crushed gravel, some black fines, some black granulars, no odors. No additional advancement due to equipment failure.						Sample Location	
	-1.0 / 1.0	End of Borehole							

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Borehole Number: SB-7

Project: Phase II Environmental Site Investigation

A.K.A.:

Client: Park Grove Realty

Logged By: CMS

Site Location: 619 Exchange Street

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (%)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0 / 0.0	Ground Surface ***Concrete Slab***							
	-0.5 / 0.5	***Fill*** Black, mostly crushed gravel, some fine sand, some black fines, some black granulars, no odors.					0.0		
	-1.0 / 1.0	***Lean Clay*** Reddish brown, moist, mostly medium plastic fines, trace fine sand and gravel, very dense, no odors.					0.0		
							0.0		
	-4.0 / 4.0	End of Borehole					0.0		

Drilled By: Trec
Drill Rig Type: 420M
Drill Method: Direct Push
Comments:
Drill Date(s): 5/23/2023

Hole Size: 2"
Stick-up:
Datum:

Sheet: 1 of 1

Project No: T0455-023-001

Project: Phase II Environmental investigation Report

Client: Park Grove Realty

Site Location: 619 Exchange Street

Sample I.D.: SB-8

Logged By: CMS

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm: 0, 25, 50, 75, 100)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Concrete Slab***				
	-0.5					
	0.5	***Fill*** Brown and black, mostly fine sand, some crushed gravel, some black fines, some black granulars, no odors. Water at 1 fbgs.		0.0	Sample Location	*Observed water*
	-1.0					
	1.0	***Native Clay*** Reddish brown, mostly medium plastic fines, trace fine sand, dense.				
	-2.0			0.0		
	2.0	End of Test Pit				

Excavated By:

Excavator Type:

Excavation Date(s): Sampled 8/22/2023

Length: 4'

Width: 4'

Depth: >2'

Depth to Water: 1'

Visual Impacts: Black fill

Olfactory Observations: No

Comments: Previously completed structural test pit

-

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Project No: T0455-023-001

Project: Phase II Environmental investigation Report

Client: Park Grove Realty

Site Location: 619 Exchange Street

Sample I.D.: SB-9

Logged By: CMS

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm: 0, 25, 50, 75, 100)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Concrete Slab***				
	-0.5					
	0.5	***Fill*** Brown and black, mostly fine sand, some crushed gravel, some black fines, some black granulars, no odors. Water at 1 fbgs.		0.0	Sample Location	*Observed water*
	-1.0					
	1.0	***Native Clay*** Reddish brown, mostly medium plastic fines, trace fine sand, dense.				
	-2.0			0.0		
	2.0	End of Test Pit				

Excavated By:

Excavator Type:

Excavation Date(s): Sampled 8/22/2023

Length: 4'

Width: 4'

Depth: >2'

Depth to Water: 1'

Visual Impacts: Black fill

Olfactory Observations: No

Comments: Previously completed structural test pit

-

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Project No: T0455-023-001

Project: Phase II Environmental investigation Report

Client: Park Grove Realty

Site Location: 619 Exchange Street

Sample I.D.: SB-10

Logged By: CMS

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE

Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Lithologic Symbol	PID VOCs (ppm: 0, 25, 50, 75, 100)	Lab Sample	Remarks
0.0	0.0	Ground Surface				
	0.0	***Concrete Slab***				
	-0.5					
	0.5	***Fill*** Brown and black, mostly fine sand, some crushed gravel, some black fines, some black granulars, no odors. Water at 1 fbgs.		0.0	Sample Location	*Observed water*
	-1.0					
	1.0	***Native Clay*** Reddish brown, mostly medium plastic fines, trace fine sand, dense.				
	-2.0			0.0		
	2.0	End of Test Pit				

Excavated By:

Excavator Type:

Excavation Date(s): Sampled 8/22/2023

Length: 4'

Width: 4'

Depth: >2'

Depth to Water: 1'

Visual Impacts: Black fill

Olfactory Observations: No

Comments: Previously completed structural test pit

-

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APPENDIX B

PHOTO LOG

SITE PHOTOGRAPHS

Photo 1:

Photo 2:

Photo 3:

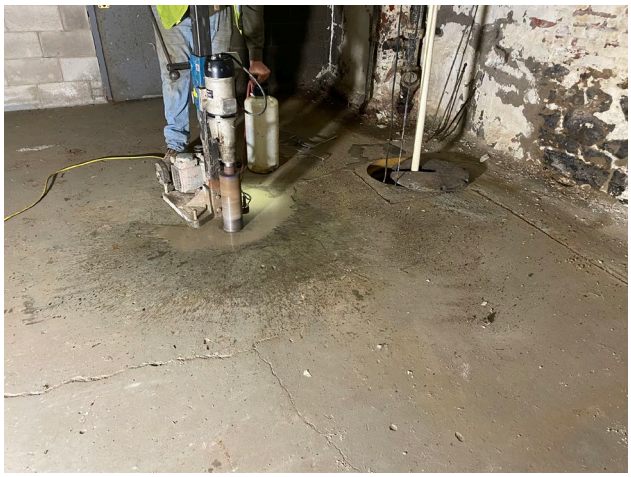

Photo 4:

Photo 1: View of the location of SB-2.

Photo 2: View of the typical fill material within SB-2.

Photo 3: View of the location of SB-3.

Photo 4: View of the typical fill material within SB-3.

SITE PHOTOGRAPHS

Photo 5:

Photo 6:

Photo 7:

Photo 8:

Photo 5: View of the location of SB-5.

Photo 6: View of the typical fill material within SB-5.

Photo 7: View of the location of SB-7.

Photo 8: View of the typical fill material within SB-7.

SITE PHOTOGRAPHS

Photo 9:

Photo 10:

Photo 11:

Photo 12:

Photo 9: View of the location of HC-2.

Photo 10: View of the typical fill material within HC-2.

Photo 11: View of the location of HC-3.

Photo 12: View of the typical fill material within HC-3.

SITE PHOTOGRAPHS

Photo 13:

Photo 14:

Photo 15:

Photo 13: View of the typical fill material at SB-8.

Photo 14: View of the typical fill material at SB-9.

Photo 15: View of the typical fill material at SB-10.

APPENDIX C

LABORATORY ANALYTICAL DATA SUMMARY PACKAGE

ANALYTICAL REPORT

Lab Number:	L2329081
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Bryan Mayback
Phone:	(716) 856-0599
Project Name:	PHASE II
Project Number:	T0455-023-001
Report Date:	06/14/23

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2329081-01	SB-2 0-0.75FT	SOIL	619 EXCHANGE STREET	05/23/23 10:00	05/24/23
L2329081-02	SB-3 0-0.75FT	SOIL	619 EXCHANGE STREET	05/23/23 11:00	05/24/23
L2329081-03	SB-5 0-0.75FT	SOIL	619 EXCHANGE STREET	05/23/23 11:30	05/24/23
L2329081-04	SB-7 0-0.75FT	SOIL	619 EXCHANGE STREET	05/23/23 13:30	05/24/23
L2329081-05	HC-2 0.5-2FT	SOIL	619 EXCHANGE STREET	05/23/23 14:30	05/24/23
L2329081-06	HC-3 0-1FT	SOIL	619 EXCHANGE STREET	05/23/23 15:00	05/24/23

Project Name:	PHASE II	**Lab Number:**	L2329081
Project Number:	T0455-023-001	**Report Date:**	06/14/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	PHASE II	**Lab Number:**	L2329081
Project Number:	T0455-023-001	**Report Date:**	06/14/23

Case Narrative (continued)

Report Submission

June 14, 2023: This final report includes the results of all requested analyses.

June 12, 2023: This is a preliminary report.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2329081-02: The Client ID was supplied by the client.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 06/14/23

ORGANICS

SEMIVOLATILES

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-01
Client ID: SB-2 0-0.75FT
Sample Location: 619 EXCHANGE STREET
Date Collected: 05/23/23 10:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/01/23 16:19
Analyst: EK
Percent Solids: 75%
Extraction Method: EPA 3546
Extraction Date: 05/31/23 18:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	180	23.	1
2-Chloronaphthalene	ND		ug/kg	220	22.	1
Fluoranthene	37	J	ug/kg	130	25.	1
Naphthalene	86	J	ug/kg	220	27.	1
Benzo(a)anthracene	37	J	ug/kg	130	25.	1
Benzo(a)pyrene	ND		ug/kg	180	53.	1
Benzo(b)fluoranthene	44	J	ug/kg	130	37.	1
Benzo(k)fluoranthene	ND		ug/kg	130	35.	1
Chrysene	35	J	ug/kg	130	23.	1
Acenaphthylene	ND		ug/kg	180	34.	1
Anthracene	ND		ug/kg	130	43.	1
Benzo(ghi)perylene	27	J	ug/kg	180	26.	1
Fluorene	ND		ug/kg	220	21.	1
Phenanthrene	52	J	ug/kg	130	27.	1
Dibenzo(a,h)anthracene	ND		ug/kg	130	25.	1
Indeno(1,2,3-cd)pyrene	30	J	ug/kg	180	30.	1
Pyrene	43	J	ug/kg	130	22.	1
2-Methylnaphthalene	96	J	ug/kg	260	26.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	40		23-120
2-Fluorobiphenyl	32		30-120
4-Terphenyl-d14	28		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-02
Client ID: SB-3 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 11:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/01/23 15:55
Analyst: EK
Percent Solids: 76%

Extraction Method: EPA 3546
Extraction Date: 05/31/23 18:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	54	J	ug/kg	170	23.	1
2-Chloronaphthalene	ND		ug/kg	220	22.	1
Fluoranthene	2100		ug/kg	130	25.	1
Naphthalene	190	J	ug/kg	220	27.	1
Benzo(a)anthracene	2700		ug/kg	130	25.	1
Benzo(a)pyrene	2900		ug/kg	170	53.	1
Benzo(b)fluoranthene	2900		ug/kg	130	37.	1
Benzo(k)fluoranthene	860		ug/kg	130	35.	1
Chrysene	2300		ug/kg	130	23.	1
Acenaphthylene	150	J	ug/kg	170	34.	1
Anthracene	580		ug/kg	130	43.	1
Benzo(ghi)perylene	1600		ug/kg	170	26.	1
Fluorene	82	J	ug/kg	220	21.	1
Phenanthrene	1300		ug/kg	130	26.	1
Dibenzo(a,h)anthracene	480		ug/kg	130	25.	1
Indeno(1,2,3-cd)pyrene	2100		ug/kg	170	30.	1
Pyrene	2300		ug/kg	130	22.	1
2-Methylnaphthalene	140	J	ug/kg	260	26.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	87		23-120
2-Fluorobiphenyl	69		30-120
4-Terphenyl-d14	63		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-03
Client ID: SB-5 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 11:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/01/23 15:31
Analyst: EK
Percent Solids: 68%

Extraction Method: EPA 3546
Extraction Date: 05/31/23 18:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	190	25.	1
2-Chloronaphthalene	ND		ug/kg	240	24.	1
Fluoranthene	110	J	ug/kg	140	28.	1
Naphthalene	ND		ug/kg	240	29.	1
Benzo(a)anthracene	48	J	ug/kg	140	27.	1
Benzo(a)pyrene	ND		ug/kg	190	59.	1
Benzo(b)fluoranthene	51	J	ug/kg	140	40.	1
Benzo(k)fluoranthene	ND		ug/kg	140	38.	1
Chrysene	46	J	ug/kg	140	25.	1
Acenaphthylene	ND		ug/kg	190	37.	1
Anthracene	ND		ug/kg	140	47.	1
Benzo(ghi)perylene	ND		ug/kg	190	28.	1
Fluorene	ND		ug/kg	240	23.	1
Phenanthrene	94	J	ug/kg	140	29.	1
Dibenzo(a,h)anthracene	ND		ug/kg	140	28.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	190	34.	1
Pyrene	82	J	ug/kg	140	24.	1
2-Methylnaphthalene	ND		ug/kg	290	29.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	103		23-120
2-Fluorobiphenyl	83		30-120
4-Terphenyl-d14	79		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-04
Client ID: SB-7 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 13:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/01/23 15:06
Analyst: EK
Percent Solids: 77%

Extraction Method: EPA 3546
Extraction Date: 05/31/23 18:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	26	J	ug/kg	170	22.	1
2-Chloronaphthalene	ND		ug/kg	210	21.	1
Fluoranthene	510		ug/kg	130	24.	1
Naphthalene	73	J	ug/kg	210	26.	1
Benzo(a)anthracene	220		ug/kg	130	24.	1
Benzo(a)pyrene	180		ug/kg	170	52.	1
Benzo(b)fluoranthene	200		ug/kg	130	36.	1
Benzo(k)fluoranthene	70	J	ug/kg	130	34.	1
Chrysene	190		ug/kg	130	22.	1
Acenaphthylene	54	J	ug/kg	170	33.	1
Anthracene	120	J	ug/kg	130	41.	1
Benzo(ghi)perylene	90	J	ug/kg	170	25.	1
Fluorene	74	J	ug/kg	210	20.	1
Phenanthrene	510		ug/kg	130	26.	1
Dibenzo(a,h)anthracene	ND		ug/kg	130	24.	1
Indeno(1,2,3-cd)pyrene	110	J	ug/kg	170	30.	1
Pyrene	400		ug/kg	130	21.	1
2-Methylnaphthalene	60	J	ug/kg	250	26.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	94		23-120
2-Fluorobiphenyl	73		30-120
4-Terphenyl-d14	66		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-05
Client ID: HC-2 0.5-2FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 14:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/01/23 14:42
Analyst: EK
Percent Solids: 79%

Extraction Method: EPA 3546
Extraction Date: 05/31/23 18:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	61	J	ug/kg	170	22.	1
2-Chloronaphthalene	ND		ug/kg	210	21.	1
Fluoranthene	540		ug/kg	120	24.	1
Naphthalene	240		ug/kg	210	25.	1
Benzo(a)anthracene	280		ug/kg	120	23.	1
Benzo(a)pyrene	180		ug/kg	170	51.	1
Benzo(b)fluoranthene	260		ug/kg	120	35.	1
Benzo(k)fluoranthene	82	J	ug/kg	120	33.	1
Chrysene	280		ug/kg	120	22.	1
Acenaphthylene	46	J	ug/kg	170	32.	1
Anthracene	160		ug/kg	120	41.	1
Benzo(ghi)perylene	120	J	ug/kg	170	24.	1
Fluorene	95	J	ug/kg	210	20.	1
Phenanthrene	640		ug/kg	120	25.	1
Dibenzo(a,h)anthracene	28	J	ug/kg	120	24.	1
Indeno(1,2,3-cd)pyrene	130	J	ug/kg	170	29.	1
Pyrene	420		ug/kg	120	21.	1
2-Methylnaphthalene	200	J	ug/kg	250	25.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	96		23-120
2-Fluorobiphenyl	75		30-120
4-Terphenyl-d14	65		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-06
Client ID: HC-3 0-1FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 15:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/01/23 14:17
Analyst: EK
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 05/31/23 18:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	160		ug/kg	160	21.	1
2-Chloronaphthalene	ND		ug/kg	210	20.	1
Fluoranthene	1300		ug/kg	120	24.	1
Naphthalene	100	J	ug/kg	210	25.	1
Benzo(a)anthracene	540		ug/kg	120	23.	1
Benzo(a)pyrene	460		ug/kg	160	50.	1
Benzo(b)fluoranthene	550		ug/kg	120	35.	1
Benzo(k)fluoranthene	150		ug/kg	120	33.	1
Chrysene	520		ug/kg	120	21.	1
Acenaphthylene	37	J	ug/kg	160	32.	1
Anthracene	280		ug/kg	120	40.	1
Benzo(ghi)perylene	230		ug/kg	160	24.	1
Fluorene	160	J	ug/kg	210	20.	1
Phenanthrene	1200		ug/kg	120	25.	1
Dibenzo(a,h)anthracene	57	J	ug/kg	120	24.	1
Indeno(1,2,3-cd)pyrene	290		ug/kg	160	29.	1
Pyrene	1100		ug/kg	120	20.	1
2-Methylnaphthalene	110	J	ug/kg	250	25.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	58		30-120
4-Terphenyl-d14	55		18-120

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 05/31/23 11:45
Analyst: LJG

Extraction Method: EPA 3546
Extraction Date: 05/31/23 04:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-06 Batch: WG1785166-1					
Acenaphthene	ND		ug/kg	130	17.
2-Chloronaphthalene	ND		ug/kg	160	16.
Fluoranthene	ND		ug/kg	100	19.
Naphthalene	ND		ug/kg	160	20.
Benzo(a)anthracene	ND		ug/kg	100	19.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	100	28.
Benzo(k)fluoranthene	ND		ug/kg	100	26.
Chrysene	ND		ug/kg	100	17.
Acenaphthylene	ND		ug/kg	130	26.
Anthracene	ND		ug/kg	100	32.
Benzo(ghi)perylene	ND		ug/kg	130	20.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	100	20.
Dibenzo(a,h)anthracene	ND		ug/kg	100	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	100	16.
2-Methylnaphthalene	ND		ug/kg	200	20.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	107		23-120
2-Fluorobiphenyl	85		30-120
4-Terphenyl-d14	90		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1785166-2 WG1785166-3								
Acenaphthene	53		66		31-137	22		50
2-Chloronaphthalene	58		72		40-140	22		50
Fluoranthene	56		69		40-140	21		50
Naphthalene	56		70		40-140	22		50
Benzo(a)anthracene	56		69		40-140	21		50
Benzo(a)pyrene	58		71		40-140	20		50
Benzo(b)fluoranthene	56		67		40-140	18		50
Benzo(k)fluoranthene	52		63		40-140	19		50
Chrysene	56		67		40-140	18		50
Acenaphthylene	65		78		40-140	18		50
Anthracene	55		66		40-140	18		50
Benzo(ghi)perylene	53		65		40-140	20		50
Fluorene	56		67		40-140	18		50
Phenanthrene	54		65		40-140	18		50
Dibenzo(a,h)anthracene	51		63		40-140	21		50
Indeno(1,2,3-cd)pyrene	56		69		40-140	21		50
Pyrene	57		68		35-142	18		50
2-Methylnaphthalene	59		72		40-140	20		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II

Project Number: T0455-023-001

Lab Number: L2329081

Report Date: 06/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-06 Batch: WG1785166-2 WG1785166-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	74		88		23-120
2-Fluorobiphenyl	57		70		30-120
4-Terphenyl-d14	53		62		18-120

METALS

Project Name: PHASE II **Lab Number:** L2329081

Project Number: T0455-023-001 **Report Date:** 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-01 Date Collected: 05/23/23 10:00

Client ID: SB-2 0-0.75FT Date Received: 05/24/23

Sample Location: 619 EXCHANGE STREET Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 75%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	64.4		mg/kg	0.504	0.105	1	06/06/23 22:40	06/12/23 07:07	EPA 3050B	1,6010D	DHL
Barium, Total	91.7		mg/kg	0.504	0.088	1	06/06/23 22:40	06/12/23 07:07	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.331	J	mg/kg	0.504	0.049	1	06/06/23 22:40	06/12/23 07:07	EPA 3050B	1,6010D	DHL
Chromium, Total	7.77		mg/kg	0.504	0.048	1	06/06/23 22:40	06/12/23 07:07	EPA 3050B	1,6010D	DHL
Lead, Total	67.6		mg/kg	2.52	0.135	1	06/06/23 22:40	06/12/23 07:07	EPA 3050B	1,6010D	DHL
Mercury, Total	0.088	J	mg/kg	0.098	0.064	1	06/06/23 23:56	06/13/23 21:41	EPA 7471B	1,7471B	DMB
Selenium, Total	1.44		mg/kg	1.01	0.130	1	06/06/23 22:40	06/12/23 07:07	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.252	0.142	1	06/06/23 22:40	06/12/23 07:07	EPA 3050B	1,6010D	DHL

Project Name: PHASE II **Lab Number:** L2329081

Project Number: T0455-023-001 **Report Date:** 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-02 Date Collected: 05/23/23 11:00

Client ID: SB-3 0-0.75FT Date Received: 05/24/23

Sample Location: 619 EXCHANGE STREET Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.30		mg/kg	0.517	0.107	1	06/06/23 22:40	06/12/23 07:10	EPA 3050B	1,6010D	DHL
Barium, Total	87.0		mg/kg	0.517	0.090	1	06/06/23 22:40	06/12/23 07:10	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.124	J	mg/kg	0.517	0.051	1	06/06/23 22:40	06/12/23 07:10	EPA 3050B	1,6010D	DHL
Chromium, Total	10.5		mg/kg	0.517	0.050	1	06/06/23 22:40	06/12/23 07:10	EPA 3050B	1,6010D	DHL
Lead, Total	16.8		mg/kg	2.58	0.138	1	06/06/23 22:40	06/12/23 07:10	EPA 3050B	1,6010D	DHL
Mercury, Total	ND		mg/kg	0.088	0.057	1	06/06/23 23:56	06/13/23 21:44	EPA 7471B	1,7471B	DMB
Selenium, Total	0.277	J	mg/kg	1.03	0.133	1	06/06/23 22:40	06/12/23 07:10	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.258	0.146	1	06/06/23 22:40	06/12/23 07:10	EPA 3050B	1,6010D	DHL

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-03
Client ID: SB-5 0-0.75FT
Sample Location: 619 EXCHANGE STREET
Date Collected: 05/23/23 11:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 68%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	11.5		mg/kg	0.584	0.121	1	06/06/23 22:40	06/12/23 07:13	EPA 3050B	1,6010D	DHL
Barium, Total	99.7		mg/kg	0.584	0.102	1	06/06/23 22:40	06/12/23 07:13	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.218	J	mg/kg	0.584	0.057	1	06/06/23 22:40	06/12/23 07:13	EPA 3050B	1,6010D	DHL
Chromium, Total	10.2		mg/kg	0.584	0.056	1	06/06/23 22:40	06/12/23 07:13	EPA 3050B	1,6010D	DHL
Lead, Total	56.1		mg/kg	2.92	0.156	1	06/06/23 22:40	06/12/23 07:13	EPA 3050B	1,6010D	DHL
Mercury, Total	ND		mg/kg	0.10	0.065	1	06/06/23 23:56	06/13/23 21:47	EPA 7471B	1,7471B	DMB
Selenium, Total	0.399	J	mg/kg	1.17	0.151	1	06/06/23 22:40	06/12/23 07:13	EPA 3050B	1,6010D	DHL
Silver, Total	0.192	J	mg/kg	0.292	0.165	1	06/06/23 22:40	06/12/23 07:13	EPA 3050B	1,6010D	DHL

Project Name: PHASE II **Lab Number:** L2329081

Project Number: T0455-023-001 **Report Date:** 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-04 Date Collected: 05/23/23 13:30

Client ID: SB-7 0-0.75FT Date Received: 05/24/23

Sample Location: 619 EXCHANGE STREET Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	18.0		mg/kg	0.517	0.108	1	06/06/23 22:40	06/12/23 07:35	EPA 3050B	1,6010D	DHL
Barium, Total	86.3		mg/kg	0.517	0.090	1	06/06/23 22:40	06/12/23 07:35	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.322	J	mg/kg	0.517	0.051	1	06/06/23 22:40	06/12/23 07:35	EPA 3050B	1,6010D	DHL
Chromium, Total	20.1		mg/kg	0.517	0.050	1	06/06/23 22:40	06/12/23 07:35	EPA 3050B	1,6010D	DHL
Lead, Total	237		mg/kg	2.59	0.139	1	06/06/23 22:40	06/12/23 07:35	EPA 3050B	1,6010D	DHL
Mercury, Total	0.453		mg/kg	0.091	0.059	1	06/06/23 23:56	06/13/23 21:51	EPA 7471B	1,7471B	DMB
Selenium, Total	4.02		mg/kg	1.03	0.133	1	06/06/23 22:40	06/12/23 07:35	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.259	0.146	1	06/06/23 22:40	06/12/23 07:35	EPA 3050B	1,6010D	DHL

Project Name: PHASE II **Lab Number:** L2329081

Project Number: T0455-023-001 **Report Date:** 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-05 Date Collected: 05/23/23 14:30

Client ID: HC-2 0.5-2FT Date Received: 05/24/23

Sample Location: 619 EXCHANGE STREET Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	14.8		mg/kg	0.499	0.104	1	06/06/23 22:40	06/12/23 07:38	EPA 3050B	1,6010D	DHL
Barium, Total	68.5		mg/kg	0.499	0.087	1	06/06/23 22:40	06/12/23 07:38	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.324	J	mg/kg	0.499	0.049	1	06/06/23 22:40	06/12/23 07:38	EPA 3050B	1,6010D	DHL
Chromium, Total	10.6		mg/kg	0.499	0.048	1	06/06/23 22:40	06/12/23 07:38	EPA 3050B	1,6010D	DHL
Lead, Total	286		mg/kg	2.50	0.134	1	06/06/23 22:40	06/12/23 07:38	EPA 3050B	1,6010D	DHL
Mercury, Total	2.53		mg/kg	0.082	0.053	1	06/06/23 23:56	06/13/23 21:54	EPA 7471B	1,7471B	DMB
Selenium, Total	4.03		mg/kg	0.998	0.129	1	06/06/23 22:40	06/12/23 07:38	EPA 3050B	1,6010D	DHL
Silver, Total	0.298		mg/kg	0.250	0.141	1	06/06/23 22:40	06/12/23 07:38	EPA 3050B	1,6010D	DHL

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-06
Client ID: HC-3 0-1FT
Sample Location: 619 EXCHANGE STREET
Date Collected: 05/23/23 15:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	22.1		mg/kg	0.490	0.102	1	06/06/23 22:40	06/12/23 07:41	EPA 3050B	1,6010D	DHL
Barium, Total	64.6		mg/kg	0.490	0.085	1	06/06/23 22:40	06/12/23 07:41	EPA 3050B	1,6010D	DHL
Cadmium, Total	0.636		mg/kg	0.490	0.048	1	06/06/23 22:40	06/12/23 07:41	EPA 3050B	1,6010D	DHL
Chromium, Total	7.57		mg/kg	0.490	0.047	1	06/06/23 22:40	06/12/23 07:41	EPA 3050B	1,6010D	DHL
Lead, Total	98.3		mg/kg	2.45	0.131	1	06/06/23 22:40	06/12/23 07:41	EPA 3050B	1,6010D	DHL
Mercury, Total	0.214		mg/kg	0.091	0.059	1	06/06/23 23:56	06/13/23 21:57	EPA 7471B	1,7471B	DMB
Selenium, Total	1.21		mg/kg	0.981	0.126	1	06/06/23 22:40	06/12/23 07:41	EPA 3050B	1,6010D	DHL
Silver, Total	ND		mg/kg	0.245	0.139	1	06/06/23 22:40	06/12/23 07:41	EPA 3050B	1,6010D	DHL

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329081
Report Date: 06/14/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-06 Batch: WG1787757-1										
Arsenic, Total	ND		mg/kg	0.400	0.083	1	06/06/23 22:40	06/07/23 11:32	1,6010D	AMW
Barium, Total	ND		mg/kg	0.400	0.070	1	06/06/23 22:40	06/07/23 11:32	1,6010D	AMW
Cadmium, Total	ND		mg/kg	0.400	0.039	1	06/06/23 22:40	06/07/23 11:32	1,6010D	AMW
Chromium, Total	ND		mg/kg	0.400	0.038	1	06/06/23 22:40	06/07/23 11:32	1,6010D	AMW
Lead, Total	ND		mg/kg	2.00	0.107	1	06/06/23 22:40	06/07/23 11:32	1,6010D	AMW
Selenium, Total	ND		mg/kg	0.800	0.103	1	06/06/23 22:40	06/07/23 11:32	1,6010D	AMW
Silver, Total	ND		mg/kg	0.200	0.113	1	06/06/23 22:40	06/07/23 11:32	1,6010D	AMW

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-06 Batch: WG1787796-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	06/06/23 23:56	06/13/23 21:01	1,7471B	DMB

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II

Project Number: T0455-023-001

Lab Number: L2329081

Report Date: 06/14/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG1787757-2 SRM Lot Number: D119-540								
Arsenic, Total	104		-		83-117	-		
Barium, Total	98		-		82-118	-		
Cadmium, Total	103		-		82-117	-		
Chromium, Total	104		-		82-119	-		
Lead, Total	103		-		82-118	-		
Selenium, Total	109		-		79-121	-		
Silver, Total	102		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG1787796-2 SRM Lot Number: D119-540								
Mercury, Total	92		-		73-127	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1787757-3 QC Sample: L2330521-01 Client ID: MS Sample												
Arsenic, Total	4.42	11.6	17.2	110		-	-		75-125	-		20
Barium, Total	98.8	193	374	**142**	Q	-	-		75-125	-		20
Cadmium, Total	0.516J	5.12	5.28	103		-	-		75-125	-		20
Chromium, Total	19.7	19.3	33.0	**69**	Q	-	-		75-125	-		20
Lead, Total	58.0	51.2	98.9	80		-	-		75-125	-		20
Selenium, Total	ND	11.6	12.3	106		-	-		75-125	-		20
Silver, Total	0.317J	4.83	5.22	108		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1787796-3 QC Sample: L2330521-01 Client ID: MS Sample												
Mercury, Total	3.05	1.72	3.06	**1**	Q	-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1787757-4 QC Sample: L2330521-01 Client ID: DUP Sample						
Arsenic, Total	4.42	4.75	mg/kg	7		20
Barium, Total	98.8	121	mg/kg	20		20
Cadmium, Total	0.516J	0.633J	mg/kg	NC		20
Chromium, Total	19.7	18.9	mg/kg	4		20
Lead, Total	58.0	63.9	mg/kg	10		20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	0.317J	0.340J	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1787796-4 QC Sample: L2330521-01 Client ID: DUP Sample						
Mercury, Total	3.05	1.49	mg/kg	**69**	Q	20

Project Name: PHASE II
Project Number: T0455-023-001

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L2329081
Report Date: 06/14/23

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1787757-6 QC Sample: L2330521-01 Client ID: DUP Sample						
Barium, Total	98.8	99.7	mg/kg	1		20

INORGANICS
&
MISCELLANEOUS

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-01
Client ID: SB-2 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 10:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.0		%	0.100	NA	1	-	05/26/23 10:30	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-02
Client ID: SB-3 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 11:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.7		%	0.100	NA	1	-	05/26/23 10:30	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-03
Client ID: SB-5 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 11:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	67.7		%	0.100	NA	1	-	05/26/23 10:30	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-04
Client ID: SB-7 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 13:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.7		%	0.100	NA	1	-	05/26/23 10:30	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-05
Client ID: HC-2 0.5-2FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 14:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.8		%	0.100	NA	1	-	05/26/23 10:30	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

SAMPLE RESULTS

Lab ID: L2329081-06
Client ID: HC-3 0-1FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 15:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.5		%	0.100	NA	1	-	05/26/23 10:30	121,2540G	ROI

Lab Duplicate Analysis

Batch Quality Control

Project Name: PHASE II

Project Number: T0455-023-001

Lab Number: L2329081

Report Date: 06/14/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-06 QC Batch ID: WG1783762-1 QC Sample: L2329081-01 Client ID: SB-2 0-0.75FT						
Solids, Total	75.0	74.0	%	1		20

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329081
Report Date: 06/14/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2329081-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2329081-01B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329081-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2329081-02B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329081-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2329081-03B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329081-04A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2329081-04B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329081-05A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2329081-05B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329081-06A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2329081-06B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)

*Values in parentheses indicate holding time in days

Project Name:	PHASE II	**Lab Number:**	L2329081
Project Number:	T0455-023-001	**Report Date:**	06/14/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PHASE II	**Lab Number:**	L2329081
Project Number:	T0455-023-001	**Report Date:**	06/14/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	PHASE II	**Lab Number:**	L2329081
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Data Qualifiers

Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	PHASE II	**Lab Number:**	L2329081
Project Number:	T0455-023-001	**Report Date:**	06/14/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 5/25/23

ALPHA Job #: L2321081

Client Information
Client: TURNKEY
Address: 2558 HAMBURG TRPK
BUFFALO, NY 14218
Phone: 716-856-0599
Fax:
Email: bmayback@bm-hk.com

Project Information
Project Name: PHASE II
Project Location: 619 EXCHANGE STREET
Project #: T0455-023-001
(Use Project name as Project #) ☐
Project Manager: BRYAN MAYBACK
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PAHs	RCRA METAL	Sample Specific Comments	Total Bottle
21081-01	SB-2 0-0.75ft	5/23/23	1000	Soil	CS	X	X		2
02	SB- 0-0.75ft		1100			X	X		2
03	SB-5 0-0.75ft		1130			X	X		2
04	SB-7 0-0.75ft		1330			X	X		2
05	HC-2 0.5-2ft		1430			X	X		2
06	HC-3 0-1 ft		1500			X	X		2

Container Type: A A
Preservative: A A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	5/24/23 1130	[signature]	5/24/23 17:00
[signature]	5/24/23 16:00	[signature]	5/25/23 0030

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

ANALYTICAL REPORT

Lab Number:	L2329082
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Bryan Mayback
Phone:	(716) 856-0599
Project Name:	PHASE II
Project Number:	T0455-023-001
Report Date:	07/07/23

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2329082-01	SB-1 0-0.75FT	SOIL	619 EXCHANGE STREET	05/23/23 09:30	05/24/23
L2329082-02	SB-4 0-0.75FT	SOIL	619 EXCHANGE STREET	05/23/23 10:30	05/24/23
L2329082-03	SB-6 0-1FT	SOIL	619 EXCHANGE STREET	05/23/23 12:00	05/24/23
L2329082-04	HC-1 0-0.75FT	SOIL	619 EXCHANGE STREET	05/23/23 14:00	05/24/23

Project Name:	PHASE II	**Lab Number:**	L2329082
Project Number:	T0455-023-001	**Report Date:**	07/07/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	PHASE II	**Lab Number:**	L2329082
Project Number:	T0455-023-001	**Report Date:**	07/07/23

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

The analyses performed were specified by the client.

Semivolatile Organics

With the client's authorization, L2329082-01 through -04 were extracted with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 07/07/23

ORGANICS

SEMIVOLATILES

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-01
Client ID: SB-1 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 09:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/29/23 19:20
Analyst: JG
Percent Solids: 75%

Extraction Method: EPA 3546
Extraction Date: 06/20/23 00:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	170	23.	1
2-Chloronaphthalene	ND		ug/kg	220	22.	1
Fluoranthene	58	J	ug/kg	130	25.	1
Naphthalene	120	J	ug/kg	220	27.	1
Benzo(a)anthracene	64	J	ug/kg	130	24.	1
Benzo(a)pyrene	120	J	ug/kg	170	53.	1
Benzo(b)fluoranthene	120	J	ug/kg	130	37.	1
Benzo(k)fluoranthene	43	J	ug/kg	130	35.	1
Chrysene	62	J	ug/kg	130	23.	1
Acenaphthylene	ND		ug/kg	170	34.	1
Anthracene	ND		ug/kg	130	42.	1
Benzo(ghi)perylene	90	J	ug/kg	170	26.	1
Fluorene	ND		ug/kg	220	21.	1
Phenanthrene	56	J	ug/kg	130	26.	1
Dibenzo(a,h)anthracene	ND		ug/kg	130	25.	1
Indeno(1,2,3-cd)pyrene	77	J	ug/kg	170	30.	1
Pyrene	60	J	ug/kg	130	22.	1
2-Methylnaphthalene	95	J	ug/kg	260	26.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	102		23-120
2-Fluorobiphenyl	80		30-120
4-Terphenyl-d14	75		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-02
Client ID: SB-4 0-0.75FT
Sample Location: 619 EXCHANGE STREET
Date Collected: 05/23/23 10:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/29/23 19:37
Analyst: JG
Percent Solids: 71%
Extraction Method: EPA 3546
Extraction Date: 06/20/23 00:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	180	24.	1
2-Chloronaphthalene	ND		ug/kg	230	23.	1
Fluoranthene	ND		ug/kg	140	26.	1
Naphthalene	ND		ug/kg	230	28.	1
Benzo(a)anthracene	ND		ug/kg	140	26.	1
Benzo(a)pyrene	ND		ug/kg	180	56.	1
Benzo(b)fluoranthene	ND		ug/kg	140	39.	1
Benzo(k)fluoranthene	ND		ug/kg	140	37.	1
Chrysene	ND		ug/kg	140	24.	1
Acenaphthylene	ND		ug/kg	180	36.	1
Anthracene	ND		ug/kg	140	45.	1
Benzo(ghi)perylene	ND		ug/kg	180	27.	1
Fluorene	ND		ug/kg	230	22.	1
Phenanthrene	ND		ug/kg	140	28.	1
Dibenzo(a,h)anthracene	ND		ug/kg	140	27.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	180	32.	1
Pyrene	ND		ug/kg	140	23.	1
2-Methylnaphthalene	ND		ug/kg	280	28.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	94		23-120
2-Fluorobiphenyl	72		30-120
4-Terphenyl-d14	70		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-03
Client ID: SB-6 0-1FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 12:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/29/23 19:54
Analyst: JG
Percent Solids: 90%

Extraction Method: EPA 3546
Extraction Date: 06/20/23 00:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	140	19.	1
2-Chloronaphthalene	ND		ug/kg	180	18.	1
Fluoranthene	36	J	ug/kg	110	21.	1
Naphthalene	52	J	ug/kg	180	22.	1
Benzo(a)anthracene	24	J	ug/kg	110	20.	1
Benzo(a)pyrene	ND		ug/kg	140	44.	1
Benzo(b)fluoranthene	ND		ug/kg	110	30.	1
Benzo(k)fluoranthene	ND		ug/kg	110	29.	1
Chrysene	24	J	ug/kg	110	19.	1
Acenaphthylene	ND		ug/kg	140	28.	1
Anthracene	ND		ug/kg	110	35.	1
Benzo(ghi)perylene	ND		ug/kg	140	21.	1
Fluorene	ND		ug/kg	180	17.	1
Phenanthrene	34	J	ug/kg	110	22.	1
Dibenzo(a,h)anthracene	ND		ug/kg	110	21.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	140	25.	1
Pyrene	34	J	ug/kg	110	18.	1
2-Methylnaphthalene	ND		ug/kg	220	22.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	101		23-120
2-Fluorobiphenyl	72		30-120
4-Terphenyl-d14	67		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-04
Client ID: HC-1 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 14:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 06/29/23 20:11
Analyst: JG
Percent Solids: 77%

Extraction Method: EPA 3546
Extraction Date: 06/20/23 00:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	110	J	ug/kg	170	22.	1
2-Chloronaphthalene	ND		ug/kg	210	21.	1
Fluoranthene	9400	E	ug/kg	130	24.	1
Naphthalene	550		ug/kg	210	26.	1
Benzo(a)anthracene	5000		ug/kg	130	24.	1
Benzo(a)pyrene	3900		ug/kg	170	52.	1
Benzo(b)fluoranthene	4300		ug/kg	130	36.	1
Benzo(k)fluoranthene	2200		ug/kg	130	34.	1
Chrysene	4400		ug/kg	130	22.	1
Acenaphthylene	720		ug/kg	170	33.	1
Anthracene	1800		ug/kg	130	41.	1
Benzo(ghi)perylene	1600		ug/kg	170	25.	1
Fluorene	440		ug/kg	210	20.	1
Phenanthrene	7800		ug/kg	130	26.	1
Dibenzo(a,h)anthracene	620		ug/kg	130	24.	1
Indeno(1,2,3-cd)pyrene	1700		ug/kg	170	29.	1
Pyrene	7200		ug/kg	130	21.	1
2-Methylnaphthalene	380		ug/kg	250	26.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	97		23-120
2-Fluorobiphenyl	72		30-120
4-Terphenyl-d14	62		18-120

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-04 D
Client ID: HC-1 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 14:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270E
Analytical Date: 07/01/23 12:07
Analyst: CMM
Percent Solids: 77%

Extraction Method: EPA 3546
Extraction Date: 06/20/23 00:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Fluoranthene	8600		ug/kg	630	120	5

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270E
Analytical Date: 06/20/23 10:26
Analyst: LJG

Extraction Method: EPA 3546
Extraction Date: 06/19/23 21:50

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1793401-1					
Acenaphthene	ND		ug/kg	130	17.
2-Chloronaphthalene	ND		ug/kg	160	16.
Fluoranthene	ND		ug/kg	98	19.
Naphthalene	ND		ug/kg	160	20.
Benzo(a)anthracene	ND		ug/kg	98	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	98	27.
Benzo(k)fluoranthene	ND		ug/kg	98	26.
Chrysene	ND		ug/kg	98	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	98	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	98	20.
Dibenzo(a,h)anthracene	ND		ug/kg	98	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	98	16.
2-Methylnaphthalene	ND		ug/kg	200	20.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	71		30-120
4-Terphenyl-d14	72		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1793401-2 WG1793401-3								
Acenaphthene	61		69		31-137	12		50
2-Chloronaphthalene	64		75		40-140	16		50
Fluoranthene	64		74		40-140	14		50
Naphthalene	59		68		40-140	14		50
Benzo(a)anthracene	62		71		40-140	14		50
Benzo(a)pyrene	65		75		40-140	14		50
Benzo(b)fluoranthene	63		71		40-140	12		50
Benzo(k)fluoranthene	58		67		40-140	14		50
Chrysene	58		67		40-140	14		50
Acenaphthylene	71		82		40-140	14		50
Anthracene	63		72		40-140	13		50
Benzo(ghi)perylene	61		70		40-140	14		50
Fluorene	66		74		40-140	11		50
Phenanthrene	61		69		40-140	12		50
Dibenzo(a,h)anthracene	62		71		40-140	14		50
Indeno(1,2,3-cd)pyrene	74		84		40-140	13		50
Pyrene	63		71		35-142	12		50
2-Methylnaphthalene	62		72		40-140	15		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II

Project Number: T0455-023-001

Lab Number: L2329082

Report Date: 07/07/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1793401-2 WG1793401-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	74		84		23-120
2-Fluorobiphenyl	66		76		30-120
4-Terphenyl-d14	64		71		18-120

METALS

Project Name: PHASE II **Lab Number:** L2329082

Project Number: T0455-023-001 **Report Date:** 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-01 Date Collected: 05/23/23 09:30

Client ID: SB-1 0-0.75FT Date Received: 05/24/23

Sample Location: 619 EXCHANGE STREET Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 75%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	22.5		mg/kg	0.520	0.108	1	06/20/23 12:35	06/21/23 16:25	EPA 3050B	1,6010D	AMW
Barium, Total	72.9		mg/kg	0.520	0.090	1	06/20/23 12:35	06/21/23 16:25	EPA 3050B	1,6010D	AMW
Cadmium, Total	0.414	J	mg/kg	0.520	0.051	1	06/20/23 12:35	06/21/23 16:25	EPA 3050B	1,6010D	AMW
Chromium, Total	11.3		mg/kg	0.520	0.050	1	06/20/23 12:35	06/21/23 16:25	EPA 3050B	1,6010D	AMW
Lead, Total	21.4		mg/kg	2.60	0.139	1	06/20/23 12:35	06/21/23 16:25	EPA 3050B	1,6010D	AMW
Mercury, Total	ND		mg/kg	0.096	0.063	1	06/20/23 12:36	06/22/23 10:19	EPA 7471B	1,7471B	MJR
Selenium, Total	ND		mg/kg	1.04	0.134	1	06/20/23 12:35	06/21/23 16:25	EPA 3050B	1,6010D	AMW
Silver, Total	ND		mg/kg	0.260	0.147	1	06/20/23 12:35	06/21/23 16:25	EPA 3050B	1,6010D	AMW

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-02
Client ID: SB-4 0-0.75FT
Sample Location: 619 EXCHANGE STREET
Date Collected: 05/23/23 10:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	8.53		mg/kg	0.538	0.112	1	06/20/23 12:35	07/07/23 12:33	EPA 3050B	1,6010D	JMF
Barium, Total	161		mg/kg	0.538	0.094	1	06/20/23 12:35	07/07/23 12:33	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.214	J	mg/kg	0.538	0.053	1	06/20/23 12:35	07/07/23 12:33	EPA 3050B	1,6010D	JMF
Chromium, Total	16.0		mg/kg	0.538	0.052	1	06/20/23 12:35	07/07/23 12:33	EPA 3050B	1,6010D	JMF
Lead, Total	45.3		mg/kg	2.69	0.144	1	06/20/23 12:35	07/07/23 12:33	EPA 3050B	1,6010D	JMF
Mercury, Total	ND		mg/kg	0.099	0.065	1	06/20/23 12:36	06/22/23 10:32	EPA 7471B	1,7471B	MJR
Selenium, Total	0.394	J	mg/kg	1.08	0.139	1	06/20/23 12:35	07/07/23 12:33	EPA 3050B	1,6010D	JMF
Silver, Total	ND		mg/kg	0.269	0.152	1	06/20/23 12:35	07/07/23 12:33	EPA 3050B	1,6010D	JMF

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-03
Client ID: SB-6 0-1FT
Sample Location: 619 EXCHANGE STREET
Date Collected: 05/23/23 12:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.61		mg/kg	0.436	0.091	1	06/20/23 12:35	07/07/23 12:37	EPA 3050B	1,6010D	JMF
Barium, Total	28.1		mg/kg	0.436	0.076	1	06/20/23 12:35	07/07/23 12:37	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.233	J	mg/kg	0.436	0.043	1	06/20/23 12:35	07/07/23 12:37	EPA 3050B	1,6010D	JMF
Chromium, Total	6.38		mg/kg	0.436	0.042	1	06/20/23 12:35	07/07/23 12:37	EPA 3050B	1,6010D	JMF
Lead, Total	24.3		mg/kg	2.18	0.117	1	06/20/23 12:35	07/07/23 12:37	EPA 3050B	1,6010D	JMF
Mercury, Total	0.088		mg/kg	0.079	0.051	1	06/20/23 12:36	06/22/23 10:35	EPA 7471B	1,7471B	MJR
Selenium, Total	0.386	J	mg/kg	0.872	0.112	1	06/20/23 12:35	07/07/23 12:37	EPA 3050B	1,6010D	JMF
Silver, Total	0.173	J	mg/kg	0.218	0.123	1	06/20/23 12:35	07/07/23 12:37	EPA 3050B	1,6010D	JMF

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-04
Client ID: HC-1 0-0.75FT
Sample Location: 619 EXCHANGE STREET
Date Collected: 05/23/23 14:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	16.8		mg/kg	0.504	0.105	1	06/20/23 12:35	07/07/23 12:40	EPA 3050B	1,6010D	JMF
Barium, Total	127		mg/kg	0.504	0.088	1	06/20/23 12:35	07/07/23 12:40	EPA 3050B	1,6010D	JMF
Cadmium, Total	0.341	J	mg/kg	0.504	0.049	1	06/20/23 12:35	07/07/23 12:40	EPA 3050B	1,6010D	JMF
Chromium, Total	10.5		mg/kg	0.504	0.048	1	06/20/23 12:35	07/07/23 12:40	EPA 3050B	1,6010D	JMF
Lead, Total	525		mg/kg	2.52	0.135	1	06/20/23 12:35	07/07/23 12:40	EPA 3050B	1,6010D	JMF
Mercury, Total	12.2		mg/kg	0.844	0.550	10	06/20/23 12:36	06/22/23 11:05	EPA 7471B	1,7471B	MJR
Selenium, Total	1.76		mg/kg	1.01	0.130	1	06/20/23 12:35	07/07/23 12:40	EPA 3050B	1,6010D	JMF
Silver, Total	0.688		mg/kg	0.252	0.143	1	06/20/23 12:35	07/07/23 12:40	EPA 3050B	1,6010D	JMF

Project Name: PHASE II
Project Number: T0455-023-001
Lab Number: L2329082
Report Date: 07/07/23

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1793615-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	06/20/23 12:36	06/22/23 10:05	1,7471B	MJR

Prep Information

Digestion Method: EPA 7471B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1793837-1										
Arsenic, Total	0.216	J	mg/kg	0.400	0.083	1	06/20/23 12:35	06/21/23 15:11	1,6010D	AMW
Barium, Total	ND		mg/kg	0.400	0.070	1	06/20/23 12:35	06/21/23 15:11	1,6010D	AMW
Cadmium, Total	ND		mg/kg	0.400	0.039	1	06/20/23 12:35	06/21/23 15:11	1,6010D	AMW
Chromium, Total	ND		mg/kg	0.400	0.038	1	06/20/23 12:35	06/21/23 15:11	1,6010D	AMW
Lead, Total	0.131	J	mg/kg	2.00	0.107	1	06/20/23 12:35	06/21/23 15:11	1,6010D	AMW
Selenium, Total	ND		mg/kg	0.800	0.103	1	06/20/23 12:35	06/21/23 15:11	1,6010D	AMW
Silver, Total	ND		mg/kg	0.200	0.113	1	06/20/23 12:35	06/21/23 15:11	1,6010D	AMW

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: PHASE II

Project Number: T0455-023-001

Lab Number: L2329082

Report Date: 07/07/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1793615-2 SRM Lot Number: D119-540								
Mercury, Total	87		-		73-127	-		
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1793837-2 SRM Lot Number: D119-540								
Arsenic, Total	105		-		83-117	-		
Barium, Total	102		-		82-118	-		
Cadmium, Total	104		-		82-117	-		
Chromium, Total	106		-		82-119	-		
Lead, Total	98		-		82-118	-		
Selenium, Total	114		-		79-121	-		
Silver, Total	103		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1793615-3 QC Sample: L2329082-01 Client ID: SB-1 0-0.75FT												
Mercury, Total	ND	2.1	2.00	95		-	-		80-120	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1793837-3 QC Sample: L2329082-01 Client ID: SB-1 0-0.75FT												
Arsenic, Total	22.5	12.5	37.3	118		-	-		75-125	-		20
Barium, Total	72.9	209	280	99		-	-		75-125	-		20
Cadmium, Total	0.414J	5.53	5.20	94		-	-		75-125	-		20
Chromium, Total	11.3	20.9	30.3	91		-	-		75-125	-		20
Lead, Total	21.4	55.3	69.2	86		-	-		75-125	-		20
Selenium, Total	ND	12.5	11.7	93		-	-		75-125	-		20
Silver, Total	ND	5.22	5.35	102		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1793615-4 QC Sample: L2329082-01 Client ID: SB-1 0-0.75FT						
Mercury, Total	ND	ND	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1793837-4 QC Sample: L2329082-01 Client ID: SB-1 0-0.75FT						
Arsenic, Total	22.5	22.0	mg/kg	2		20
Barium, Total	72.9	71.7	mg/kg	2		20
Cadmium, Total	0.414J	0.407J	mg/kg	NC		20
Chromium, Total	11.3	11.9	mg/kg	5		20
Lead, Total	21.4	21.6	mg/kg	1		20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-01
Client ID: SB-1 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 09:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	74.7		%	0.100	NA	1	-	06/21/23 08:56	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-02
Client ID: SB-4 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 10:30
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	71.2		%	0.100	NA	1	-	06/21/23 08:56	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-03
Client ID: SB-6 0-1FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 12:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.9		%	0.100	NA	1	-	06/21/23 08:56	121,2540G	ROI

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

SAMPLE RESULTS

Lab ID: L2329082-04
Client ID: HC-1 0-0.75FT
Sample Location: 619 EXCHANGE STREET

Date Collected: 05/23/23 14:00
Date Received: 05/24/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.3		%	0.100	NA	1	-	06/21/23 08:56	121,2540G	ROI

Lab Duplicate Analysis

Batch Quality Control

Project Name: PHASE II

Project Number: T0455-023-001

Lab Number: L2329082

Report Date: 07/07/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1794073-1 QC Sample: L2335069-05 Client ID: DUP Sample						
Solids, Total	79.1	78.6	%	1		20

Project Name: PHASE II
Project Number: T0455-023-001

Lab Number: L2329082
Report Date: 07/07/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2329082-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2329082-01B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329082-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2329082-02B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329082-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2329082-03B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)
L2329082-04A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.4	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2329082-04B	Glass 120ml/4oz unpreserved	A	NA		3.4	Y	Absent		NYTCL-PAH(14),TS(7)

*Values in parentheses indicate holding time in days

Project Name:	PHASE II	**Lab Number:**	L2329082
Project Number:	T0455-023-001	**Report Date:**	07/07/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	PHASE II	**Lab Number:**	L2329082
Project Number:	T0455-023-001	**Report Date:**	07/07/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

Report Format: DU Report with 'J' Qualifiers

Project Name:	PHASE II	**Lab Number:**	L2329082
Project Number:	T0455-023-001	**Report Date:**	07/07/23

Data Qualifiers

Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers

Project Name:	PHASE II	**Lab Number:**	L2329082
Project Number:	T0455-023-001	**Report Date:**	07/07/23

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625.1: alpha-Terpineol
EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

ALPHA ANALYTICAL

NEW YORK CHAIN OF CUSTODY

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 5/25/23

ALPHA Job #: L2329082

Westborough, MA 01581, 8 Walkup Dr., TEL: 508-898-9220, FAX: 508-898-9193
Mansfield, MA 02048, 320 Forbes Blvd, TEL: 508-822-9300, FAX: 508-822-3288

Project Information
Project Name: PHASE II
Project Location: 619 EXCHANGE STREET
Project # T0455-023-001
(Use Project name as Project #) ☐
Project Manager: BRYAN MAYBACK
ALPHAQuote #:

Turn-Around Time
Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information
Client: TURNKEY
Address: 2558 HAMBURG TPPK
BUFFALO, NY 14218
Phone: 716-856-0599
Fax:
Email: bmayback@bm-tk.com

Deliverables
☐ ASP-A ☐ ASP-B
☐ EQuIS (1 File) ☐ EQuIS (4 File)
☐ Other

Regulatory Requirement
☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Billing Information
☒ Same as Client Info
PO #

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☒ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	PAHs	RCRA METAL						Sample Specific Comments	Total Bottles
29082-01	SB-1 0-0.75ft	5/23/23	930	SOIL	CS	X	X						HOLD	2
02	SB- 0-0.75ft	↓	1030	↓	↓	X	X						HOLD	2
03	SB-6 0-1ft	↓	1200	↓	↓	X	X						HOLD	2
04	HC-1 0-0.75ft	↓	1400	↓	↓	X	X						HOLD	2

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

	PAHs	RCRA METAL						
Container Type	A	A						
Preservative	A	A						

Relinquished By:	Date/Time	Received By:	Date/Time
Chad M Schaub	5/24/23 1131	Jm AL AAL	5/24/23 14:00
Jm AL AAL	5/24/23 16:00	[signature]	5/25/23 00:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

Form No: 01-25 HC (rev. 30-Sept-2013)

eurofins | Environment Testing

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/29/2023 3:13:17 PM

JOB DESCRIPTION

619 Exchange

JOB NUMBER

480-212074-1

Eurofins Buffalo
10 Hazelwood Drive
Amherst NY 14228-2298

See page two for job notes and contact information.

myEOL

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

Generated
8/29/2023 3:13:17 PM

Authorized for release by
Rebecca Jones, Project Management Assistant I
Rebecca.Jones@et.eurofinsus.com
Designee for
Brian Fischer, Manager of Project Management
Brian.Fischer@et.eurofinsus.com
(716)504-9835

Table of Contents

Definitions/Glossary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-212074-1
Project/Site: 619 Exchange

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD 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.

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

Job ID: 480-212074-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-212074-1

Comments
No additional comments.

Receipt
The samples were received on 8/22/2023 3:00 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 3.8º C.

GC/MS Semi VOA
Method 8270D: The following sample was diluted due to color, appearance, and viscosity: SB-10 (480-212074-3). Elevated reporting limits (RL) are provided.

Method 8270D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 480-681194 and analytical batch 480-681261 recovered outside control limits for the following analytes: Benzo[g,h,i]perylene.

No additional analytical or quality issues were noted, other than those described above or 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: 619 Exchange

Job ID: 480-212074-1

Client Sample ID: SB-8 — Lab Sample ID: 480-212074-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	29	J	230	29	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	51	J	230	33	ug/Kg	1	☼	8270D	Total/NA
Arsenic	13.3		2.7	0.55	mg/Kg	1	☼	6010C	Total/NA
Barium	265		0.68	0.15	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.13	J	0.27	0.041	mg/Kg	1	☼	6010C	Total/NA
Chromium	9.7		0.68	0.27	mg/Kg	1	☼	6010C	Total/NA
Lead	24.3		1.4	0.33	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.059		0.026	0.0061	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-9 — Lab Sample ID: 480-212074-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	15.3		2.3	0.46	mg/Kg	1	☼	6010C	Total/NA
Barium	255		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.18	J	0.23	0.035	mg/Kg	1	☼	6010C	Total/NA
Chromium	8.3		0.58	0.23	mg/Kg	1	☼	6010C	Total/NA
Lead	20.5		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.029		0.023	0.0053	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-10 — Lab Sample ID: 480-212074-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	300	J	1100	110	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	390	J	1100	170	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	550	J	1100	180	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	330	J	1100	120	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	200	J	1100	150	ug/Kg	5	☼	8270D	Total/NA
Chrysene	350	J	1100	260	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	640	J	1100	120	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	250	J	1100	140	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	410	J	1100	170	ug/Kg	5	☼	8270D	Total/NA
Pyrene	490	J	1100	130	ug/Kg	5	☼	8270D	Total/NA
Arsenic	11.6		2.7	0.53	mg/Kg	1	☼	6010C	Total/NA
Barium	1850		3.3	0.73	mg/Kg	5	☼	6010C	Total/NA
Cadmium	0.38		0.27	0.040	mg/Kg	1	☼	6010C	Total/NA
Chromium	12.4		0.67	0.27	mg/Kg	1	☼	6010C	Total/NA
Lead	69.0		1.3	0.32	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.073		0.025	0.0057	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 619 Exchange

Job ID: 480-212074-1

Client Sample ID: SB-8
Date Collected: 08/22/23 09:35
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-1
Matrix: Solid
Percent Solids: 74.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		230	33	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Acenaphthylene	ND		230	29	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Anthracene	ND		230	56	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Benzo[a]anthracene	ND		230	23	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Benzo[a]pyrene	ND		230	33	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Benzo[b]fluoranthene	ND		230	36	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Benzo[g,h,i]perylene	ND		230	24	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Benzo[k]fluoranthene	ND		230	29	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Chrysene	ND		230	51	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Dibenz(a,h)anthracene	ND		230	40	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Fluoranthene	ND		230	24	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Fluorene	ND		230	27	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Indeno[1,2,3-cd]pyrene	ND		230	28	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Naphthalene	**29**	**J**	230	29	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Phenanthrene	**51**	**J**	230	33	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1
Pyrene	ND		230	27	ug/Kg	☼	08/24/23 08:58	08/25/23 17:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*85*		*60 - 120*	*08/24/23 08:58*	*08/25/23 17:57*	*1*
Nitrobenzene-d5 (Surr)	*89*		*53 - 120*	*08/24/23 08:58*	*08/25/23 17:57*	*1*
p-Terphenyl-d14 (Surr)	*90*		*79 - 130*	*08/24/23 08:58*	*08/25/23 17:57*	*1*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**13.3**		2.7	0.55	mg/Kg	☼	08/24/23 06:29	08/25/23 21:05	1
Barium	**265**		0.68	0.15	mg/Kg	☼	08/24/23 06:29	08/25/23 21:05	1
Cadmium	**0.13**	**J**	0.27	0.041	mg/Kg	☼	08/24/23 06:29	08/25/23 21:05	1
Chromium	**9.7**		0.68	0.27	mg/Kg	☼	08/24/23 06:29	08/25/23 21:05	1
Lead	**24.3**		1.4	0.33	mg/Kg	☼	08/24/23 06:29	08/25/23 21:05	1
Selenium	ND		5.5	0.55	mg/Kg	☼	08/24/23 06:29	08/25/23 21:05	1
Silver	ND		0.82	0.27	mg/Kg	☼	08/24/23 06:29	08/25/23 21:05	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.059**		0.026	0.0061	mg/Kg	☼	08/24/23 11:05	08/24/23 15:25	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 619 Exchange

Job ID: 480-212074-1

Client Sample ID: SB-9
Date Collected: 08/22/23 09:45
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-2
Matrix: Solid
Percent Solids: 82.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		200	30	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Acenaphthylene	ND		200	27	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Anthracene	ND		200	51	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Benzo[a]anthracene	ND		200	20	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Benzo[a]pyrene	ND		200	30	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Benzo[b]fluoranthene	ND		200	33	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Benzo[g,h,i]perylene	ND	*1	200	22	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Benzo[k]fluoranthene	ND		200	27	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Chrysene	ND		200	46	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Dibenz(a,h)anthracene	ND		200	36	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Fluoranthene	ND		200	22	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Fluorene	ND		200	24	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Indeno[1,2,3-cd]pyrene	ND		200	25	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Naphthalene	ND		200	27	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Phenanthrene	ND		200	30	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1
Pyrene	ND		200	24	ug/Kg	☼	08/24/23 15:43	08/25/23 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*79*		*60 - 120*	*08/24/23 15:43*	*08/25/23 17:58*	*1*
Nitrobenzene-d5 (Surr)	*77*		*53 - 120*	*08/24/23 15:43*	*08/25/23 17:58*	*1*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*	*08/24/23 15:43*	*08/25/23 17:58*	*1*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**15.3**		2.3	0.46	mg/Kg	☼	08/24/23 06:29	08/25/23 21:09	1
Barium	**255**		0.58	0.13	mg/Kg	☼	08/24/23 06:29	08/25/23 21:09	1
Cadmium	**0.18**	**J**	0.23	0.035	mg/Kg	☼	08/24/23 06:29	08/25/23 21:09	1
Chromium	**8.3**		0.58	0.23	mg/Kg	☼	08/24/23 06:29	08/25/23 21:09	1
Lead	**20.5**		1.2	0.28	mg/Kg	☼	08/24/23 06:29	08/25/23 21:09	1
Selenium	ND		4.6	0.46	mg/Kg	☼	08/24/23 06:29	08/25/23 21:09	1
Silver	ND		0.70	0.23	mg/Kg	☼	08/24/23 06:29	08/25/23 21:09	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.029**		0.023	0.0053	mg/Kg	☼	08/24/23 11:05	08/24/23 15:27	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 619 Exchange

Job ID: 480-212074-1

Client Sample ID: SB-10

Date Collected: 08/22/23 09:55
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-3

Matrix: Solid
Percent Solids: 72.4

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	☼	08/24/23 08:58	08/25/23 18:21	5
Acenaphthylene	ND		1100	150	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Anthracene	ND		1100	280	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Benzo[a]anthracene	**300**	**J**	1100	110	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Benzo[a]pyrene	**390**	**J**	1100	170	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Benzo[b]fluoranthene	**550**	**J**	1100	180	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Benzo[g,h,i]perylene	**330**	**J**	1100	120	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Benzo[k]fluoranthene	**200**	**J**	1100	150	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Chrysene	**350**	**J**	1100	260	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Dibenz(a,h)anthracene	ND		1100	200	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Fluoranthene	**640**	**J**	1100	120	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Fluorene	ND		1100	130	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Indeno[1,2,3-cd]pyrene	**250**	**J**	1100	140	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Naphthalene	ND		1100	150	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Phenanthrene	**410**	**J**	1100	170	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5
Pyrene	**490**	**J**	1100	130	ug/Kg	☼	08/24/23 08:58	08/25/23 18:21	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*87*		*60 - 120*	*08/24/23 08:58*	*08/25/23 18:21*	*5*
Nitrobenzene-d5 (Surr)	*84*		*53 - 120*	*08/24/23 08:58*	*08/25/23 18:21*	*5*
p-Terphenyl-d14 (Surr)	*93*		*79 - 130*	*08/24/23 08:58*	*08/25/23 18:21*	*5*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11.6**		2.7	0.53	mg/Kg	☼	08/24/23 06:29	08/25/23 21:25	1
Barium	**1850**		3.3	0.73	mg/Kg	☼	08/24/23 06:29	08/28/23 15:57	5
Cadmium	**0.38**		0.27	0.040	mg/Kg	☼	08/24/23 06:29	08/25/23 21:25	1
Chromium	**12.4**		0.67	0.27	mg/Kg	☼	08/24/23 06:29	08/25/23 21:25	1
Lead	**69.0**		1.3	0.32	mg/Kg	☼	08/24/23 06:29	08/25/23 21:25	1
Selenium	ND		5.3	0.53	mg/Kg	☼	08/24/23 06:29	08/25/23 21:25	1
Silver	ND		0.80	0.27	mg/Kg	☼	08/24/23 06:29	08/25/23 21:25	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.073**		0.025	0.0057	mg/Kg	☼	08/24/23 11:05	08/24/23 15:28	1

Surrogate Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-212074-1
Project/Site: 619 Exchange

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
		FBP	NBZ	TPHd14						
Lab Sample ID	Client Sample ID	(60-120)	(53-120)	(79-130)						
480-212074-1	SB-8	85	89	90						
480-212074-2	SB-9	79	77	100						
480-212074-3	SB-10	87	84	93						
LCS 480-681105/2-A	Lab Control Sample	83	82	89						
LCS 480-681194/2-A	Lab Control Sample	83	80	101						
LCSD 480-681194/3-A	Lab Control Sample Dup	88	78	108						
MB 480-681105/1-A	Method Blank	80	79	87						
MB 480-681194/1-A	Method Blank	99	94	124						

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)

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

Lab Sample ID: MB 480-681105/1-A
Matrix: Solid
Analysis Batch: 681265

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 681105

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Acenaphthylene	ND		170	22	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Anthracene	ND		170	42	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Benzo[a]anthracene	ND		170	17	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Benzo[a]pyrene	ND		170	25	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Chrysene	ND		170	38	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Fluoranthene	ND		170	18	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Fluorene	ND		170	20	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Naphthalene	ND		170	22	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Phenanthrene	ND		170	25	ug/Kg		08/24/23 08:58	08/25/23 15:33	1
Pyrene	ND		170	20	ug/Kg		08/24/23 08:58	08/25/23 15:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*80*		*60 - 120*	*08/24/23 08:58*	*08/25/23 15:33*	*1*
Nitrobenzene-d5 (Surr)	*79*		*53 - 120*	*08/24/23 08:58*	*08/25/23 15:33*	*1*
p-Terphenyl-d14 (Surr)	*87*		*79 - 130*	*08/24/23 08:58*	*08/25/23 15:33*	*1*

Lab Sample ID: LCS 480-681105/2-A
Matrix: Solid
Analysis Batch: 681265

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681105

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	1660	1460		ug/Kg		88	62 - 120
Acenaphthylene	1660	1560		ug/Kg		94	58 - 121
Anthracene	1660	1560		ug/Kg		94	62 - 120
Benzo[a]anthracene	1660	1550		ug/Kg		93	65 - 120
Benzo[a]pyrene	1660	1660		ug/Kg		100	64 - 120
Benzo[b]fluoranthene	1660	1650		ug/Kg		100	64 - 120
Benzo[g,h,i]perylene	1660	1490		ug/Kg		90	45 - 145
Benzo[k]fluoranthene	1660	1470		ug/Kg		89	65 - 120
Chrysene	1660	1580		ug/Kg		95	64 - 120
Dibenz(a,h)anthracene	1660	1520		ug/Kg		92	54 - 132
Fluoranthene	1660	1590		ug/Kg		96	62 - 120
Fluorene	1660	1450		ug/Kg		87	63 - 120
Indeno[1,2,3-cd]pyrene	1660	1500		ug/Kg		91	56 - 134
Naphthalene	1660	1310		ug/Kg		79	55 - 120
Phenanthrene	1660	1590		ug/Kg		96	60 - 120
Pyrene	1660	1590		ug/Kg		96	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*83*		*60 - 120*
Nitrobenzene-d5 (Surr)	*82*		*53 - 120*
p-Terphenyl-d14 (Surr)	*89*		*79 - 130*

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

Lab Sample ID: MB 480-681194/1-A
Matrix: Solid
Analysis Batch: 681261

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 681194

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Acenaphthylene	ND		170	22	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Anthracene	ND		170	41	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Benzo[a]anthracene	ND		170	17	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Benzo[a]pyrene	ND		170	25	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Benzo[b]fluoranthene	ND		170	26	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Chrysene	ND		170	37	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Dibenz(a,h)anthracene	ND		170	29	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Fluoranthene	ND		170	18	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Fluorene	ND		170	20	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Naphthalene	ND		170	22	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Phenanthrene	ND		170	25	ug/Kg		08/24/23 15:43	08/25/23 15:08	1
Pyrene	ND		170	20	ug/Kg		08/24/23 15:43	08/25/23 15:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*99*		*60 - 120*	*08/24/23 15:43*	*08/25/23 15:08*	*1*
Nitrobenzene-d5 (Surr)	*94*		*53 - 120*	*08/24/23 15:43*	*08/25/23 15:08*	*1*
p-Terphenyl-d14 (Surr)	*124*		*79 - 130*	*08/24/23 15:43*	*08/25/23 15:08*	*1*

Lab Sample ID: LCS 480-681194/2-A
Matrix: Solid
Analysis Batch: 681261

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681194

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	1640	1390		ug/Kg		84	62 - 120
Acenaphthylene	1640	1450		ug/Kg		88	58 - 121
Anthracene	1640	1510		ug/Kg		92	62 - 120
Benzo[a]anthracene	1640	1570		ug/Kg		96	65 - 120
Benzo[a]pyrene	1640	1580		ug/Kg		96	64 - 120
Benzo[b]fluoranthene	1640	1520		ug/Kg		92	64 - 120
Benzo[g,h,i]perylene	1640	1480		ug/Kg		90	45 - 145
Benzo[k]fluoranthene	1640	1610		ug/Kg		98	65 - 120
Chrysene	1640	1520		ug/Kg		93	64 - 120
Dibenz(a,h)anthracene	1640	1440		ug/Kg		88	54 - 132
Fluoranthene	1640	1420		ug/Kg		86	62 - 120
Fluorene	1640	1350		ug/Kg		82	63 - 120
Indeno[1,2,3-cd]pyrene	1640	1440		ug/Kg		88	56 - 134
Naphthalene	1640	1330		ug/Kg		81	55 - 120
Phenanthrene	1640	1490		ug/Kg		91	60 - 120
Pyrene	1640	1790		ug/Kg		109	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*83*		*60 - 120*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*
p-Terphenyl-d14 (Surr)	*101*		*79 - 130*

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

Lab Sample ID: LCSD 480-681194/3-A
Matrix: Solid
Analysis Batch: 681261

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 681194

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			1640	1460		ug/Kg		89	62 - 120	5	35
Acenaphthylene			1640	1470		ug/Kg		90	58 - 121	2	18
Anthracene			1640	1480		ug/Kg		90	62 - 120	2	15
Benzo[a]anthracene			1640	1560		ug/Kg		95	65 - 120	1	15
Benzo[a]pyrene			1640	1560		ug/Kg		95	64 - 120	1	15
Benzo[b]fluoranthene			1640	1510		ug/Kg		92	64 - 120	1	15
Benzo[g,h,i]perylene			1640	1260	*1	ug/Kg		77	45 - 145	16	15
Benzo[k]fluoranthene			1640	1490		ug/Kg		91	65 - 120	7	22
Chrysene			1640	1470		ug/Kg		90	64 - 120	3	15
Dibenz(a,h)anthracene			1640	1280		ug/Kg		78	54 - 132	12	15
Fluoranthene			1640	1380		ug/Kg		84	62 - 120	3	15
Fluorene			1640	1430		ug/Kg		87	63 - 120	6	15
Indeno[1,2,3-cd]pyrene			1640	1260		ug/Kg		77	56 - 134	14	15
Naphthalene			1640	1340		ug/Kg		82	55 - 120	1	29
Phenanthrene			1640	1530		ug/Kg		93	60 - 120	3	15
Pyrene			1640	1880		ug/Kg		114	61 - 133	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*88*		*60 - 120*
Nitrobenzene-d5 (Surr)	*78*		*53 - 120*
p-Terphenyl-d14 (Surr)	*108*		*79 - 130*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-681086/1-A
Matrix: Solid
Analysis Batch: 681409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 681086

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0	0.39	mg/Kg		08/24/23 06:29	08/25/23 20:38	1
Barium	ND		0.49	0.11	mg/Kg		08/24/23 06:29	08/25/23 20:38	1
Cadmium	ND		0.20	0.030	mg/Kg		08/24/23 06:29	08/25/23 20:38	1
Chromium	ND		0.49	0.20	mg/Kg		08/24/23 06:29	08/25/23 20:38	1
Lead	ND		0.99	0.24	mg/Kg		08/24/23 06:29	08/25/23 20:38	1
Selenium	ND		3.9	0.39	mg/Kg		08/24/23 06:29	08/25/23 20:38	1
Silver	ND		0.59	0.20	mg/Kg		08/24/23 06:29	08/25/23 20:38	1

Lab Sample ID: LCSSRM 480-681086/2-A
Matrix: Solid
Analysis Batch: 681409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681086

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			183	164.9		mg/Kg		90.1	69.9 - 130.1		
Barium			297	272.5		mg/Kg		91.8	75.1 - 125.3		
Cadmium			221	191.0		mg/Kg		86.4	75.1 - 124.9		
Chromium			200	179.9		mg/Kg		90.0	70.0 - 130.0		

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

Lab Sample ID: LCSSRM 480-681086/2-A
Matrix: Solid
Analysis Batch: 681409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681086

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Lead	257	265.2		mg/Kg		103.2	73.9 - 126.1
Selenium	217	192.4		mg/Kg		88.7	69.1 - 131.3
Silver	67.8	58.29		mg/Kg		86.0	70.6 - 129.2

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-681102/1-A
Matrix: Solid
Analysis Batch: 681193

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 681102

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019	0.0044	mg/Kg		08/24/23 11:05	08/24/23 15:04	1

Lab Sample ID: LCSSRM 480-681102/2-A ^10
Matrix: Solid
Analysis Batch: 681193

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 681102

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	18.2	17.11		mg/Kg		94.0	59.9 - 140.1

GC/MS Semi VOA

Prep Batch: 681105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-1	SB-8	Total/NA	Solid	3550C	
480-212074-3	SB-10	Total/NA	Solid	3550C	
MB 480-681105/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-681105/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Prep Batch: 681194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-2	SB-9	Total/NA	Solid	3550C	
MB 480-681194/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-681194/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 480-681194/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	

Analysis Batch: 681261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-2	SB-9	Total/NA	Solid	8270D	681194
MB 480-681194/1-A	Method Blank	Total/NA	Solid	8270D	681194
LCS 480-681194/2-A	Lab Control Sample	Total/NA	Solid	8270D	681194
LCSD 480-681194/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D	681194

Analysis Batch: 681265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-1	SB-8	Total/NA	Solid	8270D	681105
480-212074-3	SB-10	Total/NA	Solid	8270D	681105
MB 480-681105/1-A	Method Blank	Total/NA	Solid	8270D	681105
LCS 480-681105/2-A	Lab Control Sample	Total/NA	Solid	8270D	681105

Metals

Prep Batch: 681086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-1	SB-8	Total/NA	Solid	3050B	
480-212074-2	SB-9	Total/NA	Solid	3050B	
480-212074-3	SB-10	Total/NA	Solid	3050B	
MB 480-681086/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-681086/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 681102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-1	SB-8	Total/NA	Solid	7471B	
480-212074-2	SB-9	Total/NA	Solid	7471B	
480-212074-3	SB-10	Total/NA	Solid	7471B	
MB 480-681102/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-681102/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 681193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-1	SB-8	Total/NA	Solid	7471B	681102
480-212074-2	SB-9	Total/NA	Solid	7471B	681102
480-212074-3	SB-10	Total/NA	Solid	7471B	681102
MB 480-681102/1-A	Method Blank	Total/NA	Solid	7471B	681102
LCSSRM 480-681102/2-A ^10	Lab Control Sample	Total/NA	Solid	7471B	681102

QC Association Summary

Client: Benchmark Env. Eng. & Science, PLLC
Job ID: 480-212074-1
Project/Site: 619 Exchange

Metals

Analysis Batch: 681409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-1	SB-8	Total/NA	Solid	6010C	681086
480-212074-2	SB-9	Total/NA	Solid	6010C	681086
480-212074-3	SB-10	Total/NA	Solid	6010C	681086
MB 480-681086/1-A	Method Blank	Total/NA	Solid	6010C	681086
LCSSRM 480-681086/2-A	Lab Control Sample	Total/NA	Solid	6010C	681086

Analysis Batch: 681604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-3	SB-10	Total/NA	Solid	6010C	681086

General Chemistry

Analysis Batch: 681073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-212074-1	SB-8	Total/NA	Solid	Moisture	
480-212074-2	SB-9	Total/NA	Solid	Moisture	
480-212074-3	SB-10	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 619 Exchange

Job ID: 480-212074-1

Client Sample ID: SB-8
Date Collected: 08/22/23 09:35
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	681073	JMM	EET BUF	08/23/23 16:05

Client Sample ID: SB-8
Date Collected: 08/22/23 09:35
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-1
Matrix: Solid
Percent Solids: 74.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			681105	ER	EET BUF	08/24/23 08:58
Total/NA	Analysis	8270D		1	681265	JMM	EET BUF	08/25/23 17:57
Total/NA	Prep	3050B			681086	MP	EET BUF	08/24/23 06:29
Total/NA	Analysis	6010C		1	681409	LMH	EET BUF	08/25/23 21:05
Total/NA	Prep	7471B			681102	NVK	EET BUF	08/24/23 11:05
Total/NA	Analysis	7471B		1	681193	NVK	EET BUF	08/24/23 15:25

Client Sample ID: SB-9
Date Collected: 08/22/23 09:45
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	681073	JMM	EET BUF	08/23/23 16:05

Client Sample ID: SB-9
Date Collected: 08/22/23 09:45
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-2
Matrix: Solid
Percent Solids: 82.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			681194	SJM	EET BUF	08/24/23 15:43
Total/NA	Analysis	8270D		1	681261	JMM	EET BUF	08/25/23 17:58
Total/NA	Prep	3050B			681086	MP	EET BUF	08/24/23 06:29
Total/NA	Analysis	6010C		1	681409	LMH	EET BUF	08/25/23 21:09
Total/NA	Prep	7471B			681102	NVK	EET BUF	08/24/23 11:05
Total/NA	Analysis	7471B		1	681193	NVK	EET BUF	08/24/23 15:27

Client Sample ID: SB-10
Date Collected: 08/22/23 09:55
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	681073	JMM	EET BUF	08/23/23 16:05

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: 619 Exchange

Job ID: 480-212074-1

Client Sample ID: SB-10

Date Collected: 08/22/23 09:55
Date Received: 08/22/23 15:00

Lab Sample ID: 480-212074-3

Matrix: Solid
Percent Solids: 72.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			681105	ER	EET BUF	08/24/23 08:58
Total/NA	Analysis	8270D		5	681265	JMM	EET BUF	08/25/23 18:21
Total/NA	Prep	3050B			681086	MP	EET BUF	08/24/23 06:29
Total/NA	Analysis	6010C		1	681409	LMH	EET BUF	08/25/23 21:25
Total/NA	Prep	3050B			681086	MP	EET BUF	08/24/23 06:29
Total/NA	Analysis	6010C		5	681604	LMH	EET BUF	08/28/23 15:57
Total/NA	Prep	7471B			681102	NVK	EET BUF	08/24/23 11:05
Total/NA	Analysis	7471B		1	681193	NVK	EET BUF	08/24/23 15:28

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
Job ID: 480-212074-1
Project/Site: 619 Exchange

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
Job ID: 480-212074-1
Project/Site: 619 Exchange

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
Job ID: 480-212074-1
Project/Site: 619 Exchange

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-212074-1	SB-8	Solid	08/22/23 09:35	08/22/23 15:00
480-212074-2	SB-9	Solid	08/22/23 09:45	08/22/23 15:00
480-212074-3	SB-10	Solid	08/22/23 09:55	08/22/23 15:00

Address: _____

Chain of Custody Record

599575

eurofins | Environment Testing TestAmerica

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

TAL-8210

Client Contact	Project Manager: B. MAYBACK	Site Contact: C. SCHUSTER	Date: 8/22/23	COC No:
Company Name: ROUX	Tel/Email: bmayback@rouxinc.com	Lab Contact: B. FISCHER	Carrier:	1 of 1 COCs
Address: 2558 HAMBURG TPKE	Analysis Turnaround Time			Sampler: CS
City/State/Zip: BUFFALO, NY 14218	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 716-856-0599	TAT if different from Below _____			Walk-in Client:
Fax:	☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			Lab Sampling:
Project Name: 619 EXCHANGE				Job / SDG No.:
Site: 619 EXCHANGE				
P O # TO455-023-001				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	PAH	RCRA METAL
SB-8	8/22/23	735	~~GRAB~~	SOIL	2			X	X
SB-9	↓	945	↓	↓	↓			X	X
SB-10	↓	955	↓	↓	↓			X	X

480-212074 Chain of Custody

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____

	Company	Date/Time		Company	Date/Time
Relinquished by: Chad M Schuster	ROUX	8/22/23 1253	Received by:		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 8-22-23 1500

3.8 ICE

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8/29/2023

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-212074-1

Login Number: 212074

List Source: Eurofins Buffalo

List Number: 1

Creator: Yeager, Brian A

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