SUBSURFACE PHASE II ENVIRONMENTAL SITE ASSESSMENT

47 EAST AMHERST STREET
BUFFALO, ERIE COUNTY, NEW YORK

Prepared for:

Regan Development Corporation
1055 Saw Mill River Road #204
Ardsley, NY 10502

Prepared by:

Brydges Engineering in Environment and Energy
960 Busti Ave Suite B-150
Buffalo, New York, 14213
716-249-6880

Prepared By: Jacob Cox, E.I.T.	**Signature:**	**Date:** 02/2023	**Title:** BE3– Environmental Engineer
Reviewed By: Peter J. Gorton	**Signature:**	**Date:** 02/2023	**Title:** BE3- Senior Scientist

February 2023

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1.0 INTRODUCTION

Brydges Engineering in Environment and Energy (BE3) completed a Phase II Environmental Site Assessment (ESA) for 47 East Amherst Street, Buffalo, Erie County, New York (refer to **Figure 1**). The Subsurface Assessment/Phase II was completed in accordance with ASTM E1903-19 - Standard Guide for Environmental Site Assessments: - Phase II Environmental Site Assessment Process and in general accordance with the most current updates of New York State Department of Environmental Conservation NYSDEC Division of Environmental Remediation's (DER's) Technical Guidance for Site Investigation and Remediation (DER-10).

This assessment included a sub-surface soil investigation across the property (refer to **Figure 2**). The purpose of the assessment was to obtain information and data for assessing potential environmental impacts at the property from Recognized Environmental Concerns/Business Environmental Risks (REC/BERs) identified during the Phase I environmental site assessment and to determine if the property is eligible for the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP).

1.1 BACKGROUND

1.1.1 General Site Setting

The subject property currently contains one vacant building surrounded by an asphalt parking lot. The building is two stories in addition to a partial basement with limited current access to the second floor due to structural issues. The interior and exterior of the building have significant deterioration. Sections of the roof are missing and have collapsed and much of the paint and drywall has deteriorated. A 2007 pre-demolition asbestos and hazardous materials Survey was conducted in 2007 by JMD Services. The survey identified asbestos, lead-based paint, PCB containing lights and drums with unknown contents on the subject property. These materials were visually confirmed during the recent Phase I ESA completed by BE3 and it was also noted that vandalism and damage to building materials had also occurred.

The subject property is located approximately 0.75 miles east-northeast of the Buffalo Zoo, less than one mile north-northwest of Erie County Medical Center (ECMC) and 1.25 miles southwest of the University at Buffalo South Campus. The elevation is approximately 650 feet above sea level sloping northwest. The subject property is located at latitude 42° 56' 22.99" N: Longitude 78° 50' 9.20" W. The immediate area around the property is mixed use, containing various retail stores, commercial buildings, and residential properties.

1.1.2 Physical Setting

The subject property is approximately 3.3-acres and irregularly shaped. The southern adjacent property, 212 Holden Street, is currently a Dollar General store. The northern adjacent properties across East Amherst Street, 60 and 62 East Amherst Street, are occupied by Horizon Health Services and Sunoco Gas Station, respectively. East of the property is predominantly residential along Holden Street and Bennett Terrace. West of the property is Pannell Street and Main Street, comprised of several commercial businesses and a light rail station.

1.1.3 Historical Use

Historical records including street directories and Sanborn Maps suggest that the site was occupied as follows:

- From at least 1916-1935: Buffalo Cement Co.
- 1950-1986: Bowling alley (no owner specified)
- 1994: Amherst Bowling Center and Family Pro Shop (joint occupancy)
- 1999-2004: Amherst Bowling Center

1.1.4 Contaminants of Concern

The history and use of the subject property suggests there is the potential for contaminants of concern associated with fill material and past commercial use. Potential contaminants include metals, polycyclic aromatic hydrocarbons (PAHs), solvents, and PCBs. PAHs are a group of chemicals that are formed during incomplete burning of wood, coal, gas, garbage, or other organic substances and are widely distributed in the environment and particularly in older urban environments where coal, gas, and petroleum were burned for heat and other energy uses. PAH compounds are common constituents of fill material found in urban environments, and are typically associated with both fill material, coal tar, and asphalt-based materials or ash. These are frequently also found in railroad fill base material.

1.2 SCOPE

The objective of this environmental assessment was to assess the potential for environmental impacts indicated by historical use at/adjacent to the subject property and to determine if the property may be eligible for the BCP. This was completed by performing a field assessment of near surface and subsurface soil. The scope included subsurface soil screening and sampling to investigate subsurface conditions at the property. The Phase I ESA identified a REC associated with some drums observed in the building that were labeled as containing petroleum distillate and a BER associated with a former gasoline service station located on a nearby property (72 East Amherst Street) which had environmental impacts (refer to the Phase I ESA for specifics).

2.0 FIELD INVESTIGATIONS

The subsurface assessment field work was completed on January 17, 2023. A total of eighteen (18) soil borings were advanced by SJB Services. The soil in each borehole was described by BE3 personnel and unique soil samples were collected for laboratory analysis at locations across the property. Prior to conducting the Phase II ESA, utilities were marked. A photolog of field activities is included in **Appendix A** and boring logs are included in **Appendix B**.

2.1 SOIL SAMPLING

A total of eighteen (18) soil borings, designated Borings BH1 through BH18, were advanced at specific locations across the property (see **Figure 2**) Seventeen soil samples were collected each from individual boreholes and analyzed for NYSDEC Part 375 analytes including metals and semi volatile organic compounds (SVOCs). All samples were collected from fill materials below the asphalt layer. Observations and photoionization detector (PID) monitoring did not indicate volatile organic compounds (VOCs) were present in the fill at any boring locations.

Soil borings were field located to assess the subsurface specific to previous property use and to ensure coverage across the parcel. Boring depths ranged from two (2) to eight (8) feet below ground surface (bgs) and were completed at refusal/bedrock with most being advanced to depth of four (4) or less feet bgs.. The borings were completed using a track mounted Geoprobe® unit which employs direct push technology. Continuous soil sampling was performed using Macro Core soil samplers measuring approximately 44 inches in length and 1½ inches in diameter with acetate liners resulting in approximately 4-foot length distinct sample cores (i.e., 0 to 4 feet, 4 to 8 feet.). Each of the samplers was fitted with a new acetate liner prior to use. Stratification of material observed in each boring are noted on boring logs, which are included in **Appendix B**.

Soil from each soil core was visually described and field screened for volatile organic compounds (VOCs) using a MiniRae 3000+ photoionization detector (PID) with a 10.6 eV Lamp and by visual and olfactory observations. Soil cores from borings were transported to a staging area adjacent to each borehole. The soil core was opened, and the length of the core was examined visually and with the PID. Odors, PID results, and observations were noted on the boring logs. A total of seventeen (17) grab subsurface soil samples were collected at specific locations and depths from fill material all below the asphalt layer as follows:

- BH1 at 2-4 feet below ground surface (bgs). Total depth of boring was 4.8 feet bgs;
- BH2 at 1-2 feet bgs. Total depth of boring was 4.8 feet bgs;
- BH3 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH4 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH5 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH6 at 1 feet bgs. Total depth of boring was 2 feet bgs;
- BH7 at 0.5-1 feet bgs. Total depth of boring was 2.5 feet bgs;
- BH8 at 1-3 feet bgs. Total depth of boring was 7.5 feet bgs;
- BH9 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH10 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH11 no sample. Total depth of boring was 2 feet bgs;
- BH12 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH13 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH14 at 2-3 feet bgs. Total depth of boring was 4 feet bgs;
- BH15 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH16 at 1-3 feet bgs. Total depth of boring was 4 feet bgs;
- BH17 at 1-2 feet bgs. Total depth of boring was 4 feet bgs;
- BH18 at 1-3 feet bgs. Total depth of boring was 4 feet bgs;

All soil borings were backfilled with the soil from the boring. All soil samples were taken below

asphalt and asphalt subbase which ended approximately one-half foot bgs. The soil samples were submitted under chain of custody to the NYSDEC approved Eurofins Buffalo Laboratory for analysis.

2.2 GROUNDWATER SAMPLING

No groundwater samples were collected because none of the borings indicated significant water at the zone the borings were completed.

2.3 SUBSURFACE CONDITIONS

The borings indicate that shallow subsurface conditions generally consisted of fill with some construction and demolition debris consisting mostly of brick with some cement, cinder, ash, and some coal. Fill depths ranged from 2 to 7.5 feet bgs in most locations. Below the fill in most locations was brown silty clay or clayey silt with rock fragments. Depth to bedrock is shallow across the property, ranging from 2 to 5 feet in most locations. No significant groundwater was observed at the depths of the boreholes. Most boreholes were completed to 4 feet or less (refer to borehole logs in **Appendix B)**.

2.4 PREVIOUS INVESTIGATIONS

A previous geotechnical investigation was performed on the property by Glynn Group Engineering & Architecture, PLLC in 2018 for the purpose of potential redevelopment. Conclusions drawn from this investigation were that the soils are of good structural quality and will provide for the construction of a shallow foundation system in accordance with the recommendations provided by GGEA. This report was reviewed prior to the Phase II ESA and confirmed a shallow bedrock across the property. This report is included in **Appendix D**.

3.0 RESULTS

The results of the Phase II assessment indicated the following:

- Fill exists at shallow depths across the property to about two to five (2-5) feet in most locations.
- The fill contains elevated levels of metals and semi volatile organic compounds, mostly polyaromatic hydrocarbons (PAHs).
- No significant volatile organic compounds were indicated in shallow subsurface soil (see **Figure 2**)**.**

Soil samples were analyzed on a standard 10-day turnaround time. The analytical soil results were compared to the NYSDEC unrestricted, residential, restricted residential, commercial, and industrial Soil Cleanup Objectives (SCOs) listed in Table 375-6.8(a) and (b) of 6 NYCRR Part 375 (current). These SCOs and standards are listed in **Table 1**. A copy of the laboratory report is provided in **Appendix C**.

3.1 SOIL

All seventeen soil samples analyzed were analyzed for NYSDEC Part 375 metals by EPA Method 6010C and NYSDEC Part 375 SVOCs by EPA Method 8270D. The samples were collected from near surface soil from approximately 1 to 4 feet bgs,

Metals

Metal compounds were observed in all soil samples analyzed. A summary of metals above NYSDEC SCOs are provided in **Table 1** and **Figure 2**. The following results were above NYSDEC SCOs. Five (5) of the seventeen samples had metal results above industrial, commercial, or restricted-residential SCOs in various samples across the property – refer to **Figure 2**.

Semi-Volatile Organic Compounds (SVOCs)

Of the seventeen soil samples submitted for laboratory analysis, eight (8) had results above Industrial, Commercial, or Restricted-Residential SCOs. Two (2) of those samples had results above Industrial SCOs– refer to **Figure 2**.

3.2 GROUNDWATER

No appreciable groundwater was observed in soil borings and therefore no temporary wells were installed. As such, no groundwater samples were collected.

4.0 CONCLUSIONS

The purpose of this assessment was to identify potential environmental impacts at 47 East Amherst Street in Buffalo, New York and to assess its potential for the NYSDEC BCP. The property was previously commercial/industrial. Adjoining properties were historically and currently mixed commercial and residential.

The laboratory results indicate that there are urban fill conditions existing at the property to at least 2-5 feet bgs resulting in target compounds (metals and SVOCs, primarily PAHs) above NYSDEC restricted residential and industrial SCOs.

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5.0 WARRANTS AND LIMITATIONS

This report is based on information from limited soil sampling and visual observations of the soils as well as a review of a previous Phase I ESA at the property. This report is intended exclusively for the purpose outlined herein at the site location and project indicated.

This report is intended for the sole use of Regan Development. The scope of services performed in this assessment may not be appropriate to satisfy the needs of other users and any use or reuse of this document or the findings, conclusions, or recommendations presented, is at the sole risk of the user.

The conclusions set forth in this report are based upon, and limited by, the analytical data and other information available. It should be noted that all surface and subsurface environmental assessments are inherently limited in the sense that conclusions are drawn, and recommendations developed from information obtained from limited data and site evaluation at a specific time. The passage of time may result in a change in environmental circumstances at this site and surrounding properties, or petroleum/hazardous materials beneath the surface may be present but undetectable during this limited subsurface assessment.

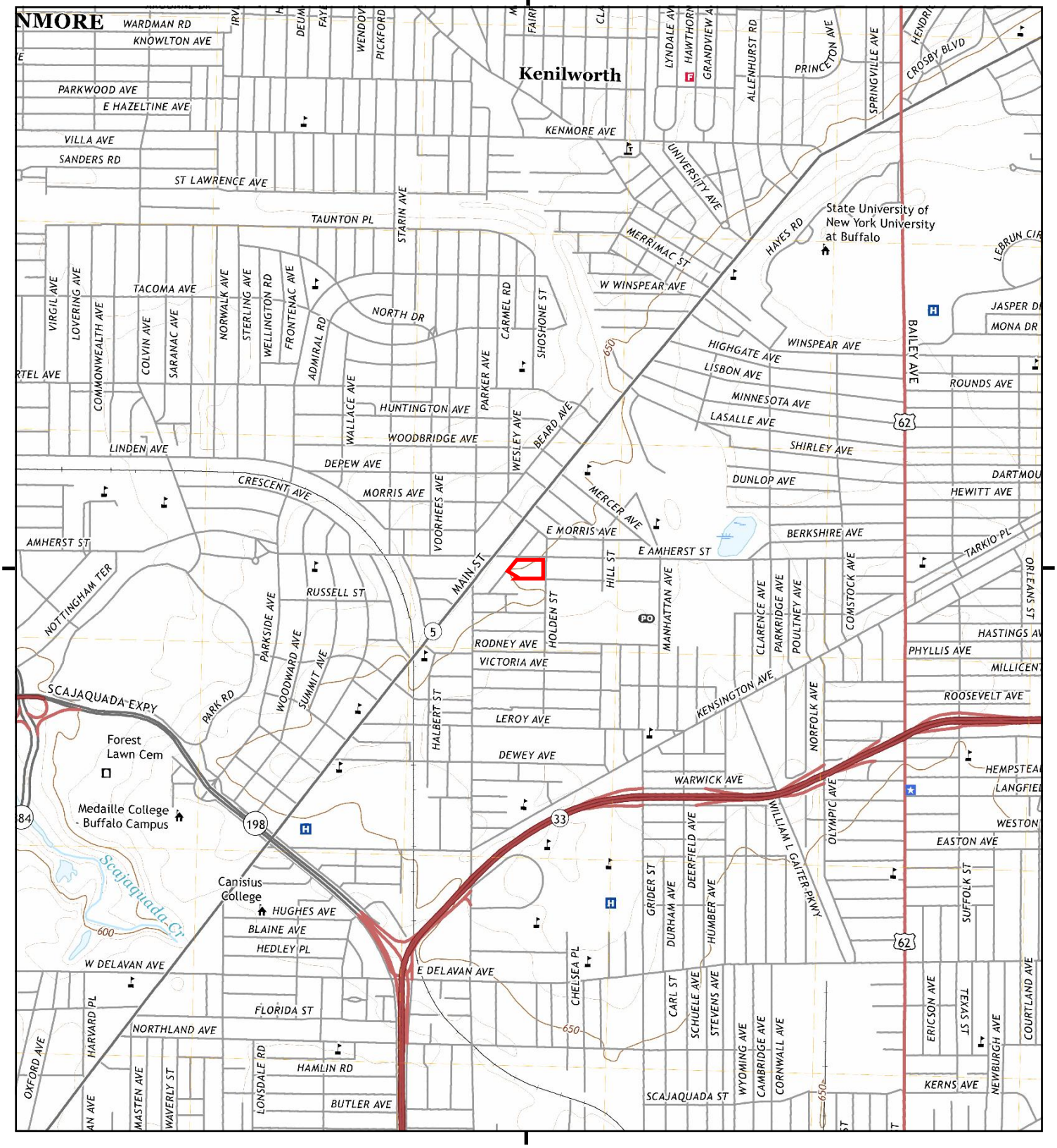
Opinions and recommendations presented herein apply to the site conditions existing at the time of the subsurface assessment and those reasonably foreseeable. They cannot necessarily apply to site changes, which are not made aware and therefore not been evaluated.

6.0 PROFESSIONAL STATEMENT/SIGNATURE

This subsurface assessment at 47 East Amherst Street, Buffalo, New York was performed in conformance with the scope and limitations of ASTM Practice E 1903-11 for the specific objectives specified in the report and was completed based on the scope of work provided by the banks' consultant. I declare that, to the best of my professional knowledge and belief, I meet the definition of environmental professional as defined in 312.10 of 40CFR312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed all appropriate inquires in conformance with the standards and practices set forth in 40 CFR 312.

Peter J Gorton, MPH; CHCM — 02/02/2023 Date

FIGURES & TABLES



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

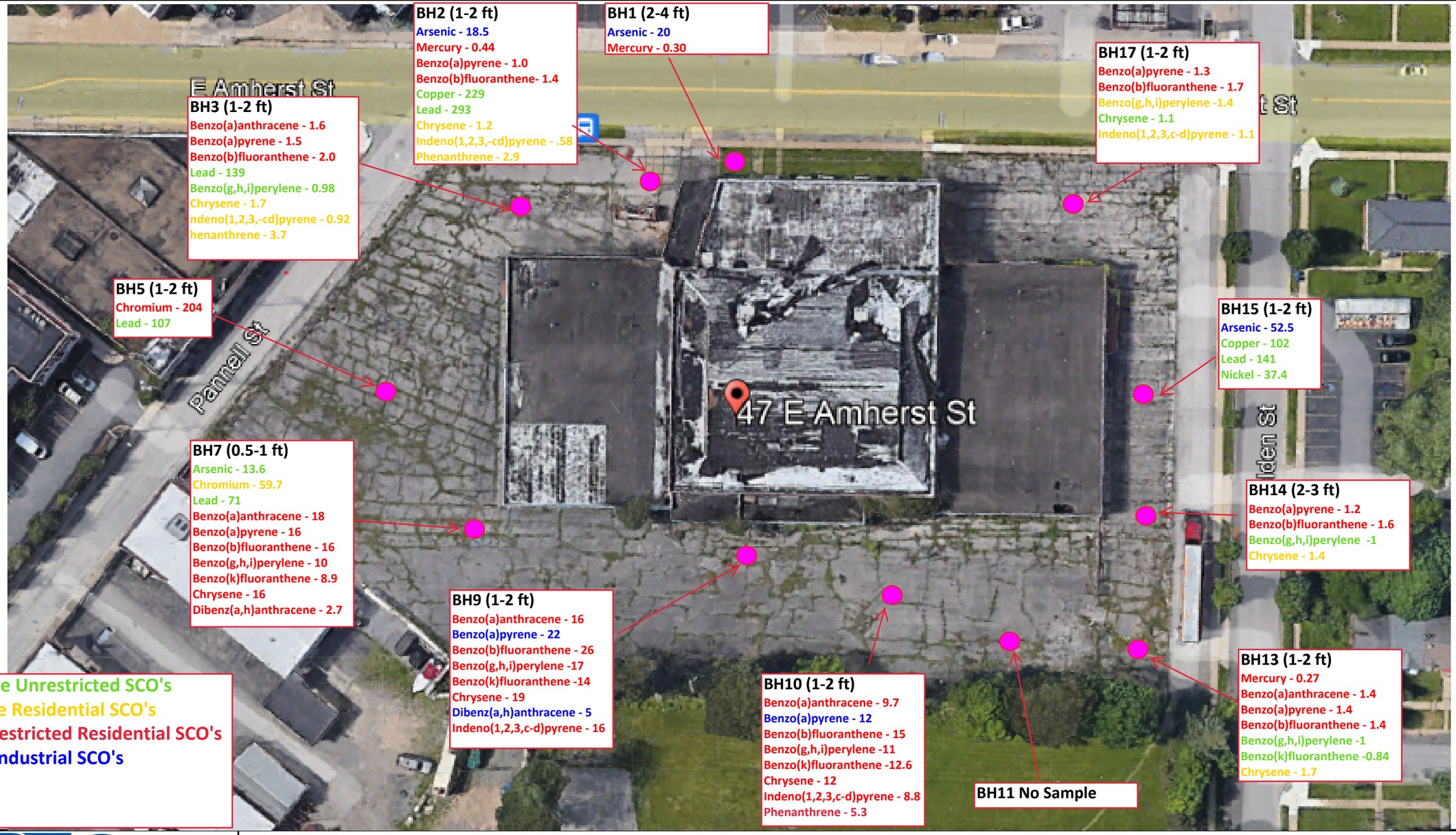
NW N NE
W E
SW S SE

TP, Buffalo NE, 2019, 7.5-minute

SITE NAME: 47 East Amherst Street - Buffalo NY
ADDRESS: 47 East Amherst Street - Buffalo NY
Buffalo, NY 14214
CLIENT: BE3

Figure 1: Property Location

Figure 2 : Boring Locations With Sample Results



BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC	Figure 2: Boring Locations with Sample Results	
	47 East Amherst Street	1/17/2023
	New York	Regan Development

**All Samples were taken below the depth of asphalt.

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS

Parameter Tested	BE3 Phase II Report February 2023 - Sample Identification, Sample Depth in feet below ground surface (bgs), and Sample Date								NYSDEC Soil Cleanup Objectives (SCOs)				
	BH1 2-4	BH2 1-2	BH3 1-2	BH4 1-2	BH5 1-2	BH6 1	BH7 0.5-1	BH8 1-3	Unrestricted	Residential	Restricted Residential	Commerical	Industrial
	1/17/2023												
METALS/INORGANICS													
Arsenic	20	18.5	8.4	2.8	9.0	**5.4**	13.6	**15.4**	13	16	16	16	16
Barium	40	400	78.8	29.4	397	74.1	391	101	410	410	410	410	10,000
Beryllium	0.63	1.30	0.5	0.24	3.4	0.78	1.90	1.30	4.4	8.8	43	670	750
Cadmium	0.35	0.5	0.6	0.26	0.4	0.55	0.31	0.30	2.5	2.5	2.5	3.7	4.4
Chromium	21.2	23.2	12.4	7.5	204	17.3	59.7	12.0	30	30	110	1,700	2,000
Copper	18.3	229 F2	42.9	15.2	31.8	9.7	25.4	24.0	50	280	280	280	10,000
Lead	46	293 F2	139.0	27.9	107	21.6	71	39	63	400	400	1,000	3,900
Manganese	386 B	359 B	349 B	142 B	213 B	1920 B	203	234 B	1,600	2,000	2,000	10,000	10,000
Mercury	0.30 B	0.44	0.14 B	0.19 B	.054 B	.065 B	0.085	0.034 B	0.18	0.26	0.26	1.1	1.1
Nickel	24.2	18.1	18.3	7.5	64.7	29.9	30.9	20.3	30	44	210	320	3,400
Silver	ND	ND	ND	ND	0.36 J	ND	0.28	ND	2	22	110	1,700	2,000
Zinc	43	160 F1	95.7	36.3	36.7	46.3	39.3	23.7	109	1,300	6,600	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)													
Acenaphthene	ND	ND	0.31 J	ND	ND	ND	2.5	0.031 J	20	100	100	500	1,000
Acenaphthylene	ND	ND	ND	ND	ND	ND	1.4 J	ND	100	100	100	500	1,000
Anthracene	ND	ND	ND	ND	ND	ND	9.6	0.89 J	100	100	100	500	1,000
Benzo(a)anthracene	0.17 J	0.99 J	1.6 J	0.35 J	ND	ND	**18**	0.3	1	1	1.4	37	37
Benzo(a)pyrene	0.17 J	1.0 J	1.5 J	0.34 J	ND	ND	**16**	0.33	1	1	1	3.7	3.7
Benzo(b)fluoranthene	0.2	1.4 J	2.00	0.51 J	ND	ND	**16**	0.38	1	1	1.4	37	37
Benzo(g,h,i)perylene	0.1 J	0.68 J	.98 J	0.34 J	ND	ND	**10**	0.27	0.64	1.2	4.9	47	78
Benzo(k)fluoranthene	0.079 J	0.46 J	.71 J	0.19 J	ND	ND	8.90	0.19 J	0.8	1.2	4.9	47	78
Chrysene	0.18 J	1.2 J	1.7 J	0.38 J	ND	ND	**16.0**	0.34	1	1.2	4.9	47	78
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	2.70	0.07 J	0.33	0.33	0.33	3.7	3.7
Dibenzofuran	ND	ND	ND	ND	ND	ND	1.9	0.029 J	2.1	4.2	18	180	290
Fluoranthene	0.4	3.0	4	0.78 J	ND	ND	37	1	85	100	100	500	1,000
Fluorene	ND	ND	0.32 J	ND	ND	ND	3.8	.025 J	30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	0.096 J	0.58 J	0.92 J	0.27 J	ND	ND	**9.1**	0.23	0.5	0.5	1.4	37	37
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	12	84	100	500	1,000
Phenanthrene	0.17 J	2.9	3.7	0.43 J	ND	ND	**30**	0.45	1.1	1.2	4.9	47	78
Pyrene	0.31	2.2	3.1	0.6 J	ND	ND	29	0.48	64	100	100	500	1,000

ND Analyte not detected
\- Not Applicable or sample not tested for this analyte
J Estimated Concentration
B Anaalyte detected in method blank
K Result is reported as Benzo(b)fluoranthene
E Results exceeded calibration range
T Result is Tentatively Identifies Compound and an estimated value

Analyte detected
Reported concentration greater than or equal to the NYSDEC Unrestricted SCO
Reported concentration greater than or equal to the NYSDEC Residential SCO
Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO
Reported concentration greater than or equal to the NYSDEC Commercial SCO
Reported concentration greater than or equal to the NYSDEC Industrial SCO

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS

Parameter Tested	BE3 Phase II Report February 2023 - Sample Identification, Sample Depth in feet below ground surface (bgs), and Sample Date								NYSDEC Soil Cleanup Objectives (SCOs)				
	BH9 1-2	BH10 1-2	BH11 No Sample	BH12 1-2	BH13 1-2	BH14 2-3	BH15 1-2	BH16 1-3	Unrestricted	Residential	Restricted Residential	Commerical	Industrial
	1/17/2023												
METALS/INORGANICS													
Arsenic	3.0	1.2 J		1.2 J	10.1	4.8	52.5	11.3	13	16	16	16	16
Barium	20.4	5.3		5.3	69	171	89.4	54.3	410	410	410	410	10,000
Beryllium	0.19 J	0.098 J		0.73	0.86		1.70	0.53	4.4	8.8	43	670	750
Cadmium	0.87	0.24		0.55	1.10	0.87 J	0.63	0.15 J	2.5	2.5	2.5	3.7	4.4
Chromium	16.9	3.7		23.8	16.6	7.2	20.5	6.9	30	30	110	1,700	2,000
Copper	18.1	4.9 J		42.0	39.1	17.0	102.0	31.8	50	280	280	280	10,000
Lead	175.0	18.3		109.0	125	29	141.0	12.6	63	400	400	1,000	3,900
Manganese	140 B	63 B		271 B	270 B	394 B	152 B	85.1 B	1,600	2,000	2,000	10,000	10,000
Mercury	0.042 B	0.014 JB		0.10	0.27	0.069	0.067	0.064	0.18	0.26	0.26	1.1	1.1
Nickel	11.4	4.2 J		28.6	24.4	9.3	37.4	14.5	30	44	210	320	3,400
Silver	ND	ND		ND	ND	ND	0.50 J	ND	2	22	110	1,700	2,000
Zinc	99.6	18.6		92	187	21.5	103	17.7	109	1,300	6,600	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)													
Benzo(a)anthracene	16 J	9.7 J		0.46 J	1.4 J	1.1	0.26 J	0.16 J	1	1	1.4	37	37
Benzo(a)pyrene	22	12 J		0.77 J	1.4 J	1.2	0.29 J	0.19	1	1	1	3.7	3.7
Benzo(b)fluoranthene	26	15 J		1 J	1.4 J	1.6	0.34 J	0.24	1	1	1.4	37	37
Benzo(g,h,i)perylene	17 J	11 J		0.79 J	1 J	1	0.20 J	0.13 J	0.64	1.2	4.9	47	78
Benzo(k)fluoranthene	14 J	7.6 J		0.4 J	0.84 J	0.54 J	ND	0.067 J	0.8	1.2	4.9	47	78
Chrysene	19	12 J		ND	1.7 J	1.4	0.27 J	0.17 J	1	1.2	4.9	47	78
Dibenz(a,h)anthracene	5 J	ND		ND	ND	0.31 J	ND	0.041 J	0.33	0.33	0.33	3.7	3.7
Dibenzofuran	ND	ND		ND	ND	ND	ND	ND	2.1	4.2	18	180	290
Fluoranthene	21	19		1 J	2.8	1.9	0.51 J	0.25	85	100	100	500	1,000
Fluorene	ND	ND		ND	ND	ND	ND	ND	30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	16 J	8.8 J		0.7 J	0.86 J	0.88 J	0.20 J	0.12 J	0.5	0.5	1.4	37	37
Naphthalene	ND	ND		ND	ND	ND	ND	ND	12	84	100	500	1,000
Phenanthrene	ND	5.3 J		0.37 J	2.7	0.75 J	0.33 J	0.15 J	1.1	1.2	4.9	47	78
Pyrene	17 J	15 J		0.81 J	3.1	1.5	0.41 J	0.25	64	100	100	500	1,000

Notes: All units in parts per million (ppm)

ND Analyte not detected

\- Not Applicable or sample not tested for this analyte

J Estimated Concentration

B Anaalyte detected in method blank

K Result is reported as Benzo(b)fluoranthene

E Results exceeded calibration range

T Result is Tentatively Identifies Compound and an estimated value

Analyte detected

Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

Reported concentration greater than or equal to the NYSDEC Residential SCO

Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

Reported concentration greater than or equal to the NYSDEC Commercial SCO

Reported concentration greater than or equal to the NYSDEC Industrial SCO

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS

Parameter Tested	BE3 Phase II Report February 2023 - Sample Identification, Sample Depth in feet below ground surface (bgs), and Sample Date				NYSDEC Soil Cleanup Objectives (SCOs)				
	BH-17 1-2	BH-18 1-3							
	1/17/2023				Unrestricted	Residential	Restricted Residential	Commerical	Industrial
METALS/INORGANICS									
Arsenic	11.8	7.5			13	16	16	16	16
Barium	62.4	77			410	410	410	410	10,000
Beryllium	0.56	0.56			4.4	8.8	43	670	750
Cadmium	0.47	0.34			2.5	2.5	2.5	3.7	4.4
Chromium	10.7	12.2			30	30	110	1,700	2,000
Copper	35.7	26.2			50	280	280	280	10,000
Lead	88	77.2			63	400	400	1,000	3,900
Manganese	120 B	198 B			1,600	2,000	2,000	10,000	10,000
Mercury	0.15	0.097			0.18	0.26	0.26	1.1	1.1
Nickel	15.5	15.9			30	44	210	320	3,400
Zinc	75	92.4			109	1,300	6,600	10,000	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)									
Acenaphthene	ND	0.079 J			20	100	100	500	1,000
Acenaphthylene	ND	0.041 J			100	100	100	500	1,000
Anthracene	ND	0.19 J			100	100	100	500	1,000
Benzo(a)anthracene	0.84 J	0.55			1	1	1.4	37	37
Benzo(a)pyrene	1.3	0.55			1	1	1	3.7	3.7
Benzo(b)fluoranthene	1.7	0.57			1	1	1.4	37	37
Benzo(g,h,i)perylene	1.4	0.4			0.64	1.2	4.9	47	78
Benzo(k)fluoranthene	0.76 J	0.33			0.8	1.2	4.9	47	78
Chrysene	1.1	0.56			1	1.2	4.9	47	78
Dibenz(a,h)anthracene	0.29 J	0.099 J			0.33	0.33	0.33	3.7	3.7
Dibenzofuran	ND	0.056			2.1	4.2	18	180	290
Fluoranthene	1.7	1.4			85	100	100	500	1,000
Fluorene	ND	0.063 J			30	100	100	500	1,000
Indeno(1,2,3-cd)pyrene	1.1	0.36			0.5	0.5	1.4	37	37
Naphthalene	ND	0.043 J			12	84	100	500	1,000
Phenanthrene	0.53 J	1.0			1.1	1.2	4.9	47	78
Pyrene	1.3	1.1			64	100	100	500	1,000

Notes: All units in parts per million (ppm)

ND Analyte not detected

\- Not Applicable or sample not tested for this analyte

J Estimated Concentration

B Analyte detected in method blank

K Result is reported as Benzo(b)fluoranthene

E Results exceeded calibration range

Analyte detected

Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

Reported concentration greater than or equal to the NYSDEC Residential SCO

Reported concentration greater than or equal to the NYSDEC Restricted Residential SCO

Reported concentration greater than or equal to the NYSDEC Commercial SCO

Reported concentration greater than or equal to the NYSDEC Industrial SCO

APPENDICES

APPENDIX A

Field Activity Photolog

Date: 1/17/2023

BH1 Location. (Facing East)

BH1 Location. (Facing South)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH1 cores.

BH2 Location (Facing East)

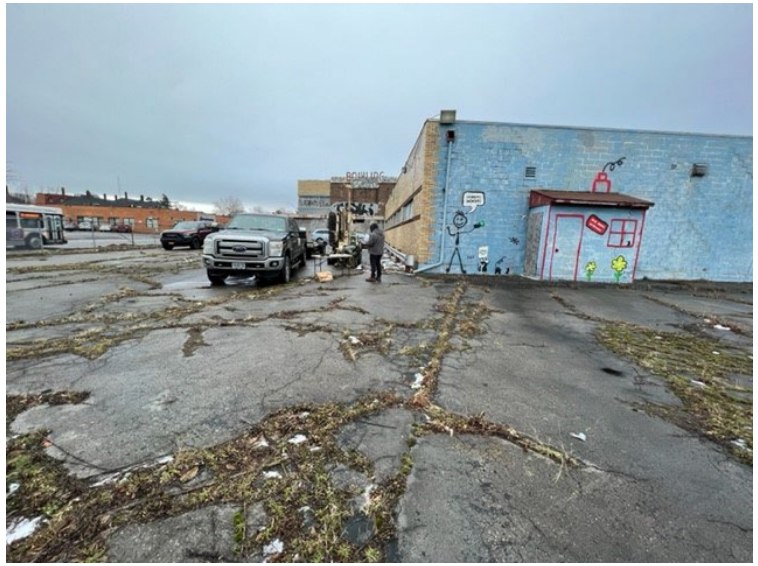
Date: 1/17/2023

BH2 Location (Facing South)

BH2 cores.

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH3 Location. (Facing South)



BH3 Location (Facing East)

Date: 1/17/2023

BH3 cores.

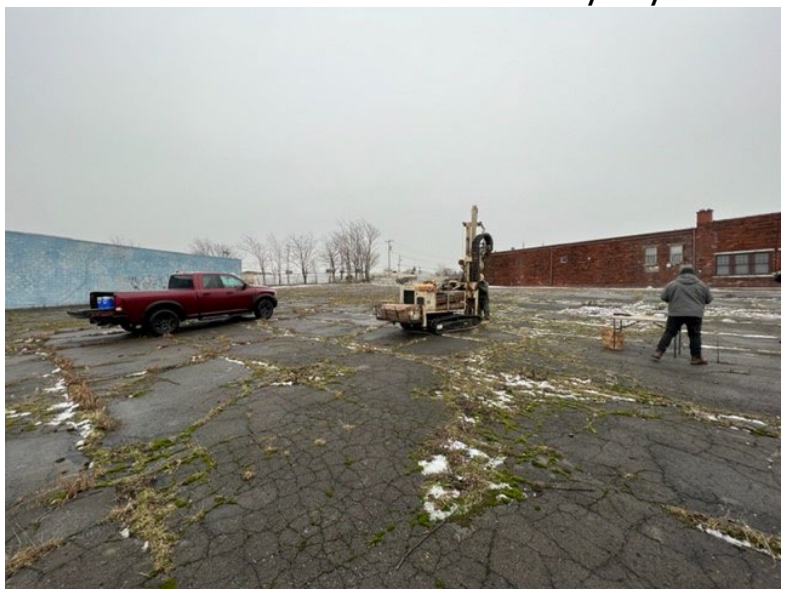
BH4 Location. (Facing Southeast)

BH4 Location. (Facing East)

BH4 cores.

Date: 1/17/2023

BH5 Location. (Facing Northeast)



BH5 Location. (Facing Southeast)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH5 cores.

BH6 Location. (Facing Southeast)

Date: 1/17/2023

BH6 Location. (Facing South)

BH6 cores.

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH7 Location. (Facing Northwest)

BH7 Location. (Facing South)

Date: 1/17/2023

BH7 cores.

BH8 Location. (Facing North)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH8 Location. (Facing South)

BH8 cores.

Date: 1/17/2023

BH9 Location (Facing South)

BH9 Location. (Facing North)

BH9 cores.

BH10 Location. (Facing Northwest)

Date: 1/17/2023

BH10 Location (Facing Southwest)

BH10 cores.

BH11 Location. (Facing Southwest)

BH 11 Location. (Facing West)

Date: 1/17/2023

BH11 cores.

BH12 Location. (Facing West)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH12 Location. (Facing Northwest)

BH12 cores.

Date: 1/17/2023

BH13 Location. (Facing West-southwest)

BH13 Location. (Facing West-northwest)

BH13 cores.

BH14 Location. (Facing southwest)

Date: 1/17/2023

BH14 Location. (Facing West)

BH14 cores.

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH15 Location. (Facing West)

BH15 Location. (Facing Northeast)

Date: 1/17/2023

BH15 cores.

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH16 Location. (Facing East)

BH16 Location. (Facing West)

BH16 cores.

Date: 1/17/2023

BH17 Location. (Facing Southwest)

BH17 Location. (Facing South)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH17 cores.

BH18 location. (Facing Southwest)

Date: 1/17/2023

BH18 Location. (Facing South)

BRYDGES ENGINEERING
IN ENVIRONMENT AND ENERGY, DPC

BH18 cores.

APPENDIX B

Boring Logs

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH1**	Depth to Bedrock:	4.8 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - silty topsoil
1					0.5 - 1 feet - sandy silt, some clay
2					
3					1 - 3 feet - sandy silt, some stone
4					3 - 4 feet - silty clay, some black cinder, some brick, trace small gravel
					4.8 feet - top of bedrock
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 2'-4'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH2**	Depth to Bedrock:	4.8 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					
3					0.5 - 3 feet - Black cinder, silty clay, some gravel
4					
					3 - 4.8 feet - light brown silty clay, some gravel, some black cinder
5					Bore End at 4.8 feet (top of bedrock)
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1'-2'
Top of bedrock at 4.8'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH3**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					0.5 - 1 feet - Black cinder, some silt, white specs throughout
					1 - 1.5 feet - silty sand, rock
2					
3					
4					1.5 - 4 feet - brown silty clay, some sand, some specs of black, orange
					and white
5					Bore End at 4 feet
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1'-2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH4**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					0.5 - 2 feet - Black cinder, gravel, silty sand, some clay, orange
					coloration, presumably brick.
3					
4					2 - 4 feet - wet, gravelly silty clay
					Bore End at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1'-2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH5**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					0.5 - 2 feet - Cinder, tan/white chunks, some black flakes
3					
4					2 - 4 feet - light brown-gray, clayey silt.
					Bore End at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1'-2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH6**	Depth to Bedrock:	2 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt, some vegetation
1					0.5 - 1 feet - brown-red silty clay
2					1 - 2 feet - bedrock. Refusal at 2 feet
					Bore end at 2 feet
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled at 1'
Refusal at 2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH7**	Depth to Bedrock:	1-2 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt, some vegetation
1					0.5 - 1 feet - brown clay, tan/white chunks
2					
					1 - 2.5 feet - bedrock.
3					Bore end at 2.5 feet
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 0.5' - 1'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH8**	Depth to Bedrock:	5 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt, some vegetation
1					
					0.5 - 1.5 feet - brown silty clay, tan/white chunks/cinder, some gravel
2					
3					
4					
5					1.5 - 5 feet - Black cinder, orange and white coloration, some brown
					clay
6					
7					5 - 7.5 feet - top of bedrock. Refusal at 7.5 feet
					Bore end at 7.5 feet
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 3'
Refusal at 7.5 feet

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH9**	Depth to Bedrock:	5.5 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt, some vegetation
1					
					0.5 - 1.5 feet - brown clay, some rock
2					
3					1.5 - 3 feet - brick and rock
4					3 - 4 feet - tan/white cinder, black cinder, brown clay, some rock/gravel
5					
					4 - 5.5 feet - bedrock. Refusal at 5.5 feet
6					Bore end at 5.5 feet
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 2'
Refusal at 5.5 feet

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH10**	Depth to Bedrock:	2.5 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt, some vegetation
1					0.5 - 1 feet - Black cinder
2					1 - 2 feet - brown silty clay, moist
					2 - 2.5 feet light brown-tan silty soil
3					
4					3 - 4 feet - bedrock
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH11**	Depth to Bedrock:	0.5 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt, some vegetation
1					
2					0.5 - 2 feet - bedrock
					Bore end at 2 feet
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
No sample.

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH12**	Depth to Bedrock:	2 feet

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt, some vegetation
1					0.5 - 1 feet - stone
2					1 - 2 feet - brown clay, some rock, white cinder, some coal
3					
4					2 - 4 feet - bedrock
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH13**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					0.5 - 2 feet - black cinder, some coal, brown silty clay
3					2 - 3 feet - rock
4					3 - 4 feet - brown silty clay
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH14**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					0.5 - 2 feet - brown silty clay, stone
3					
4					2 - 4 feet - brown silty sand, some black, some coal, piece of metal
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 2' - 3'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH15**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					0.5 - 2 feet - silty gravel, black cinder, some silty sand
3					
4					2 - 4 feet - brown silty clay, some black and red
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH16**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					0.5 - 2 feet - brown silty clay, some sand and rock
3					
4					2 - 4 feet - black cinder, moist, red color, some silty rock
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 3'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH17**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					0.5 - 2 feet - black cinder
3					
4					2 - 4 feet - brown silty clay, some coal and rock
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 2'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH18**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					
					0.5 - 2.5 feet - black sandy cinder, some brown sand, some rock
3					
4					2.5 - 4 feet - black sandy cindery coal
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 3'

Geoprobe
Bore Hole Log

BE3 BRYDGES ENGINEERING IN ENVIRONMENT AND ENERGY, DPC
960 Busti Avenue, Suite B-150
Buffalo, NY 14213
716.249.6880 be3corp.com

Project:		47 East Amherst Street - Phase II	
Client:	Regan Development	Location:	47 East Amherst Street, Buffalo, NY 14214
Contractor:	SJB	Lat/Long:	
Date Started:	1/17/2023	Equipment Model:	Geoprobe
Date Completed:	1/17/2023	Geologist/Technician:	Pete Gorton & Jacob Cox
Operator:	Art Koske (SJB)	Ground Water:	N/A
Bore Hole Number:	**BH18**	Depth to Bedrock:	N/A

Depth (Ft)	Sample NO	Sample TYPE	REC	PID (ppm)	Description
0					
					0 - 0.5 feet - Asphalt
1					
2					
					0.5 - 2.5 feet - black sandy cinder, some brown sand, some rock
3					
4					2.5 - 4 feet - black sandy cindery coal
					Bore end at 4 feet
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Comments:
No odor.
Sampled from 1' - 3'

APPENDIX C

Laboratory Data

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Jason Brydges
Brydges Engineering in Environment & Energy DPC
960 Busti Ave
Suite B-150
Buffalo, New York 14213

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JOB DESCRIPTION

47 East Amherst Street

JOB NUMBER

480-205527-1

Eurofins Buffalo
10 Hazelwood Drive
Amherst NY 14228-2298

See page two for job notes and contact information.

Job Notes

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

Authorization

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Authorized for release by
John Beninati, Project Manager
John.Beninati@et.eurofinsus.com
(716)504-9874

Table of Contents

Definitions/Glossary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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: 480-205527-1

Laboratory: Eurofins Buffalo

Narrative

Job Narrative
480-205527-1

Comments
No additional comments.

Receipt
The samples were received on 1/18/2023 8:35 AM. 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 2.7º C.

GC/MS Semi VOA
Method 8270D: The following samples were diluted due to color, appearance, and viscosity: BH2 1-2 (480-205527-2), BH3 1-2 (480-205527-3), BH4 1-2 (480-205527-4), BH5 1-2 (480-205527-5), BH6 1 (480-205527-6), BH7 0.5-1 (480-205527-7), BH9 1-2 (480-205527-9), BH10 1-2 (480-205527-10), BH12 1-2 (480-205527-11), BH13 1-2 (480-205527-12), BH14 2-3 (480-205527-13), BH15 1-2 (480-205527-14) and BH17 1-2 (480-205527-16). Elevated reporting limits (RL) are provided.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 480-656499 and analytical batch 480-656667 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected.

Method 8270D: The following samples were diluted due to the nature of the sample matrix: BH5 1-2 (480-205527-5), BH6 1 (480-205527-6), BH9 1-2 (480-205527-9) and BH10 1-2 (480-205527-10). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-656499 and analytical batch 480-656667 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

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

Metals
Method 6010C: The following samples were diluted due to the presence of Total Calcium which interferes with Copper: BH4 1-2 (480-205527-4), BH9 1-2 (480-205527-9) and BH10 1-2 (480-205527-10). Elevated reporting limits (RLs) are provided.

Method 6010C: The following sample was diluted due to the presence of Total Iron which interferes with Chromium, Manganese, Nickel, and Lead: BH5 1-2 (480-205527-5). Elevated reporting limits (RLs) are provided.

Method 6010C: Due to sample matrix effect on the internal standard (ISTD Y_3774), a dilution was required for the following sample: BH14 2-3 (480-205527-13).

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

Organic Prep
Method 3550C: Due to the matrix, the following samples could not be concentrated to the final method required volume: BH5 1-2 (480-205527-5), BH6 1 (480-205527-6), BH9 1-2 (480-205527-9) and BH10 1-2 (480-205527-10). The reporting limits (RLs) are elevated proportionately.

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

Detection Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH1 2-4 — Lab Sample ID: 480-205527-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	170	J F1 F2	190	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	170	J F1 F2	190	29	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	200	F1 F2	190	31	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	100	J F1 F2	190	21	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	79	J F2	190	25	ug/Kg	1	☼	8270D	Total/NA
Chrysene	180	J F1 F2	190	43	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	350	F1 F2	190	21	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	96	J F1 F2	190	24	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	170	J F1 F2	190	29	ug/Kg	1	☼	8270D	Total/NA
Pyrene	310	F1 F2	190	23	ug/Kg	1	☼	8270D	Total/NA
Arsenic	20.0		2.4	0.48	mg/Kg	1	☼	6010C	Total/NA
Barium	39.5		0.60	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.63		0.24	0.034	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.35		0.24	0.036	mg/Kg	1	☼	6010C	Total/NA
Chromium	21.2		0.60	0.24	mg/Kg	1	☼	6010C	Total/NA
Copper	18.3		1.2	0.25	mg/Kg	1	☼	6010C	Total/NA
Lead	46.1		1.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Manganese	386	B	0.24	0.038	mg/Kg	1	☼	6010C	Total/NA
Nickel	24.2		6.0	0.28	mg/Kg	1	☼	6010C	Total/NA
Zinc	43.1		2.4	0.77	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.30	B	0.022	0.0051	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH2 1-2 — Lab Sample ID: 480-205527-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	990	J	2000	200	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	1000	J	2000	300	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	1400	J	2000	330	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	680	J	2000	220	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	460	J	2000	260	ug/Kg	10	☼	8270D	Total/NA
Chrysene	1200	J	2000	460	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	3000		2000	220	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	580	J	2000	250	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	2900		2000	300	ug/Kg	10	☼	8270D	Total/NA
Pyrene	2200		2000	240	ug/Kg	10	☼	8270D	Total/NA
Arsenic	18.5		2.5	0.49	mg/Kg	1	☼	6010C	Total/NA
Barium	400		0.61	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	1.3		0.25	0.034	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.48		0.25	0.037	mg/Kg	1	☼	6010C	Total/NA
Chromium	23.2		0.61	0.25	mg/Kg	1	☼	6010C	Total/NA
Copper	229	F2	1.2	0.26	mg/Kg	1	☼	6010C	Total/NA
Lead	293	F2	1.2	0.29	mg/Kg	1	☼	6010C	Total/NA
Manganese	359	B	0.25	0.039	mg/Kg	1	☼	6010C	Total/NA
Nickel	18.1		6.1	0.28	mg/Kg	1	☼	6010C	Total/NA
Zinc	160	F1	2.5	0.78	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.44	B	0.024	0.0054	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH3 1-2 — Lab Sample ID: 480-205527-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	310	J	1900	280	ug/Kg	10	☼	8270D	Total/NA
Anthracene	710	J	1900	470	ug/Kg	10	☼	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample ID: BH3 1-2 (Continued)
Lab Sample ID: 480-205527-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	1600	J	1900	190	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	1500	J	1900	280	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	2000		1900	300	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	980	J	1900	200	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	710	J	1900	240	ug/Kg	10	☼	8270D	Total/NA
Chrysene	1700	J	1900	420	ug/Kg	10	☼	8270D	Total/NA
Dibenzofuran	270	J	1900	220	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	4000		1900	200	ug/Kg	10	☼	8270D	Total/NA
Fluorene	320	J	1900	220	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	920	J	1900	230	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	3700		1900	280	ug/Kg	10	☼	8270D	Total/NA
Pyrene	3100		1900	220	ug/Kg	10	☼	8270D	Total/NA
Arsenic	8.4		2.4	0.47	mg/Kg	1	☼	6010C	Total/NA
Barium	78.8		0.59	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.53		0.24	0.033	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.64		0.24	0.036	mg/Kg	1	☼	6010C	Total/NA
Chromium	12.4		0.59	0.24	mg/Kg	1	☼	6010C	Total/NA
Copper	42.9		1.2	0.25	mg/Kg	1	☼	6010C	Total/NA
Lead	139		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Manganese	349	B	0.24	0.038	mg/Kg	1	☼	6010C	Total/NA
Nickel	18.3		5.9	0.27	mg/Kg	1	☼	6010C	Total/NA
Zinc	95.7		2.4	0.76	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.14	B	0.023	0.0053	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH4 1-2
Lab Sample ID: 480-205527-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	350	J	890	89	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	340	J	890	130	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	510	J	890	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	340	J	890	94	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	190	J	890	120	ug/Kg	5	☼	8270D	Total/NA
Chrysene	380	J	890	200	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	780	J	890	94	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	270	J	890	110	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	430	J	890	130	ug/Kg	5	☼	8270D	Total/NA
Pyrene	600	J	890	100	ug/Kg	5	☼	8270D	Total/NA
Arsenic	2.8		2.2	0.44	mg/Kg	1	☼	6010C	Total/NA
Barium	29.4		0.55	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.24		0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.26		0.22	0.033	mg/Kg	1	☼	6010C	Total/NA
Chromium	7.5		0.55	0.22	mg/Kg	1	☼	6010C	Total/NA
Copper	15.2		11.0	2.3	mg/Kg	10	☼	6010C	Total/NA
Lead	27.9		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Manganese	142	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	7.5		5.5	0.25	mg/Kg	1	☼	6010C	Total/NA
Zinc	36.3		2.2	0.71	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.19	B	0.022	0.0050	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH5 1-2
Lab Sample ID: 480-205527-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	9.0		2.4	0.49	mg/Kg	1	☼	6010C	Total/NA
Barium	397		0.61	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	3.4		0.24	0.034	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.41		0.24	0.037	mg/Kg	1	☼	6010C	Total/NA
Chromium	204		1.2	0.49	mg/Kg	2	☼	6010C	Total/NA
Copper	31.8		1.2	0.26	mg/Kg	1	☼	6010C	Total/NA
Lead	107		2.4	0.59	mg/Kg	2	☼	6010C	Total/NA
Manganese	213	B	0.49	0.078	mg/Kg	2	☼	6010C	Total/NA
Nickel	64.7		12.2	0.56	mg/Kg	2	☼	6010C	Total/NA
Silver	0.36	J	0.73	0.24	mg/Kg	1	☼	6010C	Total/NA
Zinc	36.7		2.4	0.78	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.054	B	0.023	0.0053	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH6 1
Lab Sample ID: 480-205527-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.4		2.1	0.43	mg/Kg	1	☼	6010C	Total/NA
Barium	74.1		0.53	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.78		0.21	0.030	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.55		0.21	0.032	mg/Kg	1	☼	6010C	Total/NA
Chromium	17.3		0.53	0.21	mg/Kg	1	☼	6010C	Total/NA
Copper	9.7		1.1	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	21.6		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Manganese	1920	B	0.21	0.034	mg/Kg	1	☼	6010C	Total/NA
Nickel	29.9		5.3	0.25	mg/Kg	1	☼	6010C	Total/NA
Zinc	46.3		2.1	0.68	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.065	B	0.023	0.0053	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH7 0.5-1
Lab Sample ID: 480-205527-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	2500		1800	270	ug/Kg	10	☼	8270D	Total/NA
Acenaphthylene	1400	J	1800	240	ug/Kg	10	☼	8270D	Total/NA
Anthracene	9600		1800	450	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]anthracene	18000		1800	180	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	16000		1800	270	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	16000		1800	290	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	10000		1800	190	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	8900		1800	240	ug/Kg	10	☼	8270D	Total/NA
Chrysene	16000		1800	410	ug/Kg	10	☼	8270D	Total/NA
Dibenz(a,h)anthracene	2700		1800	320	ug/Kg	10	☼	8270D	Total/NA
Dibenzofuran	1900		1800	210	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	37000		1800	190	ug/Kg	10	☼	8270D	Total/NA
Fluorene	3800		1800	210	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	9100		1800	230	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	30000		1800	270	ug/Kg	10	☼	8270D	Total/NA
Pyrene	29000		1800	210	ug/Kg	10	☼	8270D	Total/NA
Arsenic	13.6		2.1	0.42	mg/Kg	1	☼	6010C	Total/NA
Barium	391		0.52	0.11	mg/Kg	1	☼	6010C	Total/NA
Beryllium	1.9		0.21	0.029	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.31		0.21	0.031	mg/Kg	1	☼	6010C	Total/NA
Chromium	59.7		0.52	0.21	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Buffalo

Client Sample ID: BH7 0.5-1 (Continued)
Lab Sample ID: 480-205527-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	25.4		1.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	71.0		1.0	0.25	mg/Kg	1	☼	6010C	Total/NA
Manganese	203	B	0.21	0.033	mg/Kg	1	☼	6010C	Total/NA
Nickel	30.9		5.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Silver	0.28	J	0.62	0.21	mg/Kg	1	☼	6010C	Total/NA
Zinc	36.3		2.1	0.67	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.085	B	0.022	0.0051	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH8 1-3
Lab Sample ID: 480-205527-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	31	J	210	30	ug/Kg	1	☼	8270D	Total/NA
Anthracene	89	J	210	51	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	300		210	21	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	330		210	30	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	380		210	33	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	270		210	22	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	190	J	210	27	ug/Kg	1	☼	8270D	Total/NA
Chrysene	340		210	46	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	70	J	210	36	ug/Kg	1	☼	8270D	Total/NA
Dibenzofuran	29	J	210	24	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	580		210	22	ug/Kg	1	☼	8270D	Total/NA
Fluorene	25	J	210	24	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	230		210	25	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	450		210	30	ug/Kg	1	☼	8270D	Total/NA
Pyrene	480		210	24	ug/Kg	1	☼	8270D	Total/NA
Arsenic	15.4		2.6	0.52	mg/Kg	1	☼	6010C	Total/NA
Barium	101		0.65	0.14	mg/Kg	1	☼	6010C	Total/NA
Beryllium	1.3		0.26	0.036	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.30		0.26	0.039	mg/Kg	1	☼	6010C	Total/NA
Chromium	12.0		0.65	0.26	mg/Kg	1	☼	6010C	Total/NA
Copper	24.0		1.3	0.27	mg/Kg	1	☼	6010C	Total/NA
Lead	38.9		1.3	0.31	mg/Kg	1	☼	6010C	Total/NA
Manganese	234	B	0.26	0.041	mg/Kg	1	☼	6010C	Total/NA
Nickel	20.3		6.5	0.30	mg/Kg	1	☼	6010C	Total/NA
Zinc	23.7		2.6	0.83	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.034	B	0.024	0.0055	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH9 1-2
Lab Sample ID: 480-205527-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	16000	J	18000	1800	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	22000		18000	2600	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	26000		18000	2800	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	17000	J	18000	1900	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	14000	J	18000	2300	ug/Kg	10	☼	8270D	Total/NA
Chrysene	19000		18000	4000	ug/Kg	10	☼	8270D	Total/NA
Dibenz(a,h)anthracene	5000	J	18000	3200	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	21000		18000	1900	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	16000	J	18000	2200	ug/Kg	10	☼	8270D	Total/NA
Pyrene	17000	J	18000	2100	ug/Kg	10	☼	8270D	Total/NA
Arsenic	3.0		2.2	0.44	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BH9 1-2 (Continued)
Lab Sample ID: 480-205527-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	20.4		0.55	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.19	J	0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.87		0.22	0.033	mg/Kg	1	☼	6010C	Total/NA
Chromium	16.9		0.55	0.22	mg/Kg	1	☼	6010C	Total/NA
Copper	18.1		11.0	2.3	mg/Kg	10	☼	6010C	Total/NA
Lead	175		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Manganese	140	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	11.4		5.5	0.25	mg/Kg	1	☼	6010C	Total/NA
Zinc	99.6		2.2	0.71	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.042	B	0.021	0.0049	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH10 1-2
Lab Sample ID: 480-205527-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	9700	J	19000	1900	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	12000	J	19000	2800	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	15000	J	19000	3100	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	11000	J	19000	2000	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	7600	J	19000	2500	ug/Kg	10	☼	8270D	Total/NA
Chrysene	12000	J	19000	4300	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	19000		19000	2000	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	8800	J	19000	2400	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	5300	J	19000	2800	ug/Kg	10	☼	8270D	Total/NA
Pyrene	15000	J	19000	2300	ug/Kg	10	☼	8270D	Total/NA
Arsenic	1.2	J	2.2	0.44	mg/Kg	1	☼	6010C	Total/NA
Barium	5.3		0.55	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.098	J	0.22	0.031	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.24		0.22	0.033	mg/Kg	1	☼	6010C	Total/NA
Chromium	3.7		0.55	0.22	mg/Kg	1	☼	6010C	Total/NA
Copper	4.9	J	5.5	1.1	mg/Kg	5	☼	6010C	Total/NA
Lead	18.3		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Manganese	63.0	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	4.2	J	5.5	0.25	mg/Kg	1	☼	6010C	Total/NA
Zinc	18.6		2.2	0.70	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.014	J B	0.020	0.0045	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH12 1-2
Lab Sample ID: 480-205527-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	460	J	1800	180	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	770	J	1800	270	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	1000	J	1800	290	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	790	J	1800	190	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	400	J	1800	230	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	1000	J	1800	190	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	700	J	1800	220	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	370	J	1800	270	ug/Kg	10	☼	8270D	Total/NA
Pyrene	810	J	1800	210	ug/Kg	10	☼	8270D	Total/NA
Arsenic	9.9		2.1	0.43	mg/Kg	1	☼	6010C	Total/NA
Barium	195		0.54	0.12	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.73		0.21	0.030	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.55		0.21	0.032	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BH12 1-2 (Continued)
Lab Sample ID: 480-205527-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	23.8		0.54	0.21	mg/Kg	1	☼	6010C	Total/NA
Copper	42.0		1.1	0.23	mg/Kg	1	☼	6010C	Total/NA
Lead	109		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Manganese	271	B	0.21	0.034	mg/Kg	1	☼	6010C	Total/NA
Nickel	28.6		5.4	0.25	mg/Kg	1	☼	6010C	Total/NA
Zinc	91.5		2.1	0.69	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.10		0.021	0.0048	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH13 1-2
Lab Sample ID: 480-205527-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	1400	J	2100	210	ug/Kg	10	☼	8270D	Total/NA
Benzo[a]pyrene	1400	J	2100	300	ug/Kg	10	☼	8270D	Total/NA
Benzo[b]fluoranthene	1400	J	2100	330	ug/Kg	10	☼	8270D	Total/NA
Benzo[g,h,i]perylene	1000	J	2100	220	ug/Kg	10	☼	8270D	Total/NA
Benzo[k]fluoranthene	840	J	2100	270	ug/Kg	10	☼	8270D	Total/NA
Chrysene	1700	J	2100	460	ug/Kg	10	☼	8270D	Total/NA
Fluoranthene	2800		2100	220	ug/Kg	10	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	860	J	2100	250	ug/Kg	10	☼	8270D	Total/NA
Phenanthrene	2700		2100	300	ug/Kg	10	☼	8270D	Total/NA
Pyrene	3100		2100	240	ug/Kg	10	☼	8270D	Total/NA
Arsenic	10.1		2.5	0.49	mg/Kg	1	☼	6010C	Total/NA
Barium	68.7		0.62	0.14	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.86		0.25	0.034	mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.1		0.25	0.037	mg/Kg	1	☼	6010C	Total/NA
Chromium	16.6		0.62	0.25	mg/Kg	1	☼	6010C	Total/NA
Copper	39.1		1.2	0.26	mg/Kg	1	☼	6010C	Total/NA
Lead	125		1.2	0.30	mg/Kg	1	☼	6010C	Total/NA
Manganese	270	B	0.25	0.039	mg/Kg	1	☼	6010C	Total/NA
Nickel	24.4		6.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Zinc	187		2.5	0.79	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.27		0.025	0.0058	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH14 2-3
Lab Sample ID: 480-205527-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	1100		970	97	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	1200		970	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	1600		970	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	1000		970	100	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	540	J	970	130	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1400		970	220	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	310	J	970	170	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	1900		970	100	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	880	J	970	120	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	750	J	970	140	ug/Kg	5	☼	8270D	Total/NA
Pyrene	1500		970	110	ug/Kg	5	☼	8270D	Total/NA
Arsenic	4.8		2.2	0.44	mg/Kg	1	☼	6010C	Total/NA
Barium	171		1.1	0.24	mg/Kg	2	☼	6010C	Total/NA
Cadmium	0.087	J	0.22	0.033	mg/Kg	1	☼	6010C	Total/NA
Chromium	7.2		0.55	0.22	mg/Kg	1	☼	6010C	Total/NA
Copper	17.0		1.1	0.23	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BH14 2-3 (Continued)
Lab Sample ID: 480-205527-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	29.2		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Manganese	394	B	0.22	0.035	mg/Kg	1	☼	6010C	Total/NA
Nickel	9.3		5.5	0.25	mg/Kg	1	☼	6010C	Total/NA
Zinc	21.5		2.2	0.70	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.069		0.024	0.0055	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH15 1-2
Lab Sample ID: 480-205527-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	260	J	990	99	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	290	J	990	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	340	J	990	160	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	200	J	990	110	ug/Kg	5	☼	8270D	Total/NA
Chrysene	270	J	990	220	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	510	J	990	110	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	200	J	990	120	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	330	J	990	150	ug/Kg	5	☼	8270D	Total/NA
Pyrene	410	J	990	120	ug/Kg	5	☼	8270D	Total/NA
Arsenic	52.5		2.4	0.47	mg/Kg	1	☼	6010C	Total/NA
Barium	89.4		0.59	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	1.7		0.24	0.033	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.63		0.24	0.035	mg/Kg	1	☼	6010C	Total/NA
Chromium	20.5		0.59	0.24	mg/Kg	1	☼	6010C	Total/NA
Copper	102		1.2	0.25	mg/Kg	1	☼	6010C	Total/NA
Lead	141		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Manganese	152	B	0.24	0.038	mg/Kg	1	☼	6010C	Total/NA
Nickel	37.4		5.9	0.27	mg/Kg	1	☼	6010C	Total/NA
Silver	0.50	J	0.71	0.24	mg/Kg	1	☼	6010C	Total/NA
Zinc	103		2.4	0.75	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.067		0.023	0.0053	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH16 1-3
Lab Sample ID: 480-205527-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	160	J	190	19	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	190		190	28	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	240		190	30	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	130	J	190	20	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	67	J	190	25	ug/Kg	1	☼	8270D	Total/NA
Chrysene	170	J	190	42	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	41	J	190	33	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	250		190	20	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	120	J	190	23	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	150	J	190	28	ug/Kg	1	☼	8270D	Total/NA
Pyrene	250		190	22	ug/Kg	1	☼	8270D	Total/NA
Arsenic	11.3		2.3	0.46	mg/Kg	1	☼	6010C	Total/NA
Barium	54.3		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.53		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.15	J	0.23	0.035	mg/Kg	1	☼	6010C	Total/NA
Chromium	6.9		0.58	0.23	mg/Kg	1	☼	6010C	Total/NA
Copper	31.8		1.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Lead	12.6		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BH16 1-3 (Continued)
Lab Sample ID: 480-205527-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	85.1	B	0.23	0.037	mg/Kg	1	☼	6010C	Total/NA
Nickel	14.5		5.8	0.26	mg/Kg	1	☼	6010C	Total/NA
Zinc	17.7		2.3	0.74	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.064		0.023	0.0053	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH17 1-2
Lab Sample ID: 480-205527-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	840	J	920	92	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	1300		920	130	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	1700		920	150	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	1400		920	97	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	760	J	920	120	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1100		920	200	ug/Kg	5	☼	8270D	Total/NA
Dibenz(a,h)anthracene	290	J	920	160	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	1700		920	97	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	1100		920	110	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	530	J	920	130	ug/Kg	5	☼	8270D	Total/NA
Pyrene	1300		920	110	ug/Kg	5	☼	8270D	Total/NA
Arsenic	11.8		2.1	0.41	mg/Kg	1	☼	6010C	Total/NA
Barium	62.4		0.51	0.11	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.56		0.21	0.029	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.47		0.21	0.031	mg/Kg	1	☼	6010C	Total/NA
Chromium	10.7		0.51	0.21	mg/Kg	1	☼	6010C	Total/NA
Copper	35.7		1.0	0.22	mg/Kg	1	☼	6010C	Total/NA
Lead	87.6		1.0	0.25	mg/Kg	1	☼	6010C	Total/NA
Manganese	120	B	0.21	0.033	mg/Kg	1	☼	6010C	Total/NA
Nickel	15.5		5.1	0.24	mg/Kg	1	☼	6010C	Total/NA
Zinc	75.4		2.1	0.66	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.15		0.021	0.0049	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: BH18 1-3
Lab Sample ID: 480-205527-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	79	J	200	29	ug/Kg	1	☼	8270D	Total/NA
Acenaphthylene	41	J	200	26	ug/Kg	1	☼	8270D	Total/NA
Anthracene	190	J	200	49	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	550		200	20	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	550		200	29	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	570		200	32	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	400		200	21	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	330		200	26	ug/Kg	1	☼	8270D	Total/NA
Chrysene	560		200	45	ug/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	99	J	200	35	ug/Kg	1	☼	8270D	Total/NA
Dibenzofuran	56	J	200	23	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	1400		200	21	ug/Kg	1	☼	8270D	Total/NA
Fluorene	63	J	200	23	ug/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	360		200	25	ug/Kg	1	☼	8270D	Total/NA
Naphthalene	43	J	200	26	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	1000		200	29	ug/Kg	1	☼	8270D	Total/NA
Pyrene	1100		200	23	ug/Kg	1	☼	8270D	Total/NA
Arsenic	7.5		2.3	0.46	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BH18 1-3 (Continued)
Lab Sample ID: 480-205527-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	76.5		0.58	0.13	mg/Kg	1	☼	6010C	Total/NA
Beryllium	0.56		0.23	0.032	mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.34		0.23	0.035	mg/Kg	1	☼	6010C	Total/NA
Chromium	12.2		0.58	0.23	mg/Kg	1	☼	6010C	Total/NA
Copper	26.2		1.2	0.24	mg/Kg	1	☼	6010C	Total/NA
Lead	77.2		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Manganese	198	B	0.23	0.037	mg/Kg	1	☼	6010C	Total/NA
Nickel	15.9		5.8	0.27	mg/Kg	1	☼	6010C	Total/NA
Zinc	92.4		2.3	0.74	mg/Kg	1	☼	6010C	Total/NA
Mercury	0.097		0.023	0.0052	mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BH1 2-4
Date Collected: 01/17/23 08:30
Date Received: 01/18/23 08:35

Lab Sample ID: 480-205527-1
Matrix: Solid
Percent Solids: 86.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	110	U	110	63	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
2-Methylphenol	190	U	190	23	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
3-Methylphenol	380	U	380	30	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
4-Methylphenol	380	U	380	23	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Acenaphthene	190	U	190	29	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Acenaphthylene	190	U	190	25	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Anthracene	190	U F1 F2	190	48	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Benzo[a]anthracene	**170**	**J F1 F2**	190	19	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Benzo[a]pyrene	**170**	**J F1 F2**	190	29	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Benzo[b]fluoranthene	**200**	**F1 F2**	190	31	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Benzo[g,h,i]perylene	**100**	**J F1 F2**	190	21	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Benzo[k]fluoranthene	**79**	**J F2**	190	25	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Chrysene	**180**	**J F1 F2**	190	43	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Dibenz(a,h)anthracene	190	U F1 F2	190	34	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Dibenzofuran	190	U F2	190	23	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Fluoranthene	**350**	**F1 F2**	190	21	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Fluorene	190	U F2	190	23	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Hexachlorobenzene	190	U	190	26	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Indeno[1,2,3-cd]pyrene	**96**	**J F1 F2**	190	24	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Naphthalene	190	U	190	25	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Pentachlorophenol	380	U	380	190	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Phenanthrene	**170**	**J F1 F2**	190	29	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Phenol	190	U	190	30	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1
Pyrene	**310**	**F1 F2**	190	23	ug/Kg	☼	01/19/23 15:30	01/24/23 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*79*		*54 - 120*	*01/19/23 15:30*	*01/24/23 01:09*	*1*
2-Fluorobiphenyl (Surr)	*75*		*60 - 120*	*01/19/23 15:30*	*01/24/23 01:09*	*1*
2-Fluorophenol (Surr)	*72*		*52 - 120*	*01/19/23 15:30*	*01/24/23 01:09*	*1*
Nitrobenzene-d5 (Surr)	*71*		*53 - 120*	*01/19/23 15:30*	*01/24/23 01:09*	*1*
Phenol-d5 (Surr)	*73*		*54 - 120*	*01/19/23 15:30*	*01/24/23 01:09*	*1*
p-Terphenyl-d14 (Surr)	*96*		*79 - 130*	*01/19/23 15:30*	*01/24/23 01:09*	*1*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**20.0**		2.4	0.48	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Barium	**39.5**		0.60	0.13	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Beryllium	**0.63**		0.24	0.034	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Cadmium	**0.35**		0.24	0.036	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Chromium	**21.2**		0.60	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Copper	**18.3**		1.2	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Lead	**46.1**		1.2	0.29	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Manganese	**386**	**B**	0.24	0.038	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Nickel	**24.2**		6.0	0.28	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Selenium	4.8	U	4.8	0.48	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Silver	0.72	U	0.72	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1
Zinc	**43.1**		2.4	0.77	mg/Kg	☼	01/19/23 11:45	01/20/23 16:55	1

Client Sample ID: BH1 2-4
Lab Sample ID: 480-205527-1
Date Collected: 01/17/23 08:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 86.9

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.30**	**B**	0.022	0.0051	mg/Kg	☼	01/23/23 11:29	01/23/23 16:16	1

Client Sample ID: BH2 1-2
Lab Sample ID: 480-205527-2
Date Collected: 01/17/23 08:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1200	U	1200	660	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
2-Methylphenol	2000	U	2000	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
3-Methylphenol	4000	U	4000	310	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
4-Methylphenol	4000	U	4000	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Acenaphthene	2000	U	2000	300	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Acenaphthylene	2000	U	2000	260	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Anthracene	2000	U	2000	510	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Benzo[a]anthracene	**990**	**J**	2000	200	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Benzo[a]pyrene	**1000**	**J**	2000	300	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Benzo[b]fluoranthene	**1400**	**J**	2000	330	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Benzo[g,h,i]perylene	**680**	**J**	2000	220	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Benzo[k]fluoranthene	**460**	**J**	2000	260	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Chrysene	**1200**	**J**	2000	460	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Dibenz(a,h)anthracene	2000	U	2000	360	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Dibenzofuran	2000	U	2000	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Fluoranthene	**3000**		2000	220	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Fluorene	2000	U	2000	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Hexachlorobenzene	2000	U	2000	280	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Indeno[1,2,3-cd]pyrene	**580**	**J**	2000	250	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Naphthalene	2000	U	2000	260	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Pentachlorophenol	4000	U	4000	2000	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Phenanthrene	**2900**		2000	300	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Phenol	2000	U	2000	310	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10
Pyrene	**2200**		2000	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:34	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*95*		*54 - 120*	*01/19/23 15:30*	*01/24/23 01:34*	*10*
2-Fluorobiphenyl (Surr)	*95*		*60 - 120*	*01/19/23 15:30*	*01/24/23 01:34*	*10*
2-Fluorophenol (Surr)	*82*		*52 - 120*	*01/19/23 15:30*	*01/24/23 01:34*	*10*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*	*01/19/23 15:30*	*01/24/23 01:34*	*10*
Phenol-d5 (Surr)	*91*		*54 - 120*	*01/19/23 15:30*	*01/24/23 01:34*	*10*
p-Terphenyl-d14 (Surr)	*105*		*79 - 130*	*01/19/23 15:30*	*01/24/23 01:34*	*10*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**18.5**		2.5	0.49	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Barium	**400**		0.61	0.13	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Beryllium	**1.3**		0.25	0.034	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Cadmium	**0.48**		0.25	0.037	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Chromium	**23.2**		0.61	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Copper	**229**	**F2**	1.2	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Lead	**293**	**F2**	1.2	0.29	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1

Client Sample ID: BH2 1-2
Lab Sample ID: 480-205527-2
Date Collected: 01/17/23 08:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.8

Method: SW846 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**359**	**B**	0.25	0.039	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Nickel	**18.1**		6.1	0.28	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Selenium	4.9	U	4.9	0.49	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Silver	0.74	U	0.74	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1
Zinc	**160**	**F1**	2.5	0.78	mg/Kg	☼	01/19/23 11:45	01/20/23 16:58	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.44**	**B**	0.024	0.0054	mg/Kg	☼	01/23/23 11:29	01/23/23 16:17	1

Client Sample ID: BH3 1-2
Lab Sample ID: 480-205527-3
Date Collected: 01/17/23 09:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 89.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1100	U	1100	610	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
2-Methylphenol	1900	U	1900	220	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
3-Methylphenol	3700	U	3700	290	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
4-Methylphenol	3700	U	3700	220	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Acenaphthene	**310**	**J**	1900	280	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Acenaphthylene	1900	U	1900	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Anthracene	**710**	**J**	1900	470	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Benzo[a]anthracene	**1600**	**J**	1900	190	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Benzo[a]pyrene	**1500**	**J**	1900	280	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Benzo[b]fluoranthene	**2000**		1900	300	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Benzo[g,h,i]perylene	**980**	**J**	1900	200	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Benzo[k]fluoranthene	**710**	**J**	1900	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Chrysene	**1700**	**J**	1900	420	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Dibenz(a,h)anthracene	1900	U	1900	330	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Dibenzofuran	**270**	**J**	1900	220	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Fluoranthene	**4000**		1900	200	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Fluorene	**320**	**J**	1900	220	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Hexachlorobenzene	1900	U	1900	260	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Indeno[1,2,3-cd]pyrene	**920**	**J**	1900	230	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Naphthalene	1900	U	1900	240	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Pentachlorophenol	3700	U	3700	1900	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Phenanthrene	**3700**		1900	280	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Phenol	1900	U	1900	290	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10
Pyrene	**3100**		1900	220	ug/Kg	☼	01/19/23 15:30	01/24/23 01:58	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*54 - 120*	*01/19/23 15:30*	*01/24/23 01:58*	*10*
2-Fluorobiphenyl (Surr)	*95*		*60 - 120*	*01/19/23 15:30*	*01/24/23 01:58*	*10*
2-Fluorophenol (Surr)	*77*		*52 - 120*	*01/19/23 15:30*	*01/24/23 01:58*	*10*
Nitrobenzene-d5 (Surr)	*78*		*53 - 120*	*01/19/23 15:30*	*01/24/23 01:58*	*10*
Phenol-d5 (Surr)	*80*		*54 - 120*	*01/19/23 15:30*	*01/24/23 01:58*	*10*
p-Terphenyl-d14 (Surr)	*98*		*79 - 130*	*01/19/23 15:30*	*01/24/23 01:58*	*10*

Client Sample ID: BH3 1-2
Lab Sample ID: 480-205527-3
Date Collected: 01/17/23 09:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 89.4

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**8.4**		2.4	0.47	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Barium	**78.8**		0.59	0.13	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Beryllium	**0.53**		0.24	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Cadmium	**0.64**		0.24	0.036	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Chromium	**12.4**		0.59	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Copper	**42.9**		1.2	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Lead	**139**		1.2	0.28	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Manganese	**349**	**B**	0.24	0.038	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Nickel	**18.3**		5.9	0.27	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Selenium	4.7	U	4.7	0.47	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Silver	0.71	U	0.71	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1
Zinc	**95.7**		2.4	0.76	mg/Kg	☼	01/19/23 11:45	01/20/23 17:19	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.14**	**B**	0.023	0.0053	mg/Kg	☼	01/23/23 11:29	01/23/23 16:19	1

Client Sample ID: BH4 1-2
Lab Sample ID: 480-205527-4
Date Collected: 01/17/23 09:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 94.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	520	U	520	290	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
2-Methylphenol	890	U	890	100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
3-Methylphenol	1700	U	1700	140	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
4-Methylphenol	1700	U	1700	100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Acenaphthene	890	U	890	130	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Acenaphthylene	890	U	890	120	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Anthracene	890	U	890	220	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Benzo[a]anthracene	**350**	**J**	890	89	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Benzo[a]pyrene	**340**	**J**	890	130	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Benzo[b]fluoranthene	**510**	**J**	890	140	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Benzo[g,h,i]perylene	**340**	**J**	890	94	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Benzo[k]fluoranthene	**190**	**J**	890	120	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Chrysene	**380**	**J**	890	200	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Dibenz(a,h)anthracene	890	U	890	160	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Dibenzofuran	890	U	890	100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Fluoranthene	**780**	**J**	890	94	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Fluorene	890	U	890	100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Hexachlorobenzene	890	U	890	120	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Indeno[1,2,3-cd]pyrene	**270**	**J**	890	110	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Naphthalene	890	U	890	120	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Pentachlorophenol	1700	U	1700	890	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Phenanthrene	**430**	**J**	890	130	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Phenol	890	U	890	140	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5
Pyrene	**600**	**J**	890	100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:23	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*54 - 120*	*01/19/23 15:30*	*01/24/23 02:23*	*5*

Client Sample ID: BH4 1-2
Lab Sample ID: 480-205527-4

Date Collected: 01/17/23 09:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 94.8

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*87*		*60 - 120*	*01/19/23 15:30*	*01/24/23 02:23*	*5*
2-Fluorophenol (Surr)	*71*		*52 - 120*	*01/19/23 15:30*	*01/24/23 02:23*	*5*
Nitrobenzene-d5 (Surr)	*74*		*53 - 120*	*01/19/23 15:30*	*01/24/23 02:23*	*5*
Phenol-d5 (Surr)	*77*		*54 - 120*	*01/19/23 15:30*	*01/24/23 02:23*	*5*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*	*01/19/23 15:30*	*01/24/23 02:23*	*5*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.8**		2.2	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Barium	**29.4**		0.55	0.12	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Beryllium	**0.24**		0.22	0.031	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Cadmium	**0.26**		0.22	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Chromium	**7.5**		0.55	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Copper	**15.2**		11.0	2.3	mg/Kg	☼	01/19/23 11:45	01/25/23 16:47	10
Lead	**27.9**		1.1	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Manganese	**142**	**B**	0.22	0.035	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Nickel	**7.5**		5.5	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Selenium	4.4	U	4.4	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Silver	0.66	U	0.66	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1
Zinc	**36.3**		2.2	0.71	mg/Kg	☼	01/19/23 11:45	01/20/23 17:34	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.19**	**B**	0.022	0.0050	mg/Kg	☼	01/23/23 11:29	01/23/23 16:20	1

Client Sample ID: BH5 1-2
Lab Sample ID: 480-205527-5

Date Collected: 01/17/23 09:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 85.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	12000	U	12000	6400	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
2-Methylphenol	20000	U	20000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
3-Methylphenol	38000	U	38000	3000	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
4-Methylphenol	38000	U	38000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Acenaphthene	20000	U	20000	2900	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Acenaphthylene	20000	U	20000	2500	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Anthracene	20000	U	20000	4900	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Benzo[a]anthracene	20000	U	20000	2000	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Benzo[a]pyrene	20000	U	20000	2900	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Benzo[b]fluoranthene	20000	U	20000	3100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Benzo[g,h,i]perylene	20000	U	20000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Benzo[k]fluoranthene	20000	U	20000	2500	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Chrysene	20000	U	20000	4400	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Dibenz(a,h)anthracene	20000	U	20000	3500	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Dibenzofuran	20000	U	20000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Fluoranthene	20000	U	20000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Fluorene	20000	U	20000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Hexachlorobenzene	20000	U	20000	2700	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Indeno[1,2,3-cd]pyrene	20000	U	20000	2400	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10

Client Sample ID: BH5 1-2
Lab Sample ID: 480-205527-5
Date Collected: 01/17/23 09:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 85.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	20000	U	20000	2500	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Pentachlorophenol	38000	U	38000	20000	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Phenanthrene	20000	U	20000	2900	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Phenol	20000	U	20000	3000	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10
Pyrene	20000	U	20000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 02:48	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*S1-*	*54 - 120*	*01/19/23 15:30*	*01/24/23 02:48*	*10*
2-Fluorobiphenyl (Surr)	*103*		*60 - 120*	*01/19/23 15:30*	*01/24/23 02:48*	*10*
2-Fluorophenol (Surr)	*0*	*S1-*	*52 - 120*	*01/19/23 15:30*	*01/24/23 02:48*	*10*
Nitrobenzene-d5 (Surr)	*0*	*S1-*	*53 - 120*	*01/19/23 15:30*	*01/24/23 02:48*	*10*
Phenol-d5 (Surr)	*83*		*54 - 120*	*01/19/23 15:30*	*01/24/23 02:48*	*10*
p-Terphenyl-d14 (Surr)	*112*		*79 - 130*	*01/19/23 15:30*	*01/24/23 02:48*	*10*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**9.0**		2.4	0.49	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1
Barium	**397**		0.61	0.13	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1
Beryllium	**3.4**		0.24	0.034	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1
Cadmium	**0.41**		0.24	0.037	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1
Chromium	**204**		1.2	0.49	mg/Kg	☼	01/19/23 11:45	01/25/23 16:51	2
Copper	**31.8**		1.2	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1
Lead	**107**		2.4	0.59	mg/Kg	☼	01/19/23 11:45	01/25/23 16:51	2
Manganese	**213**	**B**	0.49	0.078	mg/Kg	☼	01/19/23 11:45	01/25/23 16:51	2
Nickel	**64.7**		12.2	0.56	mg/Kg	☼	01/19/23 11:45	01/25/23 16:51	2
Selenium	4.9	U	4.9	0.49	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1
Silver	**0.36**	**J**	0.73	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1
Zinc	**36.7**		2.4	0.78	mg/Kg	☼	01/19/23 11:45	01/20/23 17:38	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.054**	**B**	0.023	0.0053	mg/Kg	☼	01/23/23 11:29	01/23/23 16:21	1

Client Sample ID: BH6 1
Lab Sample ID: 480-205527-6
Date Collected: 01/17/23 09:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	11000	U	11000	6000	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
2-Methylphenol	19000	U	19000	2200	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
3-Methylphenol	36000	U	36000	2800	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
4-Methylphenol	36000	U	36000	2200	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Acenaphthene	19000	U	19000	2700	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Acenaphthylene	19000	U	19000	2400	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Anthracene	19000	U	19000	4600	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Benzo[a]anthracene	19000	U	19000	1900	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Benzo[a]pyrene	19000	U	19000	2700	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Benzo[b]fluoranthene	19000	U	19000	3000	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Benzo[g,h,i]perylene	19000	U	19000	2000	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Benzo[k]fluoranthene	19000	U	19000	2400	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10

Client Sample ID: BH6 1
Lab Sample ID: 480-205527-6
Date Collected: 01/17/23 09:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	19000	U	19000	4200	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Dibenz(a,h)anthracene	19000	U	19000	3300	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Dibenzofuran	19000	U	19000	2200	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Fluoranthene	19000	U	19000	2000	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Fluorene	19000	U	19000	2200	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Hexachlorobenzene	19000	U	19000	2500	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Indeno[1,2,3-cd]pyrene	19000	U	19000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Naphthalene	19000	U	19000	2400	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Pentachlorophenol	36000	U	36000	19000	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Phenanthrene	19000	U	19000	2700	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Phenol	19000	U	19000	2800	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10
Pyrene	19000	U	19000	2200	ug/Kg	☼	01/19/23 15:30	01/24/23 03:12	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*S1-*	*54 - 120*	*01/19/23 15:30*	*01/24/23 03:12*	*10*
2-Fluorobiphenyl (Surr)	*103*		*60 - 120*	*01/19/23 15:30*	*01/24/23 03:12*	*10*
2-Fluorophenol (Surr)	*0*	*S1-*	*52 - 120*	*01/19/23 15:30*	*01/24/23 03:12*	*10*
Nitrobenzene-d5 (Surr)	*0*	*S1-*	*53 - 120*	*01/19/23 15:30*	*01/24/23 03:12*	*10*
Phenol-d5 (Surr)	*89*		*54 - 120*	*01/19/23 15:30*	*01/24/23 03:12*	*10*
p-Terphenyl-d14 (Surr)	*112*		*79 - 130*	*01/19/23 15:30*	*01/24/23 03:12*	*10*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.4**		2.1	0.43	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Barium	**74.1**		0.53	0.12	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Beryllium	**0.78**		0.21	0.030	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Cadmium	**0.55**		0.21	0.032	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Chromium	**17.3**		0.53	0.21	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Copper	**9.7**		1.1	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Lead	**21.6**		1.1	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Manganese	**1920**	**B**	0.21	0.034	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Nickel	**29.9**		5.3	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Selenium	4.3	U	4.3	0.43	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Silver	0.64	U	0.64	0.21	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1
Zinc	**46.3**		2.1	0.68	mg/Kg	☼	01/19/23 11:45	01/20/23 17:42	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.065**	**B**	0.023	0.0053	mg/Kg	☼	01/23/23 11:29	01/23/23 16:25	1

Client Sample ID: BH7 0.5-1
Lab Sample ID: 480-205527-7
Date Collected: 01/17/23 10:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 91.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1100	U	1100	590	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
2-Methylphenol	1800	U	1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
3-Methylphenol	3500	U	3500	280	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
4-Methylphenol	3500	U	3500	210	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Acenaphthene	**2500**		1800	270	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10

Client Sample ID: BH7 0.5-1
Date Collected: 01/17/23 10:00
Date Received: 01/18/23 08:35

Lab Sample ID: 480-205527-7
Matrix: Solid
Percent Solids: 91.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	**1400**	**J**	1800	240	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Anthracene	**9600**		1800	450	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Benzo[a]anthracene	**18000**		1800	180	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Benzo[a]pyrene	**16000**		1800	270	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Benzo[b]fluoranthene	**16000**		1800	290	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Benzo[g,h,i]perylene	**10000**		1800	190	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Benzo[k]fluoranthene	**8900**		1800	240	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Chrysene	**16000**		1800	410	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Dibenz(a,h)anthracene	**2700**		1800	320	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Dibenzofuran	**1900**		1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Fluoranthene	**37000**		1800	190	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Fluorene	**3800**		1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Hexachlorobenzene	1800	U	1800	250	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Indeno[1,2,3-cd]pyrene	**9100**		1800	230	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Naphthalene	1800	U	1800	240	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Pentachlorophenol	3500	U	3500	1800	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Phenanthrene	**30000**		1800	270	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Phenol	1800	U	1800	280	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10
Pyrene	**29000**		1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 03:37	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*102*		*54 - 120*	*01/19/23 15:30*	*01/24/23 03:37*	*10*
2-Fluorobiphenyl (Surr)	*105*		*60 - 120*	*01/19/23 15:30*	*01/24/23 03:37*	*10*
2-Fluorophenol (Surr)	*88*		*52 - 120*	*01/19/23 15:30*	*01/24/23 03:37*	*10*
Nitrobenzene-d5 (Surr)	*85*		*53 - 120*	*01/19/23 15:30*	*01/24/23 03:37*	*10*
Phenol-d5 (Surr)	*92*		*54 - 120*	*01/19/23 15:30*	*01/24/23 03:37*	*10*
p-Terphenyl-d14 (Surr)	*105*		*79 - 130*	*01/19/23 15:30*	*01/24/23 03:37*	*10*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**13.6**		2.1	0.42	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Barium	**391**		0.52	0.11	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Beryllium	**1.9**		0.21	0.029	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Cadmium	**0.31**		0.21	0.031	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Chromium	**59.7**		0.52	0.21	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Copper	**25.4**		1.0	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Lead	**71.0**		1.0	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Manganese	**203**	**B**	0.21	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Nickel	**30.9**		5.2	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Selenium	4.2	U	4.2	0.42	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Silver	**0.28**	**J**	0.62	0.21	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1
Zinc	**36.3**		2.1	0.67	mg/Kg	☼	01/19/23 11:45	01/20/23 17:46	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.085**	**B**	0.022	0.0051	mg/Kg	☼	01/23/23 11:29	01/23/23 16:27	1

Client Sample ID: BH8 1-3
Lab Sample ID: 480-205527-8

Date Collected: 01/17/23 10:15
Matrix: Solid

Date Received: 01/18/23 08:35
Percent Solids: 81.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	120	U	120	66	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
2-Methylphenol	210	U	210	24	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
3-Methylphenol	400	U	400	31	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
4-Methylphenol	400	U	400	24	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Acenaphthene	**31**	**J**	210	30	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Acenaphthylene	210	U	210	27	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Anthracene	**89**	**J**	210	51	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Benzo[a]anthracene	**300**		210	21	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Benzo[a]pyrene	**330**		210	30	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Benzo[b]fluoranthene	**380**		210	33	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Benzo[g,h,i]perylene	**270**		210	22	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Benzo[k]fluoranthene	**190**	**J**	210	27	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Chrysene	**340**		210	46	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Dibenz(a,h)anthracene	**70**	**J**	210	36	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Dibenzofuran	**29**	**J**	210	24	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Fluoranthene	**580**		210	22	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Fluorene	**25**	**J**	210	24	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Hexachlorobenzene	210	U	210	28	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Indeno[1,2,3-cd]pyrene	**230**		210	25	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Naphthalene	210	U	210	27	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Pentachlorophenol	400	U	400	210	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Phenanthrene	**450**		210	30	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Phenol	210	U	210	31	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1
Pyrene	**480**		210	24	ug/Kg	☼	01/19/23 15:30	01/24/23 04:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*54 - 120*	*01/19/23 15:30*	*01/24/23 04:02*	*1*
2-Fluorobiphenyl (Surr)	*93*		*60 - 120*	*01/19/23 15:30*	*01/24/23 04:02*	*1*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*01/19/23 15:30*	*01/24/23 04:02*	*1*
Nitrobenzene-d5 (Surr)	*87*		*53 - 120*	*01/19/23 15:30*	*01/24/23 04:02*	*1*
Phenol-d5 (Surr)	*81*		*54 - 120*	*01/19/23 15:30*	*01/24/23 04:02*	*1*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*	*01/19/23 15:30*	*01/24/23 04:02*	*1*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**15.4**		2.6	0.52	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Barium	**101**		0.65	0.14	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Beryllium	**1.3**		0.26	0.036	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Cadmium	**0.30**		0.26	0.039	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Chromium	**12.0**		0.65	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Copper	**24.0**		1.3	0.27	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Lead	**38.9**		1.3	0.31	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Manganese	**234**	**B**	0.26	0.041	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Nickel	**20.3**		6.5	0.30	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Selenium	5.2	U	5.2	0.52	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Silver	0.78	U	0.78	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1
Zinc	**23.7**		2.6	0.83	mg/Kg	☼	01/19/23 11:45	01/20/23 17:50	1

Client Sample ID: BH8 1-3
Lab Sample ID: 480-205527-8
Date Collected: 01/17/23 10:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.4

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.034**	**B**	0.024	0.0055	mg/Kg	☼	01/23/23 11:29	01/23/23 16:28	1

Client Sample ID: BH9 1-2
Lab Sample ID: 480-205527-9
Date Collected: 01/17/23 10:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 92.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	11000	U	11000	5800	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
2-Methylphenol	18000	U	18000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
3-Methylphenol	35000	U	35000	2700	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
4-Methylphenol	35000	U	35000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Acenaphthene	18000	U	18000	2600	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Acenaphthylene	18000	U	18000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Anthracene	18000	U	18000	4400	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Benzo[a]anthracene	**16000**	**J**	18000	1800	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Benzo[a]pyrene	**22000**		18000	2600	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Benzo[b]fluoranthene	**26000**		18000	2800	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Benzo[g,h,i]perylene	**17000**	**J**	18000	1900	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Benzo[k]fluoranthene	**14000**	**J**	18000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Chrysene	**19000**		18000	4000	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Dibenz(a,h)anthracene	**5000**	**J**	18000	3200	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Dibenzofuran	18000	U	18000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Fluoranthene	**21000**		18000	1900	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Fluorene	18000	U	18000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Hexachlorobenzene	18000	U	18000	2400	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Indeno[1,2,3-cd]pyrene	**16000**	**J**	18000	2200	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Naphthalene	18000	U	18000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Pentachlorophenol	35000	U	35000	18000	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Phenanthrene	18000	U	18000	2600	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Phenol	18000	U	18000	2700	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10
Pyrene	**17000**	**J**	18000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 04:26	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*S1-*	*54 - 120*	*01/19/23 15:30*	*01/24/23 04:26*	*10*
2-Fluorobiphenyl (Surr)	*103*		*60 - 120*	*01/19/23 15:30*	*01/24/23 04:26*	*10*
2-Fluorophenol (Surr)	*0*	*S1-*	*52 - 120*	*01/19/23 15:30*	*01/24/23 04:26*	*10*
Nitrobenzene-d5 (Surr)	*102*		*53 - 120*	*01/19/23 15:30*	*01/24/23 04:26*	*10*
Phenol-d5 (Surr)	*107*		*54 - 120*	*01/19/23 15:30*	*01/24/23 04:26*	*10*
p-Terphenyl-d14 (Surr)	*104*		*79 - 130*	*01/19/23 15:30*	*01/24/23 04:26*	*10*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.0**		2.2	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Barium	**20.4**		0.55	0.12	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Beryllium	**0.19**	**J**	0.22	0.031	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Cadmium	**0.87**		0.22	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Chromium	**16.9**		0.55	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Copper	**18.1**		11.0	2.3	mg/Kg	☼	01/19/23 11:45	01/25/23 17:10	10
Lead	**175**		1.1	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1

Client Sample ID: BH9 1-2
Lab Sample ID: 480-205527-9
Date Collected: 01/17/23 10:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 92.4

Method: SW846 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**140**	**B**	0.22	0.035	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Nickel	**11.4**		5.5	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Selenium	4.4	U	4.4	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Silver	0.66	U	0.66	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1
Zinc	**99.6**		2.2	0.71	mg/Kg	☼	01/19/23 11:45	01/20/23 17:54	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.042**	**B**	0.021	0.0049	mg/Kg	☼	01/23/23 11:29	01/23/23 16:29	1

Client Sample ID: BH10 1-2
Lab Sample ID: 480-205527-10
Date Collected: 01/17/23 10:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 95.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	11000	U	11000	6200	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
2-Methylphenol	19000	U	19000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
3-Methylphenol	37000	U	37000	2900	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
4-Methylphenol	37000	U	37000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Acenaphthene	19000	U	19000	2800	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Acenaphthylene	19000	U	19000	2500	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Anthracene	19000	U	19000	4800	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Benzo[a]anthracene	**9700**	**J**	19000	1900	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Benzo[a]pyrene	**12000**	**J**	19000	2800	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Benzo[b]fluoranthene	**15000**	**J**	19000	3100	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Benzo[g,h,i]perylene	**11000**	**J**	19000	2000	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Benzo[k]fluoranthene	**7600**	**J**	19000	2500	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Chrysene	**12000**	**J**	19000	4300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Dibenz(a,h)anthracene	19000	U	19000	3400	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Dibenzofuran	19000	U	19000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Fluoranthene	**19000**		19000	2000	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Fluorene	19000	U	19000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Hexachlorobenzene	19000	U	19000	2600	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Indeno[1,2,3-cd]pyrene	**8800**	**J**	19000	2400	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Naphthalene	19000	U	19000	2500	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Pentachlorophenol	37000	U	37000	19000	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Phenanthrene	**5300**	**J**	19000	2800	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Phenol	19000	U	19000	2900	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10
Pyrene	**15000**	**J**	19000	2300	ug/Kg	☼	01/19/23 15:30	01/24/23 04:51	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*0*	*S1-*	*54 - 120*	*01/19/23 15:30*	*01/24/23 04:51*	*10*
2-Fluorobiphenyl (Surr)	*110*		*60 - 120*	*01/19/23 15:30*	*01/24/23 04:51*	*10*
2-Fluorophenol (Surr)	*0*	*S1-*	*52 - 120*	*01/19/23 15:30*	*01/24/23 04:51*	*10*
Nitrobenzene-d5 (Surr)	*120*		*53 - 120*	*01/19/23 15:30*	*01/24/23 04:51*	*10*
Phenol-d5 (Surr)	*88*		*54 - 120*	*01/19/23 15:30*	*01/24/23 04:51*	*10*
p-Terphenyl-d14 (Surr)	*121*		*79 - 130*	*01/19/23 15:30*	*01/24/23 04:51*	*10*

Client Sample ID: BH10 1-2
Lab Sample ID: 480-205527-10

Date Collected: 01/17/23 10:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 95.8

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**1.2**	**J**	2.2	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Barium	**5.3**		0.55	0.12	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Beryllium	**0.098**	**J**	0.22	0.031	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Cadmium	**0.24**		0.22	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Chromium	**3.7**		0.55	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Copper	**4.9**	**J**	5.5	1.1	mg/Kg	☼	01/19/23 11:45	01/25/23 17:14	5
Lead	**18.3**		1.1	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Manganese	**63.0**	**B**	0.22	0.035	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Nickel	**4.2**	**J**	5.5	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Selenium	4.4	U	4.4	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Silver	0.66	U	0.66	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1
Zinc	**18.6**		2.2	0.70	mg/Kg	☼	01/19/23 11:45	01/20/23 17:58	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.014**	**J B**	0.020	0.0045	mg/Kg	☼	01/23/23 11:29	01/23/23 16:31	1

Client Sample ID: BH12 1-2
Lab Sample ID: 480-205527-11

Date Collected: 01/17/23 11:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 93.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1100	U	1100	590	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
2-Methylphenol	1800	U	1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
3-Methylphenol	3500	U	3500	280	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
4-Methylphenol	3500	U	3500	210	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Acenaphthene	1800	U	1800	270	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Acenaphthylene	1800	U	1800	230	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Anthracene	1800	U	1800	450	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Benzo[a]anthracene	**460**	**J**	1800	180	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Benzo[a]pyrene	**770**	**J**	1800	270	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Benzo[b]fluoranthene	**1000**	**J**	1800	290	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Benzo[g,h,i]perylene	**790**	**J**	1800	190	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Benzo[k]fluoranthene	**400**	**J**	1800	230	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Chrysene	1800	U	1800	410	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Dibenz(a,h)anthracene	1800	U	1800	320	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Dibenzofuran	1800	U	1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Fluoranthene	**1000**	**J**	1800	190	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Fluorene	1800	U	1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Hexachlorobenzene	1800	U	1800	250	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Indeno[1,2,3-cd]pyrene	**700**	**J**	1800	220	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Naphthalene	1800	U	1800	230	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Pentachlorophenol	3500	U	3500	1800	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Phenanthrene	**370**	**J**	1800	270	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Phenol	1800	U	1800	280	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10
Pyrene	**810**	**J**	1800	210	ug/Kg	☼	01/19/23 15:30	01/24/23 05:15	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*100*		*54 - 120*	*01/19/23 15:30*	*01/24/23 05:15*	*10*

Client Sample ID: BH12 1-2
Lab Sample ID: 480-205527-11

Date Collected: 01/17/23 11:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 93.1

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*94*		*60 - 120*	*01/19/23 15:30*	*01/24/23 05:15*	*10*
2-Fluorophenol (Surr)	*79*		*52 - 120*	*01/19/23 15:30*	*01/24/23 05:15*	*10*
Nitrobenzene-d5 (Surr)	*86*		*53 - 120*	*01/19/23 15:30*	*01/24/23 05:15*	*10*
Phenol-d5 (Surr)	*78*		*54 - 120*	*01/19/23 15:30*	*01/24/23 05:15*	*10*
p-Terphenyl-d14 (Surr)	*84*		*79 - 130*	*01/19/23 15:30*	*01/24/23 05:15*	*10*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**9.9**		2.1	0.43	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Barium	**195**		0.54	0.12	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Beryllium	**0.73**		0.21	0.030	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Cadmium	**0.55**		0.21	0.032	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Chromium	**23.8**		0.54	0.21	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Copper	**42.0**		1.1	0.23	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Lead	**109**		1.1	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Manganese	**271**	**B**	0.21	0.034	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Nickel	**28.6**		5.4	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Selenium	4.3	U	4.3	0.43	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Silver	0.64	U	0.64	0.21	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1
Zinc	**91.5**		2.1	0.69	mg/Kg	☼	01/19/23 11:45	01/20/23 18:02	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.10**		0.021	0.0048	mg/Kg	☼	01/23/23 11:29	01/23/23 16:34	1

Client Sample ID: BH13 1-2
Lab Sample ID: 480-205527-12

Date Collected: 01/17/23 12:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1200	U	1200	660	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
2-Methylphenol	2100	U	2100	240	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
3-Methylphenol	4000	U	4000	310	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
4-Methylphenol	4000	U	4000	240	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Acenaphthene	2100	U	2100	300	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Acenaphthylene	2100	U	2100	270	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Anthracene	2100	U	2100	510	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Benzo[a]anthracene	**1400**	**J**	2100	210	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Benzo[a]pyrene	**1400**	**J**	2100	300	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Benzo[b]fluoranthene	**1400**	**J**	2100	330	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Benzo[g,h,i]perylene	**1000**	**J**	2100	220	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Benzo[k]fluoranthene	**840**	**J**	2100	270	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Chrysene	**1700**	**J**	2100	460	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Dibenz(a,h)anthracene	2100	U	2100	360	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Dibenzofuran	2100	U	2100	240	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Fluoranthene	**2800**		2100	220	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Fluorene	2100	U	2100	240	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Hexachlorobenzene	2100	U	2100	280	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Indeno[1,2,3-cd]pyrene	**860**	**J**	2100	250	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10

Client Sample ID: BH13 1-2
Lab Sample ID: 480-205527-12
Date Collected: 01/17/23 12:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	2100	U	2100	270	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Pentachlorophenol	4000	U	4000	2100	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Phenanthrene	**2700**		2100	300	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Phenol	2100	U	2100	310	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10
Pyrene	**3100**		2100	240	ug/Kg	☼	01/19/23 15:30	01/24/23 05:40	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*85*		*54 - 120*	*01/19/23 15:30*	*01/24/23 05:40*	*10*
2-Fluorobiphenyl (Surr)	*77*		*60 - 120*	*01/19/23 15:30*	*01/24/23 05:40*	*10*
2-Fluorophenol (Surr)	*63*		*52 - 120*	*01/19/23 15:30*	*01/24/23 05:40*	*10*
Nitrobenzene-d5 (Surr)	*65*		*53 - 120*	*01/19/23 15:30*	*01/24/23 05:40*	*10*
Phenol-d5 (Surr)	*70*		*54 - 120*	*01/19/23 15:30*	*01/24/23 05:40*	*10*
p-Terphenyl-d14 (Surr)	*86*		*79 - 130*	*01/19/23 15:30*	*01/24/23 05:40*	*10*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**10.1**		2.5	0.49	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Barium	**68.7**		0.62	0.14	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Beryllium	**0.86**		0.25	0.034	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Cadmium	**1.1**		0.25	0.037	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Chromium	**16.6**		0.62	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Copper	**39.1**		1.2	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Lead	**125**		1.2	0.30	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Manganese	**270**	**B**	0.25	0.039	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Nickel	**24.4**		6.2	0.28	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Selenium	4.9	U	4.9	0.49	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Silver	0.74	U	0.74	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1
Zinc	**187**		2.5	0.79	mg/Kg	☼	01/19/23 11:45	01/20/23 18:06	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.27**		0.025	0.0058	mg/Kg	☼	01/23/23 11:29	01/23/23 16:42	1

Client Sample ID: BH14 2-3
Lab Sample ID: 480-205527-13
Date Collected: 01/17/23 12:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 86.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	570	U	570	310	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
2-Methylphenol	970	U	970	110	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
3-Methylphenol	1900	U	1900	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
4-Methylphenol	1900	U	1900	110	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Acenaphthene	970	U	970	140	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Acenaphthylene	970	U	970	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Anthracene	970	U	970	240	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Benzo[a]anthracene	**1100**		970	97	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Benzo[a]pyrene	**1200**		970	140	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Benzo[b]fluoranthene	**1600**		970	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Benzo[g,h,i]perylene	**1000**		970	100	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Benzo[k]fluoranthene	**540**	**J**	970	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5

Client Sample ID: BH14 2-3
Lab Sample ID: 480-205527-13
Date Collected: 01/17/23 12:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 86.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	**1400**		970	220	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Dibenz(a,h)anthracene	**310**	**J**	970	170	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Dibenzofuran	970	U	970	110	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Fluoranthene	**1900**		970	100	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Fluorene	970	U	970	110	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Hexachlorobenzene	970	U	970	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Indeno[1,2,3-cd]pyrene	**880**	**J**	970	120	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Naphthalene	970	U	970	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Pentachlorophenol	1900	U	1900	970	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Phenanthrene	**750**	**J**	970	140	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Phenol	970	U	970	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5
Pyrene	**1500**		970	110	ug/Kg	☼	01/19/23 15:30	01/24/23 06:04	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*54 - 120*	*01/19/23 15:30*	*01/24/23 06:04*	*5*
2-Fluorobiphenyl (Surr)	*89*		*60 - 120*	*01/19/23 15:30*	*01/24/23 06:04*	*5*
2-Fluorophenol (Surr)	*81*		*52 - 120*	*01/19/23 15:30*	*01/24/23 06:04*	*5*
Nitrobenzene-d5 (Surr)	*79*		*53 - 120*	*01/19/23 15:30*	*01/24/23 06:04*	*5*
Phenol-d5 (Surr)	*85*		*54 - 120*	*01/19/23 15:30*	*01/24/23 06:04*	*5*
p-Terphenyl-d14 (Surr)	*98*		*79 - 130*	*01/19/23 15:30*	*01/24/23 06:04*	*5*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.8**		2.2	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Barium	**171**		1.1	0.24	mg/Kg	☼	01/19/23 11:45	01/26/23 18:07	2
Beryllium	0.44	U	0.44	0.062	mg/Kg	☼	01/19/23 11:45	01/26/23 18:07	2
Cadmium	**0.087**	**J**	0.22	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Chromium	**7.2**		0.55	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Copper	**17.0**		1.1	0.23	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Lead	**29.2**		1.1	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Manganese	**394**	**B**	0.22	0.035	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Nickel	**9.3**		5.5	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Selenium	4.4	U	4.4	0.44	mg/Kg	☼	01/19/23 11:45	01/20/23 18:22	1
Silver	0.66	U	0.66	0.22	mg/Kg	☼	01/19/23 11:45	01/25/23 17:18	1
Zinc	**21.5**		2.2	0.70	mg/Kg	☼	01/19/23 11:45	01/25/23 17:18	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.069**		0.024	0.0055	mg/Kg	☼	01/23/23 11:29	01/23/23 16:44	1

Client Sample ID: BH15 1-2
Lab Sample ID: 480-205527-14
Date Collected: 01/17/23 12:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	580	U	580	320	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
2-Methylphenol	990	U	990	120	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
3-Methylphenol	1900	U	1900	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
4-Methylphenol	1900	U	1900	120	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Acenaphthene	990	U	990	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5

Client Sample ID: BH15 1-2
Lab Sample ID: 480-205527-14

Date Collected: 01/17/23 12:45
Matrix: Solid

Date Received: 01/18/23 08:35
Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	990	U	990	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Anthracene	990	U	990	250	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Benzo[a]anthracene	**260**	**J**	990	99	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Benzo[a]pyrene	**290**	**J**	990	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Benzo[b]fluoranthene	**340**	**J**	990	160	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Benzo[g,h,i]perylene	**200**	**J**	990	110	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Benzo[k]fluoranthene	990	U	990	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Chrysene	**270**	**J**	990	220	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Dibenz(a,h)anthracene	990	U	990	180	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Dibenzofuran	990	U	990	120	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Fluoranthene	**510**	**J**	990	110	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Fluorene	990	U	990	120	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Hexachlorobenzene	990	U	990	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Indeno[1,2,3-cd]pyrene	**200**	**J**	990	120	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Naphthalene	990	U	990	130	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Pentachlorophenol	1900	U	1900	990	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Phenanthrene	**330**	**J**	990	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Phenol	990	U	990	150	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5
Pyrene	**410**	**J**	990	120	ug/Kg	☼	01/19/23 15:30	01/24/23 06:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*54 - 120*	*01/19/23 15:30*	*01/24/23 06:29*	*5*
2-Fluorobiphenyl (Surr)	*91*		*60 - 120*	*01/19/23 15:30*	*01/24/23 06:29*	*5*
2-Fluorophenol (Surr)	*80*		*52 - 120*	*01/19/23 15:30*	*01/24/23 06:29*	*5*
Nitrobenzene-d5 (Surr)	*82*		*53 - 120*	*01/19/23 15:30*	*01/24/23 06:29*	*5*
Phenol-d5 (Surr)	*81*		*54 - 120*	*01/19/23 15:30*	*01/24/23 06:29*	*5*
p-Terphenyl-d14 (Surr)	*101*		*79 - 130*	*01/19/23 15:30*	*01/24/23 06:29*	*5*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**52.5**		2.4	0.47	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Barium	**89.4**		0.59	0.13	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Beryllium	**1.7**		0.24	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Cadmium	**0.63**		0.24	0.035	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Chromium	**20.5**		0.59	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Copper	**102**		1.2	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Lead	**141**		1.2	0.28	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Manganese	**152**	**B**	0.24	0.038	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Nickel	**37.4**		5.9	0.27	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Selenium	4.7	U	4.7	0.47	mg/Kg	☼	01/19/23 11:45	01/20/23 18:26	1
Silver	**0.50**	**J**	0.71	0.24	mg/Kg	☼	01/19/23 11:45	01/25/23 17:22	1
Zinc	**103**		2.4	0.75	mg/Kg	☼	01/19/23 11:45	01/25/23 17:22	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.067**		0.023	0.0053	mg/Kg	☼	01/23/23 11:29	01/23/23 16:45	1

Client Sample ID: BH16 1-3
Lab Sample ID: 480-205527-15

Date Collected: 01/17/23 13:00
Matrix: Solid

Date Received: 01/18/23 08:35
Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	110	U	110	61	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
2-Methylphenol	190	U	190	22	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
3-Methylphenol	370	U	370	29	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
4-Methylphenol	370	U	370	22	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Acenaphthene	190	U	190	28	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Acenaphthylene	190	U	190	25	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Anthracene	190	U	190	47	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Benzo[a]anthracene	**160**	**J**	190	19	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Benzo[a]pyrene	**190**		190	28	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Benzo[b]fluoranthene	**240**		190	30	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Benzo[g,h,i]perylene	**130**	**J**	190	20	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Benzo[k]fluoranthene	**67**	**J**	190	25	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Chrysene	**170**	**J**	190	42	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Dibenz(a,h)anthracene	**41**	**J**	190	33	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Dibenzofuran	190	U	190	22	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Fluoranthene	**250**		190	20	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Fluorene	190	U	190	22	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Hexachlorobenzene	190	U	190	26	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Indeno[1,2,3-cd]pyrene	**120**	**J**	190	23	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Naphthalene	190	U	190	25	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Pentachlorophenol	370	U	370	190	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Phenanthrene	**150**	**J**	190	28	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Phenol	190	U	190	29	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1
Pyrene	**250**		190	22	ug/Kg	☼	01/19/23 15:30	01/24/23 06:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*79*		*54 - 120*	*01/19/23 15:30*	*01/24/23 06:54*	*1*
2-Fluorobiphenyl (Surr)	*85*		*60 - 120*	*01/19/23 15:30*	*01/24/23 06:54*	*1*
2-Fluorophenol (Surr)	*76*		*52 - 120*	*01/19/23 15:30*	*01/24/23 06:54*	*1*
Nitrobenzene-d5 (Surr)	*83*		*53 - 120*	*01/19/23 15:30*	*01/24/23 06:54*	*1*
Phenol-d5 (Surr)	*78*		*54 - 120*	*01/19/23 15:30*	*01/24/23 06:54*	*1*
p-Terphenyl-d14 (Surr)	*95*		*79 - 130*	*01/19/23 15:30*	*01/24/23 06:54*	*1*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11.3**		2.3	0.46	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Barium	**54.3**		0.58	0.13	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Beryllium	**0.53**		0.23	0.032	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Cadmium	**0.15**	**J**	0.23	0.035	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Chromium	**6.9**		0.58	0.23	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Copper	**31.8**		1.2	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Lead	**12.6**		1.2	0.28	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Manganese	**85.1**	**B**	0.23	0.037	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Nickel	**14.5**		5.8	0.26	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Selenium	4.6	U	4.6	0.46	mg/Kg	☼	01/19/23 11:45	01/20/23 18:30	1
Silver	0.69	U	0.69	0.23	mg/Kg	☼	01/19/23 11:45	01/25/23 17:26	1
Zinc	**17.7**		2.3	0.74	mg/Kg	☼	01/19/23 11:45	01/25/23 17:26	1

Client Sample ID: BH16 1-3
Lab Sample ID: 480-205527-15
Date Collected: 01/17/23 13:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 88.7

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.064**		0.023	0.0053	mg/Kg	☼	01/23/23 11:29	01/23/23 16:46	1

Client Sample ID: BH17 1-2
Lab Sample ID: 480-205527-16
Date Collected: 01/17/23 13:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 91.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	540	U	540	300	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
2-Methylphenol	920	U	920	110	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
3-Methylphenol	1800	U	1800	140	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
4-Methylphenol	1800	U	1800	110	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Acenaphthene	920	U	920	130	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Acenaphthylene	920	U	920	120	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Anthracene	920	U	920	230	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Benzo[a]anthracene	**840**	**J**	920	92	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Benzo[a]pyrene	**1300**		920	130	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Benzo[b]fluoranthene	**1700**		920	150	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Benzo[g,h,i]perylene	**1400**		920	97	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Benzo[k]fluoranthene	**760**	**J**	920	120	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Chrysene	**1100**		920	200	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Dibenz(a,h)anthracene	**290**	**J**	920	160	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Dibenzofuran	920	U	920	110	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Fluoranthene	**1700**		920	97	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Fluorene	920	U	920	110	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Hexachlorobenzene	920	U	920	120	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Indeno[1,2,3-cd]pyrene	**1100**		920	110	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Naphthalene	920	U	920	120	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Pentachlorophenol	1800	U	1800	920	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Phenanthrene	**530**	**J**	920	130	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Phenol	920	U	920	140	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5
Pyrene	**1300**		920	110	ug/Kg	☼	01/19/23 15:30	01/24/23 07:18	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*54 - 120*	*01/19/23 15:30*	*01/24/23 07:18*	*5*
2-Fluorobiphenyl (Surr)	*79*		*60 - 120*	*01/19/23 15:30*	*01/24/23 07:18*	*5*
2-Fluorophenol (Surr)	*69*		*52 - 120*	*01/19/23 15:30*	*01/24/23 07:18*	*5*
Nitrobenzene-d5 (Surr)	*66*		*53 - 120*	*01/19/23 15:30*	*01/24/23 07:18*	*5*
Phenol-d5 (Surr)	*71*		*54 - 120*	*01/19/23 15:30*	*01/24/23 07:18*	*5*
p-Terphenyl-d14 (Surr)	*94*		*79 - 130*	*01/19/23 15:30*	*01/24/23 07:18*	*5*

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11.8**		2.1	0.41	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Barium	**62.4**		0.51	0.11	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Beryllium	**0.56**		0.21	0.029	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Cadmium	**0.47**		0.21	0.031	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Chromium	**10.7**		0.51	0.21	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Copper	**35.7**		1.0	0.22	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Lead	**87.6**		1.0	0.25	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1

Client Sample ID: BH17 1-2
Lab Sample ID: 480-205527-16
Date Collected: 01/17/23 13:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 91.7

Method: SW846 6010C - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**120**	**B**	0.21	0.033	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Nickel	**15.5**		5.1	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Selenium	4.1	U	4.1	0.41	mg/Kg	☼	01/19/23 11:45	01/20/23 18:34	1
Silver	0.62	U	0.62	0.21	mg/Kg	☼	01/19/23 11:45	01/25/23 17:30	1
Zinc	**75.4**		2.1	0.66	mg/Kg	☼	01/19/23 11:45	01/25/23 17:30	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.15**		0.021	0.0049	mg/Kg	☼	01/23/23 11:29	01/23/23 16:47	1

Client Sample ID: BH18 1-3
Lab Sample ID: 480-205527-17
Date Collected: 01/17/23 13:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 84.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	120	U	120	64	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
2-Methylphenol	200	U	200	23	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
3-Methylphenol	390	U	390	30	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
4-Methylphenol	390	U	390	23	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Acenaphthene	**79**	**J**	200	29	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Acenaphthylene	**41**	**J**	200	26	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Anthracene	**190**	**J**	200	49	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Benzo[a]anthracene	**550**		200	20	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Benzo[a]pyrene	**550**		200	29	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Benzo[b]fluoranthene	**570**		200	32	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Benzo[g,h,i]perylene	**400**		200	21	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Benzo[k]fluoranthene	**330**		200	26	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Chrysene	**560**		200	45	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Dibenz(a,h)anthracene	**99**	**J**	200	35	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Dibenzofuran	**56**	**J**	200	23	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Fluoranthene	**1400**		200	21	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Fluorene	**63**	**J**	200	23	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Hexachlorobenzene	200	U	200	27	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Indeno[1,2,3-cd]pyrene	**360**		200	25	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Naphthalene	**43**	**J**	200	26	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Pentachlorophenol	390	U	390	200	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Phenanthrene	**1000**		200	29	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Phenol	200	U	200	30	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1
Pyrene	**1100**		200	23	ug/Kg	☼	01/19/23 15:30	01/24/23 07:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*82*		*54 - 120*	*01/19/23 15:30*	*01/24/23 07:43*	*1*
2-Fluorobiphenyl (Surr)	*91*		*60 - 120*	*01/19/23 15:30*	*01/24/23 07:43*	*1*
2-Fluorophenol (Surr)	*75*		*52 - 120*	*01/19/23 15:30*	*01/24/23 07:43*	*1*
Nitrobenzene-d5 (Surr)	*81*		*53 - 120*	*01/19/23 15:30*	*01/24/23 07:43*	*1*
Phenol-d5 (Surr)	*82*		*54 - 120*	*01/19/23 15:30*	*01/24/23 07:43*	*1*
p-Terphenyl-d14 (Surr)	*95*		*79 - 130*	*01/19/23 15:30*	*01/24/23 07:43*	*1*

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH18 1-3
Lab Sample ID: 480-205527-17
Date Collected: 01/17/23 13:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 84.3

Method: SW846 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.5		2.3	0.46	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Barium	76.5		0.58	0.13	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Beryllium	0.56		0.23	0.032	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Cadmium	0.34		0.23	0.035	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Chromium	12.2		0.58	0.23	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Copper	26.2		1.2	0.24	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Lead	77.2		1.2	0.28	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Manganese	198	B	0.23	0.037	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Nickel	15.9		5.8	0.27	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Selenium	4.6	U	4.6	0.46	mg/Kg	☼	01/19/23 11:45	01/20/23 18:38	1
Silver	0.69	U	0.69	0.23	mg/Kg	☼	01/19/23 11:45	01/25/23 17:34	1
Zinc	92.4		2.3	0.74	mg/Kg	☼	01/19/23 11:45	01/25/23 17:34	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.097		0.023	0.0052	mg/Kg	☼	01/23/23 11:29	01/23/23 16:49	1

Surrogate Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

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

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

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TBP (54-120)	FBP (60-120)	2FP (52-120)	NBZ (53-120)	PHL (54-120)	TPHd14 (79-130)		
480-205527-1	BH1 2-4	79	75	72	71	73	96		
480-205527-1 MS	BH1 2-4	100	77	64	69	73	100		
480-205527-1 MSD	BH1 2-4	104	77	63	67	66	96		
480-205527-2	BH2 1-2	95	95	82	80	91	105		
480-205527-3	BH3 1-2	89	95	77	78	80	98		
480-205527-4	BH4 1-2	83	87	71	74	77	100		
480-205527-5	BH5 1-2	0 S1-	103	0 S1-	0 S1-	83	112		
480-205527-6	BH6 1	0 S1-	103	0 S1-	0 S1-	89	112		
480-205527-7	BH7 0.5-1	102	105	88	85	92	105		
480-205527-8	BH8 1-3	89	93	80	87	81	100		
480-205527-9	BH9 1-2	0 S1-	103	0 S1-	102	107	104		
480-205527-10	BH10 1-2	0 S1-	110	0 S1-	120	88	121		
480-205527-11	BH12 1-2	100	94	79	86	78	84		
480-205527-12	BH13 1-2	85	77	63	65	70	86		
480-205527-13	BH14 2-3	75	89	81	79	85	98		
480-205527-14	BH15 1-2	83	91	80	82	81	101		
480-205527-15	BH16 1-3	79	85	76	83	78	95		
480-205527-16	BH17 1-2	89	79	69	66	71	94		
480-205527-17	BH18 1-3	82	91	75	81	82	95		
LCS 480-656499/2-A	Lab Control Sample	103	92	79	85	83	108		
MB 480-656499/1-A	Method Blank	83	97	84	86	93	125		

Surrogate Legend

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

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

Lab Sample ID: MB 480-656499/1-A
Matrix: Solid
Analysis Batch: 656667

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 656499

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	99	U	99	54	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
2-Methylphenol	170	U	170	20	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
3-Methylphenol	330	U	330	26	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
4-Methylphenol	330	U	330	20	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Acenaphthene	170	U	170	25	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Acenaphthylene	170	U	170	22	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Anthracene	170	U	170	42	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Benzo[a]anthracene	170	U	170	17	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Benzo[a]pyrene	170	U	170	25	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Benzo[b]fluoranthene	170	U	170	27	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Benzo[g,h,i]perylene	170	U	170	18	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Benzo[k]fluoranthene	170	U	170	22	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Chrysene	170	U	170	38	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Dibenz(a,h)anthracene	170	U	170	30	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Dibenzofuran	170	U	170	20	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Fluoranthene	170	U	170	18	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Fluorene	170	U	170	20	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Hexachlorobenzene	170	U	170	23	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Indeno[1,2,3-cd]pyrene	170	U	170	21	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Naphthalene	170	U	170	22	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Pentachlorophenol	330	U	330	170	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Phenanthrene	170	U	170	25	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Phenol	170	U	170	26	ug/Kg		01/19/23 15:30	01/23/23 23:31	1
Pyrene	170	U	170	20	ug/Kg		01/19/23 15:30	01/23/23 23:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*54 - 120*	*01/19/23 15:30*	*01/23/23 23:31*	*1*
2-Fluorobiphenyl (Surr)	*97*		*60 - 120*	*01/19/23 15:30*	*01/23/23 23:31*	*1*
2-Fluorophenol (Surr)	*84*		*52 - 120*	*01/19/23 15:30*	*01/23/23 23:31*	*1*
Nitrobenzene-d5 (Surr)	*86*		*53 - 120*	*01/19/23 15:30*	*01/23/23 23:31*	*1*
Phenol-d5 (Surr)	*93*		*54 - 120*	*01/19/23 15:30*	*01/23/23 23:31*	*1*
p-Terphenyl-d14 (Surr)	*125*		*79 - 130*	*01/19/23 15:30*	*01/23/23 23:31*	*1*

Lab Sample ID: LCS 480-656499/2-A
Matrix: Solid
Analysis Batch: 656667

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 656499

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	1640	704		ug/Kg		43	23 - 120
2-Methylphenol	1640	1380		ug/Kg		84	54 - 120
3-Methylphenol	1640	1370		ug/Kg		83	55 - 120
4-Methylphenol	1640	1370		ug/Kg		83	55 - 120
Acenaphthene	1640	1460		ug/Kg		89	62 - 120
Acenaphthylene	1640	1540		ug/Kg		94	58 - 121
Anthracene	1640	1600		ug/Kg		97	62 - 120
Benzo[a]anthracene	1640	1650		ug/Kg		101	65 - 120
Benzo[a]pyrene	1640	1650		ug/Kg		101	64 - 120
Benzo[b]fluoranthene	1640	1620		ug/Kg		98	64 - 120

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

Lab Sample ID: LCS 480-656499/2-A
Matrix: Solid
Analysis Batch: 656667

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 656499

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[g,h,i]perylene	1640	1520		ug/Kg		92	45 - 145
Benzo[k]fluoranthene	1640	1710		ug/Kg		104	65 - 120
Chrysene	1640	1550		ug/Kg		95	64 - 120
Dibenz(a,h)anthracene	1640	1600		ug/Kg		97	54 - 132
Dibenzofuran	1640	1480		ug/Kg		90	63 - 120
Fluoranthene	1640	1520		ug/Kg		93	62 - 120
Fluorene	1640	1520		ug/Kg		92	63 - 120
Hexachlorobenzene	1640	1610		ug/Kg		98	60 - 120
Indeno[1,2,3-cd]pyrene	1640	1640		ug/Kg		100	56 - 134
Naphthalene	1640	1400		ug/Kg		85	55 - 120
Pentachlorophenol	3290	3160		ug/Kg		96	51 - 120
Phenanthrene	1640	1560		ug/Kg		95	60 - 120
Phenol	1640	1390		ug/Kg		85	53 - 120
Pyrene	1640	1710		ug/Kg		104	61 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*103*		*54 - 120*
2-Fluorobiphenyl (Surr)	*92*		*60 - 120*
2-Fluorophenol (Surr)	*79*		*52 - 120*
Nitrobenzene-d5 (Surr)	*85*		*53 - 120*
Phenol-d5 (Surr)	*83*		*54 - 120*
p-Terphenyl-d14 (Surr)	*108*		*79 - 130*

Lab Sample ID: 480-205527-1 MS
Matrix: Solid
Analysis Batch: 656667

Client Sample ID: BH1 2-4
Prep Type: Total/NA
Prep Batch: 656499

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	110	U	1890	555		ug/Kg	☼	29	13 - 120
2-Methylphenol	190	U	1890	1340		ug/Kg	☼	71	48 - 120
3-Methylphenol	380	U	1890	1390		ug/Kg	☼	74	50 - 120
4-Methylphenol	380	U	1890	1390		ug/Kg	☼	73	50 - 120
Acenaphthene	190	U	1890	1840		ug/Kg	☼	97	60 - 120
Acenaphthylene	190	U	1890	1810		ug/Kg	☼	96	58 - 121
Anthracene	190	U F1 F2	1890	2770	F1	ug/Kg	☼	146	62 - 120
Benzo[a]anthracene	170	J F1 F2	1890	4100	F1	ug/Kg	☼	208	65 - 120
Benzo[a]pyrene	170	J F1 F2	1890	3910	F1	ug/Kg	☼	198	64 - 120
Benzo[b]fluoranthene	200	F1 F2	1890	3900	F1	ug/Kg	☼	196	10 - 150
Benzo[g,h,i]perylene	100	J F1 F2	1890	3530	F1	ug/Kg	☼	181	45 - 145
Benzo[k]fluoranthene	79	J F2	1890	2740		ug/Kg	☼	141	23 - 150
Chrysene	180	J F1 F2	1890	3790	F1	ug/Kg	☼	191	64 - 120
Dibenz(a,h)anthracene	190	U F1 F2	1890	2510	F1	ug/Kg	☼	133	54 - 132
Dibenzofuran	190	U F2	1890	1820		ug/Kg	☼	97	62 - 120
Fluoranthene	350	F1 F2	1890	5320	F1	ug/Kg	☼	263	62 - 120
Fluorene	190	U F2	1890	1980		ug/Kg	☼	105	63 - 120
Hexachlorobenzene	190	U	1890	1670		ug/Kg	☼	88	60 - 120
Indeno[1,2,3-cd]pyrene	96	J F1 F2	1890	3440	F1	ug/Kg	☼	177	56 - 134
Naphthalene	190	U	1890	1470		ug/Kg	☼	78	46 - 120

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

Lab Sample ID: 480-205527-1 MS
Matrix: Solid
Analysis Batch: 656667

Client Sample ID: BH1 2-4
Prep Type: Total/NA
Prep Batch: 656499

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Pentachlorophenol	380	U	3780	3900		ug/Kg	☼	103	25 - 136
Phenanthrene	170	J F1 F2	1890	4630	F1	ug/Kg	☼	236	60 - 122
Phenol	190	U	1890	1280		ug/Kg	☼	68	50 - 120
Pyrene	310	F1 F2	1890	4610	F1	ug/Kg	☼	227	61 - 133

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*100*		*54 - 120*
2-Fluorobiphenyl (Surr)	*77*		*60 - 120*
2-Fluorophenol (Surr)	*64*		*52 - 120*
Nitrobenzene-d5 (Surr)	*69*		*53 - 120*
Phenol-d5 (Surr)	*73*		*54 - 120*
p-Terphenyl-d14 (Surr)	*100*		*79 - 130*

Lab Sample ID: 480-205527-1 MSD
Matrix: Solid
Analysis Batch: 656667

Client Sample ID: BH1 2-4
Prep Type: Total/NA
Prep Batch: 656499

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane	110	U	1890	546		ug/Kg	☼	29	13 - 120	2	50
2-Methylphenol	190	U	1890	1260		ug/Kg	☼	67	48 - 120	6	27
3-Methylphenol	380	U	1890	1260		ug/Kg	☼	67	50 - 120	10	24
4-Methylphenol	380	U	1890	1260		ug/Kg	☼	67	50 - 120	10	24
Acenaphthene	190	U	1890	1430		ug/Kg	☼	76	60 - 120	25	35
Acenaphthylene	190	U	1890	1540		ug/Kg	☼	82	58 - 121	16	18
Anthracene	190	U F1 F2	1890	1840	F2	ug/Kg	☼	97	62 - 120	40	15
Benzo[a]anthracene	170	J F1 F2	1890	2350	F2	ug/Kg	☼	116	65 - 120	54	15
Benzo[a]pyrene	170	J F1 F2	1890	2340	F2	ug/Kg	☼	115	64 - 120	50	15
Benzo[b]fluoranthene	200	F1 F2	1890	2180	F2	ug/Kg	☼	105	10 - 150	56	15
Benzo[g,h,i]perylene	100	J F1 F2	1890	2380	F2	ug/Kg	☼	121	45 - 145	39	15
Benzo[k]fluoranthene	79	J F2	1890	2090	F2	ug/Kg	☼	107	23 - 150	27	22
Chrysene	180	J F1 F2	1890	2170	F2	ug/Kg	☼	105	64 - 120	54	15
Dibenz(a,h)anthracene	190	U F1 F2	1890	2120	F2	ug/Kg	☼	112	54 - 132	17	15
Dibenzofuran	190	U F2	1890	1460	F2	ug/Kg	☼	77	62 - 120	22	15
Fluoranthene	350	F1 F2	1890	2630	F1 F2	ug/Kg	☼	121	62 - 120	68	15
Fluorene	190	U F2	1890	1550	F2	ug/Kg	☼	82	63 - 120	24	15
Hexachlorobenzene	190	U	1890	1730		ug/Kg	☼	92	60 - 120	4	15
Indeno[1,2,3-cd]pyrene	96	J F1 F2	1890	2440	F2	ug/Kg	☼	124	56 - 134	34	15
Naphthalene	190	U	1890	1280		ug/Kg	☼	68	46 - 120	14	29
Pentachlorophenol	380	U	3770	3650		ug/Kg	☼	97	25 - 136	7	35
Phenanthrene	170	J F1 F2	1890	2060	F2	ug/Kg	☼	101	60 - 122	77	15
Phenol	190	U	1890	1250		ug/Kg	☼	66	50 - 120	2	35
Pyrene	310	F1 F2	1890	2520	F2	ug/Kg	☼	117	61 - 133	59	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*104*		*54 - 120*
2-Fluorobiphenyl (Surr)	*77*		*60 - 120*
2-Fluorophenol (Surr)	*63*		*52 - 120*
Nitrobenzene-d5 (Surr)	*67*		*53 - 120*

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

Lab Sample ID: 480-205527-1 MSD
Matrix: Solid
Analysis Batch: 656667

Client Sample ID: BH1 2-4
Prep Type: Total/NA
Prep Batch: 656499

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Phenol-d5 (Surr)	*66*		*54 - 120*
p-Terphenyl-d14 (Surr)	*96*		*79 - 130*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-656375/1-A
Matrix: Solid
Analysis Batch: 656694

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 656375

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1	U	2.1	0.41	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Barium	0.52	U	0.52	0.11	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Beryllium	0.21	U	0.21	0.029	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Cadmium	0.21	U	0.21	0.031	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Chromium	0.52	U	0.52	0.21	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Copper	1.0	U	1.0	0.22	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Lead	1.0	U	1.0	0.25	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Manganese	0.198	J	0.21	0.033	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Nickel	5.2	U	5.2	0.24	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Selenium	4.1	U	4.1	0.41	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Silver	0.62	U	0.62	0.21	mg/Kg		01/19/23 11:45	01/20/23 16:47	1
Zinc	2.1	U	2.1	0.66	mg/Kg		01/19/23 11:45	01/20/23 16:47	1

Lab Sample ID: LCSSRM 480-656375/2-A
Matrix: Solid
Analysis Batch: 656694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 656375

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	129	97.04		mg/Kg		75.2	60.9 - 113.2
Barium	169	129.8		mg/Kg		76.8	68.6 - 114.2
Beryllium	137	100.7		mg/Kg		73.5	66.3 - 110.2
Cadmium	227	155.1		mg/Kg		68.3	64.8 - 110.1
Chromium	115	85.42		mg/Kg		74.3	62.4 - 115.7
Copper	76.0	57.70		mg/Kg		75.9	69.5 - 115.8
Lead	74.8	76.28		mg/Kg		102.0	67.0 - 128.9
Manganese	400	328.7		mg/Kg		82.2	70.5 - 115.8
Nickel	282	239.3		mg/Kg		84.9	62.1 - 114.9
Selenium	246	174.7		mg/Kg		71.0	60.2 - 114.6
Silver	87.5	61.55		mg/Kg		70.3	63.7 - 115.4
Zinc	401	270.5		mg/Kg		67.4	62.8 - 116.7

Method: 6010C - Metals (ICP)

Lab Sample ID: 480-205527-2 MS
Matrix: Solid
Analysis Batch: 656694

Client Sample ID: BH2 1-2
Prep Type: Total/NA
Prep Batch: 656375

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	18.5		48.1	65.12		mg/Kg	☼	97	75 - 125
Barium	400		48.1	596.6	4	mg/Kg	☼	409	75 - 125
Beryllium	1.3		48.1	46.55		mg/Kg	☼	94	75 - 125
Cadmium	0.48		48.1	44.16		mg/Kg	☼	91	75 - 125
Chromium	23.2		48.1	77.81		mg/Kg	☼	113	75 - 125
Copper	229	F2	48.1	345.2	4	mg/Kg	☼	241	75 - 125
Lead	293	F2	48.1	474.6	4	mg/Kg	☼	378	75 - 125
Manganese	359	B	48.1	189.5	4	mg/Kg	☼	-351	75 - 125
Nickel	18.1		48.1	69.44		mg/Kg	☼	107	75 - 125
Selenium	4.9	U	48.1	42.23		mg/Kg	☼	88	75 - 125
Silver	0.74	U	12.0	10.45		mg/Kg	☼	87	75 - 125
Zinc	160	F1	48.1	226.2	F1	mg/Kg	☼	137	75 - 125

Lab Sample ID: 480-205527-2 MSD
Matrix: Solid
Analysis Batch: 656694

Client Sample ID: BH2 1-2
Prep Type: Total/NA
Prep Batch: 656375

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	18.5		47.8	62.84		mg/Kg	☼	93	75 - 125	4	20
Barium	400		47.8	598.9	4	mg/Kg	☼	417	75 - 125	0	20
Beryllium	1.3		47.8	46.00		mg/Kg	☼	94	75 - 125	1	20
Cadmium	0.48		47.8	44.97		mg/Kg	☼	93	75 - 125	2	20
Chromium	23.2		47.8	70.04		mg/Kg	☼	98	75 - 125	11	20
Copper	229	F2	47.8	246.5	4 F2	mg/Kg	☼	36	75 - 125	33	20
Lead	293	F2	47.8	379.2	4 F2	mg/Kg	☼	180	75 - 125	22	20
Manganese	359	B	47.8	223.6	4	mg/Kg	☼	-282	75 - 125	17	20
Nickel	18.1		47.8	67.58		mg/Kg	☼	104	75 - 125	3	20
Selenium	4.9	U	47.8	42.51		mg/Kg	☼	89	75 - 125	1	20
Silver	0.74	U	11.9	10.76		mg/Kg	☼	90	75 - 125	3	20
Zinc	160	F1	47.8	200.2		mg/Kg	☼	83	75 - 125	12	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-656679/1-A
Matrix: Solid
Analysis Batch: 656753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 656679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0115	J	0.020	0.0045	mg/Kg		01/23/23 11:29	01/23/23 15:54	1

Lab Sample ID: LCDSRM 480-656679/3-A ^10
Matrix: Solid
Analysis Batch: 656753

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 656679

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	20.7	13.31		mg/Kg		64.3	38.3 - 110.1	3	20

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 480-656679/2-A ^10
Matrix: Solid
Analysis Batch: 656753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 656679

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			20.7	12.85		mg/Kg		62.1	38.3 - 110.1		

Lab Sample ID: MB 480-656680/1-A
Matrix: Solid
Analysis Batch: 656753

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 656680

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020	U	0.020	0.0046	mg/Kg		01/23/23 11:29	01/23/23 16:32	1

Lab Sample ID: LCSSRM 480-656680/2-A ^10
Matrix: Solid
Analysis Batch: 656753

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 656680

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			20.7	13.01		mg/Kg		62.9	38.3 - 110.1		

Lab Sample ID: 480-205527-11 MS
Matrix: Solid
Analysis Batch: 656753

Client Sample ID: BH12 1-2
Prep Type: Total/NA
Prep Batch: 656680

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury	0.10		0.366	0.467		mg/Kg	☼	100	80 - 120		

Lab Sample ID: 480-205527-11 MSD
Matrix: Solid
Analysis Batch: 656753

Client Sample ID: BH12 1-2
Prep Type: Total/NA
Prep Batch: 656680

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.10		0.370	0.467		mg/Kg	☼	99	80 - 120	0	20

GC/MS Semi VOA

Prep Batch: 656499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-1	BH1 2-4	Total/NA	Solid	3550C	
480-205527-2	BH2 1-2	Total/NA	Solid	3550C	
480-205527-3	BH3 1-2	Total/NA	Solid	3550C	
480-205527-4	BH4 1-2	Total/NA	Solid	3550C	
480-205527-5	BH5 1-2	Total/NA	Solid	3550C	
480-205527-6	BH6 1	Total/NA	Solid	3550C	
480-205527-7	BH7 0.5-1	Total/NA	Solid	3550C	
480-205527-8	BH8 1-3	Total/NA	Solid	3550C	
480-205527-9	BH9 1-2	Total/NA	Solid	3550C	
480-205527-10	BH10 1-2	Total/NA	Solid	3550C	
480-205527-11	BH12 1-2	Total/NA	Solid	3550C	
480-205527-12	BH13 1-2	Total/NA	Solid	3550C	
480-205527-13	BH14 2-3	Total/NA	Solid	3550C	
480-205527-14	BH15 1-2	Total/NA	Solid	3550C	
480-205527-15	BH16 1-3	Total/NA	Solid	3550C	
480-205527-16	BH17 1-2	Total/NA	Solid	3550C	
480-205527-17	BH18 1-3	Total/NA	Solid	3550C	
MB 480-656499/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-656499/2-A	Lab Control Sample	Total/NA	Solid	3550C	
480-205527-1 MS	BH1 2-4	Total/NA	Solid	3550C	
480-205527-1 MSD	BH1 2-4	Total/NA	Solid	3550C	

Analysis Batch: 656667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-1	BH1 2-4	Total/NA	Solid	8270D	656499
480-205527-2	BH2 1-2	Total/NA	Solid	8270D	656499
480-205527-3	BH3 1-2	Total/NA	Solid	8270D	656499
480-205527-4	BH4 1-2	Total/NA	Solid	8270D	656499
480-205527-5	BH5 1-2	Total/NA	Solid	8270D	656499
480-205527-6	BH6 1	Total/NA	Solid	8270D	656499
480-205527-7	BH7 0.5-1	Total/NA	Solid	8270D	656499
480-205527-8	BH8 1-3	Total/NA	Solid	8270D	656499
480-205527-9	BH9 1-2	Total/NA	Solid	8270D	656499
480-205527-10	BH10 1-2	Total/NA	Solid	8270D	656499
480-205527-11	BH12 1-2	Total/NA	Solid	8270D	656499
480-205527-12	BH13 1-2	Total/NA	Solid	8270D	656499
480-205527-13	BH14 2-3	Total/NA	Solid	8270D	656499
480-205527-14	BH15 1-2	Total/NA	Solid	8270D	656499
480-205527-15	BH16 1-3	Total/NA	Solid	8270D	656499
480-205527-16	BH17 1-2	Total/NA	Solid	8270D	656499
480-205527-17	BH18 1-3	Total/NA	Solid	8270D	656499
MB 480-656499/1-A	Method Blank	Total/NA	Solid	8270D	656499
LCS 480-656499/2-A	Lab Control Sample	Total/NA	Solid	8270D	656499
480-205527-1 MS	BH1 2-4	Total/NA	Solid	8270D	656499
480-205527-1 MSD	BH1 2-4	Total/NA	Solid	8270D	656499

Metals

Prep Batch: 656375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-1	BH1 2-4	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 656375 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-2	BH2 1-2	Total/NA	Solid	3050B	
480-205527-3	BH3 1-2	Total/NA	Solid	3050B	
480-205527-4	BH4 1-2	Total/NA	Solid	3050B	
480-205527-5	BH5 1-2	Total/NA	Solid	3050B	
480-205527-6	BH6 1	Total/NA	Solid	3050B	
480-205527-7	BH7 0.5-1	Total/NA	Solid	3050B	
480-205527-8	BH8 1-3	Total/NA	Solid	3050B	
480-205527-9	BH9 1-2	Total/NA	Solid	3050B	
480-205527-10	BH10 1-2	Total/NA	Solid	3050B	
480-205527-11	BH12 1-2	Total/NA	Solid	3050B	
480-205527-12	BH13 1-2	Total/NA	Solid	3050B	
480-205527-13	BH14 2-3	Total/NA	Solid	3050B	
480-205527-14	BH15 1-2	Total/NA	Solid	3050B	
480-205527-15	BH16 1-3	Total/NA	Solid	3050B	
480-205527-16	BH17 1-2	Total/NA	Solid	3050B	
480-205527-17	BH18 1-3	Total/NA	Solid	3050B	
MB 480-656375/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-656375/2-A	Lab Control Sample	Total/NA	Solid	3050B	
480-205527-2 MS	BH2 1-2	Total/NA	Solid	3050B	
480-205527-2 MSD	BH2 1-2	Total/NA	Solid	3050B	

Prep Batch: 656679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-1	BH1 2-4	Total/NA	Solid	7471B	
480-205527-2	BH2 1-2	Total/NA	Solid	7471B	
480-205527-3	BH3 1-2	Total/NA	Solid	7471B	
480-205527-4	BH4 1-2	Total/NA	Solid	7471B	
480-205527-5	BH5 1-2	Total/NA	Solid	7471B	
480-205527-6	BH6 1	Total/NA	Solid	7471B	
480-205527-7	BH7 0.5-1	Total/NA	Solid	7471B	
480-205527-8	BH8 1-3	Total/NA	Solid	7471B	
480-205527-9	BH9 1-2	Total/NA	Solid	7471B	
480-205527-10	BH10 1-2	Total/NA	Solid	7471B	
MB 480-656679/1-A	Method Blank	Total/NA	Solid	7471B	
LCDSRM 480-656679/3-A ^1	Lab Control Sample Dup	Total/NA	Solid	7471B	
LCSSRM 480-656679/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	

Prep Batch: 656680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-11	BH12 1-2	Total/NA	Solid	7471B	
480-205527-12	BH13 1-2	Total/NA	Solid	7471B	
480-205527-13	BH14 2-3	Total/NA	Solid	7471B	
480-205527-14	BH15 1-2	Total/NA	Solid	7471B	
480-205527-15	BH16 1-3	Total/NA	Solid	7471B	
480-205527-16	BH17 1-2	Total/NA	Solid	7471B	
480-205527-17	BH18 1-3	Total/NA	Solid	7471B	
MB 480-656680/1-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 480-656680/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	
480-205527-11 MS	BH12 1-2	Total/NA	Solid	7471B	
480-205527-11 MSD	BH12 1-2	Total/NA	Solid	7471B	

Metals

Analysis Batch: 656694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-1	BH1 2-4	Total/NA	Solid	6010C	656375
480-205527-2	BH2 1-2	Total/NA	Solid	6010C	656375
480-205527-3	BH3 1-2	Total/NA	Solid	6010C	656375
480-205527-4	BH4 1-2	Total/NA	Solid	6010C	656375
480-205527-5	BH5 1-2	Total/NA	Solid	6010C	656375
480-205527-6	BH6 1	Total/NA	Solid	6010C	656375
480-205527-7	BH7 0.5-1	Total/NA	Solid	6010C	656375
480-205527-8	BH8 1-3	Total/NA	Solid	6010C	656375
480-205527-9	BH9 1-2	Total/NA	Solid	6010C	656375
480-205527-10	BH10 1-2	Total/NA	Solid	6010C	656375
480-205527-11	BH12 1-2	Total/NA	Solid	6010C	656375
480-205527-12	BH13 1-2	Total/NA	Solid	6010C	656375
480-205527-13	BH14 2-3	Total/NA	Solid	6010C	656375
480-205527-14	BH15 1-2	Total/NA	Solid	6010C	656375
480-205527-15	BH16 1-3	Total/NA	Solid	6010C	656375
480-205527-16	BH17 1-2	Total/NA	Solid	6010C	656375
480-205527-17	BH18 1-3	Total/NA	Solid	6010C	656375
MB 480-656375/1-A	Method Blank	Total/NA	Solid	6010C	656375
LCSSRM 480-656375/2-A	Lab Control Sample	Total/NA	Solid	6010C	656375
480-205527-2 MS	BH2 1-2	Total/NA	Solid	6010C	656375
480-205527-2 MSD	BH2 1-2	Total/NA	Solid	6010C	656375

Analysis Batch: 656753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-1	BH1 2-4	Total/NA	Solid	7471B	656679
480-205527-2	BH2 1-2	Total/NA	Solid	7471B	656679
480-205527-3	BH3 1-2	Total/NA	Solid	7471B	656679
480-205527-4	BH4 1-2	Total/NA	Solid	7471B	656679
480-205527-5	BH5 1-2	Total/NA	Solid	7471B	656679
480-205527-6	BH6 1	Total/NA	Solid	7471B	656679
480-205527-7	BH7 0.5-1	Total/NA	Solid	7471B	656679
480-205527-8	BH8 1-3	Total/NA	Solid	7471B	656679
480-205527-9	BH9 1-2	Total/NA	Solid	7471B	656679
480-205527-10	BH10 1-2	Total/NA	Solid	7471B	656679
480-205527-11	BH12 1-2	Total/NA	Solid	7471B	656680
480-205527-12	BH13 1-2	Total/NA	Solid	7471B	656680
480-205527-13	BH14 2-3	Total/NA	Solid	7471B	656680
480-205527-14	BH15 1-2	Total/NA	Solid	7471B	656680
480-205527-15	BH16 1-3	Total/NA	Solid	7471B	656680
480-205527-16	BH17 1-2	Total/NA	Solid	7471B	656680
480-205527-17	BH18 1-3	Total/NA	Solid	7471B	656680
MB 480-656679/1-A	Method Blank	Total/NA	Solid	7471B	656679
MB 480-656680/1-A	Method Blank	Total/NA	Solid	7471B	656680
LCDSRM 480-656679/3-A ^1	Lab Control Sample Dup	Total/NA	Solid	7471B	656679
LCSSRM 480-656679/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	656679
LCSSRM 480-656680/2-A ^1	Lab Control Sample	Total/NA	Solid	7471B	656680
480-205527-11 MS	BH12 1-2	Total/NA	Solid	7471B	656680
480-205527-11 MSD	BH12 1-2	Total/NA	Solid	7471B	656680

Metals

Analysis Batch: 657060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-4	BH4 1-2	Total/NA	Solid	6010C	656375
480-205527-5	BH5 1-2	Total/NA	Solid	6010C	656375
480-205527-9	BH9 1-2	Total/NA	Solid	6010C	656375
480-205527-10	BH10 1-2	Total/NA	Solid	6010C	656375
480-205527-13	BH14 2-3	Total/NA	Solid	6010C	656375
480-205527-14	BH15 1-2	Total/NA	Solid	6010C	656375
480-205527-15	BH16 1-3	Total/NA	Solid	6010C	656375
480-205527-16	BH17 1-2	Total/NA	Solid	6010C	656375
480-205527-17	BH18 1-3	Total/NA	Solid	6010C	656375

Analysis Batch: 657201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-13	BH14 2-3	Total/NA	Solid	6010C	656375

General Chemistry

Analysis Batch: 656374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-205527-1	BH1 2-4	Total/NA	Solid	Moisture	
480-205527-2	BH2 1-2	Total/NA	Solid	Moisture	
480-205527-3	BH3 1-2	Total/NA	Solid	Moisture	
480-205527-4	BH4 1-2	Total/NA	Solid	Moisture	
480-205527-5	BH5 1-2	Total/NA	Solid	Moisture	
480-205527-6	BH6 1	Total/NA	Solid	Moisture	
480-205527-7	BH7 0.5-1	Total/NA	Solid	Moisture	
480-205527-8	BH8 1-3	Total/NA	Solid	Moisture	
480-205527-9	BH9 1-2	Total/NA	Solid	Moisture	
480-205527-10	BH10 1-2	Total/NA	Solid	Moisture	
480-205527-11	BH12 1-2	Total/NA	Solid	Moisture	
480-205527-12	BH13 1-2	Total/NA	Solid	Moisture	
480-205527-13	BH14 2-3	Total/NA	Solid	Moisture	
480-205527-14	BH15 1-2	Total/NA	Solid	Moisture	
480-205527-15	BH16 1-3	Total/NA	Solid	Moisture	
480-205527-16	BH17 1-2	Total/NA	Solid	Moisture	
480-205527-17	BH18 1-3	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH1 2-4
Lab Sample ID: 480-205527-1
Date Collected: 01/17/23 08:30
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH1 2-4
Lab Sample ID: 480-205527-1
Date Collected: 01/17/23 08:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		1	656667	JMM	EET BUF	01/24/23 01:09
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 16:55
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:16

Client Sample ID: BH2 1-2
Lab Sample ID: 480-205527-2
Date Collected: 01/17/23 08:45
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH2 1-2
Lab Sample ID: 480-205527-2
Date Collected: 01/17/23 08:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 01:34
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 16:58
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:17

Client Sample ID: BH3 1-2
Lab Sample ID: 480-205527-3
Date Collected: 01/17/23 09:00
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Lab Chronicle

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH3 1-2
Lab Sample ID: 480-205527-3
Date Collected: 01/17/23 09:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 01:58
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:19
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:19

Client Sample ID: BH4 1-2
Lab Sample ID: 480-205527-4
Date Collected: 01/17/23 09:15
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH4 1-2
Lab Sample ID: 480-205527-4
Date Collected: 01/17/23 09:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 94.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		5	656667	JMM	EET BUF	01/24/23 02:23
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:34
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		10	657060	LMH	EET BUF	01/25/23 16:47
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:20

Client Sample ID: BH5 1-2
Lab Sample ID: 480-205527-5
Date Collected: 01/17/23 09:30
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH5 1-2
Lab Sample ID: 480-205527-5
Date Collected: 01/17/23 09:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 02:48
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:38
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		2	657060	LMH	EET BUF	01/25/23 16:51

Lab Chronicle

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH5 1-2
Lab Sample ID: 480-205527-5
Date Collected: 01/17/23 09:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:21

Client Sample ID: BH6 1
Lab Sample ID: 480-205527-6
Date Collected: 01/17/23 09:45
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH6 1
Lab Sample ID: 480-205527-6
Date Collected: 01/17/23 09:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 03:12
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:42
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:25

Client Sample ID: BH7 0.5-1
Lab Sample ID: 480-205527-7
Date Collected: 01/17/23 10:00
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH7 0.5-1
Lab Sample ID: 480-205527-7
Date Collected: 01/17/23 10:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 03:37
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:46
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:27

Lab Chronicle

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH8 1-3
Lab Sample ID: 480-205527-8
Date Collected: 01/17/23 10:15
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH8 1-3
Lab Sample ID: 480-205527-8
Date Collected: 01/17/23 10:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		1	656667	JMM	EET BUF	01/24/23 04:02
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:50
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:28

Client Sample ID: BH9 1-2
Lab Sample ID: 480-205527-9
Date Collected: 01/17/23 10:30
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH9 1-2
Lab Sample ID: 480-205527-9
Date Collected: 01/17/23 10:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 04:26
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:54
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		10	657060	LMH	EET BUF	01/25/23 17:10
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:29

Client Sample ID: BH10 1-2
Lab Sample ID: 480-205527-10
Date Collected: 01/17/23 10:45
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH10 1-2
Lab Sample ID: 480-205527-10
Date Collected: 01/17/23 10:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 95.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 04:51
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 17:58
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		5	657060	LMH	EET BUF	01/25/23 17:14
Total/NA	Prep	7471B			656679	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:31

Client Sample ID: BH12 1-2
Lab Sample ID: 480-205527-11
Date Collected: 01/17/23 11:00
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH12 1-2
Lab Sample ID: 480-205527-11
Date Collected: 01/17/23 11:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 05:15
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 18:02
Total/NA	Prep	7471B			656680	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:34

Client Sample ID: BH13 1-2
Lab Sample ID: 480-205527-12
Date Collected: 01/17/23 12:15
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH13 1-2
Lab Sample ID: 480-205527-12
Date Collected: 01/17/23 12:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		10	656667	JMM	EET BUF	01/24/23 05:40
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 18:06
Total/NA	Prep	7471B			656680	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:42

Client Sample ID: BH14 2-3
Lab Sample ID: 480-205527-13
Date Collected: 01/17/23 12:30
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH14 2-3
Lab Sample ID: 480-205527-13
Date Collected: 01/17/23 12:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 86.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		5	656667	JMM	EET BUF	01/24/23 06:04
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 18:22
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	657060	LMH	EET BUF	01/25/23 17:18
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		2	657201	LMH	EET BUF	01/26/23 18:07
Total/NA	Prep	7471B			656680	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:44

Client Sample ID: BH15 1-2
Lab Sample ID: 480-205527-14
Date Collected: 01/17/23 12:45
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH15 1-2
Lab Sample ID: 480-205527-14
Date Collected: 01/17/23 12:45
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		5	656667	JMM	EET BUF	01/24/23 06:29
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 18:26
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	657060	LMH	EET BUF	01/25/23 17:22
Total/NA	Prep	7471B			656680	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:45

Client Sample ID: BH16 1-3
Lab Sample ID: 480-205527-15
Date Collected: 01/17/23 13:00
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH16 1-3
Lab Sample ID: 480-205527-15
Date Collected: 01/17/23 13:00
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		1	656667	JMM	EET BUF	01/24/23 06:54
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 18:30
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	657060	LMH	EET BUF	01/25/23 17:26
Total/NA	Prep	7471B			656680	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:46

Client Sample ID: BH17 1-2
Lab Sample ID: 480-205527-16
Date Collected: 01/17/23 13:15
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH17 1-2
Lab Sample ID: 480-205527-16
Date Collected: 01/17/23 13:15
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		5	656667	JMM	EET BUF	01/24/23 07:18
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 18:34
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	657060	LMH	EET BUF	01/25/23 17:30
Total/NA	Prep	7471B			656680	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:47

Client Sample ID: BH18 1-3
Lab Sample ID: 480-205527-17
Date Collected: 01/17/23 13:30
Matrix: Solid
Date Received: 01/18/23 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	656374	JMM	EET BUF	01/18/23 15:50

Client Sample ID: BH18 1-3
Lab Sample ID: 480-205527-17
Date Collected: 01/17/23 13:30
Matrix: Solid
Date Received: 01/18/23 08:35
Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			656499	SJM	EET BUF	01/19/23 15:30
Total/NA	Analysis	8270D		1	656667	JMM	EET BUF	01/24/23 07:43
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	656694	LMH	EET BUF	01/20/23 18:38

Lab Chronicle

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Client Sample ID: BH18 1-3
Lab Sample ID: 480-205527-17

Date Collected: 01/17/23 13:30
Matrix: Solid

Date Received: 01/18/23 08:35
Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			656375	NVK	EET BUF	01/19/23 11:45
Total/NA	Analysis	6010C		1	657060	LMH	EET BUF	01/25/23 17:34
Total/NA	Prep	7471B			656680	NVK	EET BUF	01/23/23 11:29
Total/NA	Analysis	7471B		1	656753	NVK	EET BUF	01/23/23 16:49

Laboratory References:

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

Accreditation/Certification Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Laboratory: Eurofins Buffalo

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

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

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

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

Method Summary

Client: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

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: Brydges Engineering in Environment & Energy DPC
Job ID: 480-205527-1
Project/Site: 47 East Amherst Street

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-205527-1	BH1 2-4	Solid	01/17/23 08:30	01/18/23 08:35
480-205527-2	BH2 1-2	Solid	01/17/23 08:45	01/18/23 08:35
480-205527-3	BH3 1-2	Solid	01/17/23 09:00	01/18/23 08:35
480-205527-4	BH4 1-2	Solid	01/17/23 09:15	01/18/23 08:35
480-205527-5	BH5 1-2	Solid	01/17/23 09:30	01/18/23 08:35
480-205527-6	BH6 1	Solid	01/17/23 09:45	01/18/23 08:35
480-205527-7	BH7 0.5-1	Solid	01/17/23 10:00	01/18/23 08:35
480-205527-8	BH8 1-3	Solid	01/17/23 10:15	01/18/23 08:35
480-205527-9	BH9 1-2	Solid	01/17/23 10:30	01/18/23 08:35
480-205527-10	BH10 1-2	Solid	01/17/23 10:45	01/18/23 08:35
480-205527-11	BH12 1-2	Solid	01/17/23 11:00	01/18/23 08:35
480-205527-12	BH13 1-2	Solid	01/17/23 12:15	01/18/23 08:35
480-205527-13	BH14 2-3	Solid	01/17/23 12:30	01/18/23 08:35
480-205527-14	BH15 1-2	Solid	01/17/23 12:45	01/18/23 08:35
480-205527-15	BH16 1-3	Solid	01/17/23 13:00	01/18/23 08:35
480-205527-16	BH17 1-2	Solid	01/17/23 13:15	01/18/23 08:35
480-205527-17	BH18 1-3	Solid	01/17/23 13:30	01/18/23 08:35

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jacob Cox	Lab PM: Beninati, John	Carrier Tracking No(s):	COC No: 480-180871-38584.1
Client Contact: Mr. Peter Gorton	Phone: (716) 418-0192	E-Mail: John.Beninati@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: Brydges Engineering in Environment & Energy DPC	PWSID:			Job #:
Address: 960 Busti Ave Suite B-150	Due Date Requested:			
City: Buffalo	TAT Requested (days): 10 day			
State, Zip: NY, 14213	Compliance Project: Δ Yes Δ No			
Phone: 716-362-6533(Tel)	PO #: Purchase Order not required			
Email: pgorton@be3corp.com	WO #: Regan Development			
Project Name: BE3 - Job #8159	Project #: 48024347			
Site: 47 East Amherst St.	SSOW#:			

Analysis Requested

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	6010C, 7471B	8270D - Part 375 SVOCs	8260C - Part 375 VOCs (LL BULK)	Total Number of containers
			Preservation Code:			N	N	N	
BH1 2-4'	1/17	8:30	G	Solid		X	X		
BH2 1-2'	1/17	8:45	G	Solid		X	X		
BH3 1-2'	1/17	9:00	G	Solid		X	X		
BH4 1-2'	1/17	9:15	G	Solid		X	X		
BH5 1-2'	1/17	9:30	G	Solid		X	X		8 oz + 2 oz jars
BH6 1'	1/17	9:45	G	Solid		X	X		
BH7 0.5-1'	1/17	10:00	G	Solid		X	X		
BH8 1-3'	1/17	10:15	G	Solid		X	X		
BH9 1-2'	1/17	10:30	G	Solid		X	X		
BH10 1-2'	1/17	10:45	G	Solid		X	X		8 oz + 2 oz jars
BH12 1-2'	1/17	11:00	G	Solid		X	X		

480-205527 Chain of Custody

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: N/A

Empty Kit Relinquished by: Jacob Cox Date: Time: Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by: Jacob Cox	1/18/2023 8:35 AM		Received by:	4:35 1/18/23	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks: 2.7 ICE

Ver: 06/08/2021

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Jacob Cox	Lab PM: Beninati, John	Carrier Tracking No(s):	COC No: 480-180871-38584.2
Client Contact: Mr. Peter Gorton	Phone: (716)418-0192	E-Mail: John.Beninati@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: Brydges Engineering in Environment & Energy DPC	PWSID:			Job #:
Address: 960 Busti Ave Suite B-150	Due Date Requested:			
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State, Zip: NY, 14213	Compliance Project: Δ Yes Δ No			
Phone: 716-362-6533(Tel)	PO #: Purchase Order not required			
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Project Name: BE3 - Job #8159	Project #: 48024347			
Site: 47 East Amherst St.	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B	8270D - Part 375 SVOCs	8260C - Part 375 VOCs (LL BULK)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N		
BH 13 1-2'	1/17	12:15	G	Solid			X	X			
BH 14 2-3'	1/17	12:30	G	Solid			X	X			
BH 15 1-2'	1/17	12:45	G	Solid			X	X			
BH 16 1-3'	1/17	13:00	G	Solid			X	X			4oz, (2) 2oz jars
BH 17 1-2'	1/17	13:15	G	Solid			X	X			4oz, (2) 2oz jars
BH 18 1-3'	1/17	13:30	G	Solid			X	X			

Possible Hazard Identification

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

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: N/A

Empty Kit Relinquished by: Jacob Cox	Date:	Time:	Method of Shipment:
Relinquished by: Jacob Cox	Date/Time: 1/18/2023 8:35 AM	Company: BE3	Received by:	Date/Time: 8:35 1/18/23	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks: 2.7 ICE

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Brydges Engineering in Environment & Energy DPC

Job Number: 480-205527-1

Login Number: 205527
List Number: 1
Creator: Yeager, Brian A

List Source: Eurofins Buffalo

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

APPENDIX D

Previous Investigations

PROJ. 160202

GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC

Civil • Geotechnical
Structural • Architecture
Material Testing • Consulting

Site Redevelopment
47 East Amherst Street
Buffalo, New York

Geotechnical Engineering Report

GGEA 18-1306

Prepared for:
EI Team
2060 Sheridan Drive
Buffalo, New York 14223

Prepared by:
Glynn Group Engineering & Architecture, PLLC
415 South Transit Street
Lockport, New York 14094

STATE OF NEW YORK
MARK W. GLYNN
LICENSED PROFESSIONAL ENGINEER
LICENSE NO. 057491

December 6, 2018

GLYNN GROUP ENGINEERING & ARCHITECTURE, PLLC
415 South Transit Street, Lockport, New York 14094
voice 716.625.6933 / fax 716.625.6983
www.glynngroup.com

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 SCOPE

This report provides subsurface investigation data and geotechnical recommendations for the proposed redevelopment of the property located at 47 East Amherst Street in the City of Buffalo, New York. Specifically, Glynn Group Engineering & Architecture, PLLC (GGEA) has provided the following scope of services:

1. Performed a site visit and staked/marked four (4) soil boring locations.
2. Cleared underground utilities with Dig Safely New York.
3. Mobilized drilling subcontractor, Earth Dimensions, Inc. (EDI), with a truck mounted drill rig and crew.
4. Performed SPT sampling in accordance with ASTM D-1586 "Standard Method for Penetration Test and Split Barrel Sampling of Soils" to auger refusal at each boring location.
5. Provided soil boring logs, prepared by drilling subcontractor, to include SPT data, N values, soil classification, refusal depth and groundwater conditions.
6. Prepared a geotechnical report in accordance with the 2015 International Building Code (IBC) to include allowable bearing capacity, total and differential settlement, seismic site class and design category, groundwater mitigation, expansive soil mitigation, liquefaction mitigation, foundation recommendations and construction recommendations.

1.2 CONTRACT

GGEA performed this study in accordance with a written proposal to EI Team dated November 12, 2018. GGEA received the notice to proceed via signed contract from Mr. Ronald J. Szatkowski of EI Team on November 13, 2018. All services provided by GGEA are subject to the Standard Terms and Conditions included in the November 12, 2018 geotechnical proposal.

1.3 EXCLUSIONS

The project efforts exercised by GGEA include geotechnical analysis, design recommendations and the preparation of this report. The scope of this report specifically excludes any review of former site use, in particular, environmental or pollution related concerns.

2.0 PROJECT BACKGROUND

2.1 SITE DESCRIPTION AND PROPOSED IMPROVEMENTS

The property encompasses approximately 3.33 acres and is identified as 47 East Amherst Street (SBL #90.21-8-1), which is located on the south side of East Amherst Street between Pannell Street to the west and Holden Street to the east. At the center of the property is the former "Amherst Bowling Center", which is a CMU block and brick one and two story structure with a footprint of approximately 50,000 square feet. The remainder of the property is paved, with the exception of approximately 1800 square feet of grass area directly in front of the building. The majority of the property is flat, however there is a slight rise in elevation at the southwest corner of the site. Refer to the Project Location Plan (S1) included in Appendix B.

The proposed site redevelopment is to consist of the complete demolition of the existing bowling center building and the construction of a new five (5) story building with commercial/retail space on the first floor and residential housing on the remaining floors. The new building is presumed to be supported by a shallow foundation system with a slab on grade floor.

2.2 GEOLOGIC SETTING

The site is located long the precipice of the Onondaga Escarpment (Middle Devonian Onondaga Formation), which is composed of hard cherty limestone rock that was deposited in a warm shallow sea covering New York State approximately 390 million years ago. The limestone bedrock is located in close proximity to the ground surface and is covered by approximately 0.8 to 5.6 feet of overburden soil. The native overburden at this site at one time was composed of glacial till, a dense matrix of silt, sand, rock and clay, deposited during the last glacial stage of the Pleistocene Epoch approximately 12,000 years ago. However, the native soils at this site were previously stripped during past development efforts and replaced with soil, stone and industrial fill materials.

3.0 FIELD INVESTIGATION

3.1 METHODOLOGY

The subsurface investigation consisted of a total of four (4) soil borings located in the general vicinity of the existing building corners, as identified on the boring location plan included with the email RFP from EI Team and the Soil Boring Location Plan (S2) included in Appendix C of this report. GGEA performed a site visit on November 15, 2018 to establish soil boring locations and assess drill rig access. Utility clearance was performed by EDI through Dig Safely New York.

EDI mobilized a truck mounted drill rig to the site on November 28, 2018 to perform the subsurface investigation. Soil boring and sampling operations were performed using hollow stem augers to advance through overburden materials in accordance with the Standard Penetration Test Method ASTM D-1586. Resistance values, or blow counts, were recorded for each six-inch advancement of a twenty-four inch long, two inch diameter split spoon sampler. "N" values were calculated by totaling the resistance values for the 6/12 and 12/18 inch intervals. All data recorded during drilling operations can be found on the soil boring logs included in Appendix A.

Retrieved soil samples were logged and visually classified by EDI in accordance with the ASEE System of Definition for Visual Identification of Soils (Burmister Classification System) and ASTM D-2488 "Standard Practice for Description and Identification of Soils (Visual – Manual Procedure)". Recovered soil samples were not visually examined by GGEA prior to the preparation of this report, however overburden soils have been classified as fill by EDI.

3.2 SUBSURFACE CONDITIONS

All soil borings were advanced to auger refusal, which was encountered at depths ranging from 0.8 feet at boring B-2 to 5.6 feet at boring B-4. The overburden soils were found to be composed of variable fill materials consisting of sandy silt with gravel (ML), silty sand with gravel (SM), gravel with sand (GW), slag and cinders. A Soil Boring Location Plan has been included in Appendix C and specific subsurface conditions can be found on the Soil Boring Logs included in Appendix A. Subsurface conditions at each location have been summarized as follows:

B-1	0.0 – 0.2 ft	Asphalt pavement.
	0.2 – 0.8 ft	Gray, moist, crushed stone (GW) FILL.
	0.8 – 4.5 ft	Light brownish gray, extremely moist, compact to loose, sandy silt with gravel (ML) FILL, slag and cinders. N values range from 18 to 7.
	4.5 – 4.8 ft	Gray, hard, weathered, limestone.
	> 4.8 ft	Presumed limestone bedrock.
B-2	0.0 – 0.3 ft	Asphalt pavement.
	0.3 – 0.8 ft	Gray, moderately soft to moderately hard, weathered, limestone.
	> 0.8 ft	Presumed limestone bedrock.
B-3	0.0 – 0.7 ft	Dark brown, wet to extremely moist, very loose, silty topsoil.
	0.7 – 2.2 ft	Gray, moist to extremely moist, loose, silty sand with gravel (SM) FILL, slag, ash and cinders. N value of 10.
	2.2 – 4.1 ft	Gray, moist, loose, ash and cinders FILL. N value of 5.
	4.1 – 4.3 ft	Gray, moderately hard, weathered, limestone.
	> 4.3 ft	Presumed limestone bedrock.
B-4	0.0 – 0.1 ft	Asphalt pavement.

0.1 – 1.0 ft	Gray, moist, compact, cinders FILL. N value of 15.
1.0 – 5.6 ft	Grayish brown, extremely moist to moist, loose, silty sand with gravel (SM) FILL, slag, cinders and ash. N value of 10.
> 5.6 ft	Presumed limestone bedrock.

It is GGEA's opinion the extent of this investigation was sufficient to accurately characterize the subsurface conditions and provide information necessary for the preparation of this report. The soil borings portray the subsurface conditions encountered at the soil boring locations at the time of investigation. The stratification lines shown on the soil boring logs are approximate, whereas in-situ the changes between strata may be more gradual. Specific subsurface conditions can be found on the soil boring logs included in Appendix A.

3.3 GROUNDWATER

Groundwater was not encountered in the augers upon the completion of drilling efforts. The augers did not remain in the ground for an extended period of time to allow groundwater to migrate through the soils and stabilize within the augers. Although groundwater monitoring wells or piezometers were not included in the scope of this investigation, based on the moisture content of recovered soil samples, the stabilized groundwater elevation is believed to be within the bedrock below the construction depth of this project.

4.0 GEOTECHNICAL EVALUATION AND RECOMMENDATIONS

4.1 FOUNDATIONS

The overburden soils at this site consist of fill materials of variable composition and relative density, which will provide limited capacity for shallow foundation construction. Considering the shallow depth to bedrock encountered throughout this site and the known high compressive strength of the Onondaga Limestone, GGEA recommends all foundations be advanced to bedrock. GGEA provides design and construction recommendations as follows:

1. Foundations should be advanced through overburden fill soils to bear on limestone bedrock. Surficial weathered, fractured, limestone rock that can be easily chipped with the excavator bucket should be removed to expose sound bedrock.
2. Limestone bedrock will provide for an allowable bearing capacity of 10,000 psf.
3. Foundation frost walls may bear directly on bedrock without the construction of an underlying footing, pending they are of adequate width to remain plumb during construction prior to backfilling. Foundations shall have a minimum width of 12 inches.

4. Foundations may be pinned to the rock to add horizontal stability, however pinning the foundations to rock is not required.
5. Although regional frost protection typically calls for foundations to be constructed at a depth of greater than 3.5 feet below final grade, in accordance with section 1809.4 of the 2015 IBC, foundations shall be constructed at a minimum depth of 12 inches below final grade when bearing on bedrock. Regional frost depth regulations do not apply to foundations constructed directly over rock.
6. Existing foundations, utilities and structural elements associated with the existing building should be removed and replaced with engineered fill where applicable beneath the footprint of the new building.

4.2 SLAB ON GRADE

The building interior slab on grade should be designed and constructed in accordance with the following recommendations:

1. All slabs should be designed using a recognized standard procedure, such as identified in the text "Designing Floor Slabs on Grade" by Ringo and Anderson (ISBN 0-924659-34-3).
2. Remove topsoil, asphalt pavement and poor quality existing fill.
3. Compact the exposed subgrade thoroughly with a smooth drum vibratory roller to produce a uniform density throughout the subgrade. This may be composed of existing fill materials, however considering the variable composition encountered at the soil boring locations, existing fill materials may need to be removed to bedrock and replaced with engineered fill if compaction and proof rolling yields poor results.
4. Proof roll the exposed subgrade with a fully loaded 10-wheel dump truck weighing at least 30 tons or a smooth drum roller having an effective force of at least 600 pounds per linear inch of roller width. Any area exhibiting weaving, yielding, rutting or boiling should be reworked and compacted to produce an acceptable response *or* over excavated and replaced with structural fill. The depth of the undercut and type of soil fill will depend on the soil material encountered, weather conditions and the bearing conditions at the base of the undercut. The top surface of the subgrade should be pitched to drain to prevent ponding of stormwater.
5. Install subsurface utilities.
6. Separation geotextile is not required for design, but is suggested to prevent the contamination of granular base materials from underling subgrade soils as a result of repeated construction traffic. Any granular base that becomes contaminated with soil during construction should be removed and replaced prior to pouring concrete. Ultimately, the site geotechnical engineer should evaluate the need for geotextile fabric based on the condition and composition of exposed subgrade soils. GGEA recommends US Fabrics US 250 or equivalent.

7. Place granular base composed of Select Structural Fill. The thickness of the granular base material should be dependent upon the intended slab usage. At a minimum, GGEA recommends the granular base thickness be equivalent to that of the thickness of the slab. Heavily loaded slabs may require additional thickness.
8. Install the concrete slab, the design of which should be based on a modulus of subgrade reaction of 125 pci. The installation of a vapor barrier and specification of the concrete finish technique is at the discretion of the architect.
9. Proper joint spacing and reinforcing steel spacing/placement will be critical to the long term performance of slab. The Portland Cement Association recommends joint spacing in feet should be two to three times the slab thickness in inches.

4.3 FLEXIBLE PAVEMENT

GGEA provides design and construction recommendations for flexible pavement as follows:

1. Remove existing asphalt pavement, topsoil and unsuitable existing fill materials to expose competent subgrade composed of existing fill materials or limestone bedrock.
2. If soil or existing fill subgrade is exposed, compact the subgrade thoroughly with a smooth drum vibratory roller to produce a uniform density throughout the subgrade.
3. After the exposed subgrade is thoroughly densified, proof roll the soil subgrade with a fully loaded 10-wheel dump truck weighing at least 30 tons or a smooth drum roller having an effective force of at least 600 pounds per linear inch of roller width. Any area exhibiting weaving, yielding, rutting or boiling should be reworked and compacted to produce an acceptable response *or* over excavated and replaced with structural fill. The depth of the undercut and type of soil fill will depend on the soil material encountered, weather conditions and the bearing conditions at the base of the undercut. The top surface of the subgrade should be pitched to drain to prevent ponding of stormwater.
4. If the design dictates, install ditches, lateral drains, weeps and storm drainage piping.
5. Install a granular base layer composed of properly placed and compacted Select Structural Fill. GGEA recommends a minimum granular base thickness of 10 inches for automobile traffic and 12 inches for bus or truck traffic. However, granular base thickness can be reduced or eliminated if paving directly over limestone rock.
6. If catch basins are installed, special attention should be directed at the compaction of stone around the catch basins and the pipes. Failure to properly compact the stone will result in pavement settlement around the catch basins and ponding of water.
7. Construct a flexible pavement system consisting of asphalt binder followed by asphalt top. GGEA provides recommended pavement sections as follows:

Light Duty (primarily car traffic)

- 10 inches select structural fill
- 2.5 inches of asphalt concrete binder (2008 NYSDOT item number 403.138902)
- 1.0 inch of asphalt concrete top (2008 NYSDOT item number 403.178902 or 403.198902)

Heavy Duty (mixed truck/bus and car traffic)

- 12 inches select structural fill
- 3.0 inches of asphalt concrete binder (2008 NYSDOT item number 403.138902)
- 1.5 inch of asphalt concrete top (2008 NYSDOT item number 403.178902 or 403.198902)

The existing overburden fill materials may become soft if exposed to moisture, which will contaminate the overlying select structural fill over time through repeated loading. The installation of a separation geotextile will provide additional support and should be considered, especially if the granular base will be used as a working surface during construction. GGEA recommends US 200 beneath light duty pavement and US 250 beneath heavy duty pavement, both of which are manufactured by US Fabrics.

All site contractors should be notified that roadways and parking areas will not support repeated travel by construction loads where existing fill materials remain over bedrock. Pavement and subgrade failure can be anticipated in areas that receive a high volume of heavy construction traffic. To preclude the overstressing of the pavement system it is recommended that haul roads be located in non-critical areas. As an option, the base course of stone can be overbuilt to a total thickness of 20 inches to serve as a haul route. The additional thickness of stone should be removed prior to paving along with any areas of stone that have been contaminated with soil. Failure to remove fine-grained soils from the stone base may cause pavement distress in the form of heaving resulting from freeze thaw effects.

In the event the binder layer is used as a working surface during construction or there is a prolonged time period between binder and top placement such that daily activities occur over the binder surface, the surface must be power washed, not just swept, and a tack coat should be applied prior to installation of the top course. In addition, any yielding area of pavement binder should be removed and replaced prior to application of the top course.

Design and construction of the pavement system should take care to provide adequate drainage to prevent saturation of the subgrade soil, which may have a high silt content in some areas and provide a high potential for frost heave if exposed to water and freezing temperatures.

4.4 EXCAVATION and BACKFILL

Excavation through the overburden soil and fill materials is anticipated to require minimal effort from standard excavation equipment. Excavation into the limestone bedrock will require significant effort and the use of a heavy duty hydraulic breaker (rock hammer) with an impact energy of greater than 10,000 foot pounds.

The soil encountered at this site should be classified by an OSHA competent person in accordance with 29 CFR, Part 1926, OSHA Subpart P, "Excavations and Trenches" prior to and during excavation. GGEA has preliminarily classified the overburden soils and existing fill materials as Type C. However, this classification may change depending on other site criteria and moisture conditions at the time of construction. An OSHA competent person should judge the potential need for excavation bracing and excavation geometry in the field.

Engineered fill materials are defined as follows:

- Select Structural Fill (SSF) is defined as run of crusher stone or gravel in compliance with NYSDOT Item Number 304.12 (Subbase Course Type 2) or NYSDOT Item Number 304.14 (Subbase Course Type 4). Fill should be placed in lifts with a loose thickness of 9 inches and compacted to 95 % of modified proctor density (ASTM D 1557) within 2% of optimum moisture content. Properly compacted Select Structural Fill will provide for a moist unit weight of 145 pcf, a friction angle of 40 degrees, an at rest pressure coefficient (Ko) of 0.36 and an active pressure coefficient (Ka) of 0.22.
- Controlled Low Strength Material (CLSM), commonly referred to as flowable fill, is typically a fly ash based pozzolanic fill manufactured by local concrete plants. A specific mix design should be provided by the manufacturer and reviewed/approved by the project design professional prior to placement. CLSM should have a minimum 28-day compressive strength of 100 psi and may include fine aggregate materials. The material should be placed in separate lifts not to exceed 30 inches in depth and each lift should be allowed to fully cure (monitor for shrinkage and/or desiccation) prior to placing subsequent lifts or constructing the foundation. CLSM should not be used within 42 inches of final grade due to potential freeze/thaw susceptibility and should not be used if the excavation contains standing water or is subject to water infiltration.
- Engineered Fill – SF, SSF or CLSM.
- Structural Fill (SF) is defined as soil materials with the exception of those classified as CH, MH, OH, OL, ML and CL-ML. Pending proper moisture conditioning, native soils may be used for structural fill. Fill should be placed in lifts with a loose thickness of 9 inches and compacted to 95 % of modified proctor density (ASTM D 1557) within 2% of optimum moisture content.
- Common Fill is defined as soil materials with the exception of those classified as CH, MH, OH and OL. Existing site soils may be used as common fill. The fill should be placed in maximum 12 inch lifts and compacted to 90 % modified proctor density (ASTM D-1557) at a moisture content within 2 % of optimum. The soil material should free of organics or other deleterious materials.

Foundations should be backfilled with properly placed and compacted Structural Fill in structurally loaded areas (pavement, sidewalk, interior backfill) and Common Fill in non-structural landscaped areas. Select Structural Fill should be used in the upper 12 inches for structural loaded areas. In place density testing should be performed at a rate of one test per 50 feet of trench or 1600 square feet of area per lift with a minimum of one test per day of placement.

4.5 EXPANSIVE SOIL MITIGATION

Some cohesive soils undergo volumetric change (shrinkage and swelling) with changes in moisture content and degree of saturation, which are commonly referred to as expansive soils. This condition primarily occurs with fat clay (CH) soil, which is a cohesive soil that exhibits a liquid limit of 50 or greater. The liquid limit is the water content, in percent, of a soil that defines the boundary between the plastic and viscous fluid states. Although laboratory testing was not performed on the soils encountered at this site, the soils primarily have a granular composition and are not susceptible to volumetric change.

4.6 LIQUEFACTION MITIGATION

Liquefaction is the process where saturated cohesionless (granular) soils, specifically, loose sands and silts, transform from a solid into a liquid as a result of an increase in the pore water pressure caused by repeated disturbance such as experienced during seismic events. Liquefaction results in an immediate loss of shear strength and bearing capacity, causing total and differential settling of the overlying structure. The overburden soils and fill materials encountered at this site typically have a loose relative density and may be subject to liquefaction if saturated. Densification or removal should be performed to mitigate the liquefaction potential.

4.7 SETTLEMENT

Total and differential settlement is estimated to be negligible for foundations constructed directly over bedrock. Notwithstanding, foundations designed and constructed in accordance with the recommendations of this report will provide for total settlement of less than 1.0 inch and differential settlement of less than 0.5 inches.

4.8 SEISMIC SITE CLASS AND DESIGN CATEGORY

In accordance with Section 1613 (Earthquake Loads) of the 2015 IBC, GGEA has classified the site as Seismic **Site Class C.** The site classification is based on the summation of N values at boring B-4 for the upper 100 feet of subsurface conditions in accordance with ASCE 7.

The design spectral response accelerations have been calculated as 0.169 g for short period design spectral response acceleration (S_{DS}) and 0.068 g for one second design spectral response acceleration (S_{D1}). In accordance with tables 1613.5.6(1) and 1613.5.6(2), using Occupancy Category I, the site is classified as Seismic **Design Category B**. See Appendix D for reference.

4.9 GENERAL CONSTRUCTION RECOMMENDATIONS

GGEA provides general construction recommendations as follows:

1. Existing overburden fill materials should not be allowed to become saturated or inundated with standing water. No fill material or concrete shall be placed in water, over saturated subgrade or over frozen subgrade. Existing overburden fill materials may lose considerable strength and bearing capacity if subject to saturation. Stormwater should be removed through proper grading, sumps and suction pumps.
2. Backfill foundations prior to applying load.
3. Conformance to OSHA standards is mandatory during excavation and trench work.
4. Topsoil, organic soils and poor quality existing fill materials should be removed from all load bearing areas.
5. Footing sizes should be proportioned to create nearly equal contact pressures under all foundations, which will serve to minimize differential settlement.
6. Foundation bearing grades should not be allowed to freeze prior to or after placement of concrete. Insulating blankets should be used to cover bearing grades plus a one foot perimeter outside of the forms or completed footings until backfill is placed.
7. The fill placed at grade elevation should be sloped to drain away from the foundation walls to eliminate the potential for standing water to accumulate along the foundation
8. During the excavation process, if encountered subsurface conditions are found to be different than those identified on the soil boring logs and represented within this report, the allowable bearing capacity and associated design recommendations may need to be reevaluated by a qualified geotechnical engineer to account for varying bearing capacity.

4.10 CONCLUSION

This completes the geotechnical evaluation for the proposed site redevelopment at 47 East Amherst Street in the City of Buffalo, New York. The site soils are of good structural quality and will provide for the construction of a shallow foundation system designed in accordance with the recommendations provided by GGEA. This report has been prepared based on the encountered subsurface conditions at the soil boring locations and pertinent data supplied by EI Team. Please contact GGEA if major project changes are made or if encountered soils differ from conditions noted herein.

Sincerely,

G. Edward Lover
Senior Geologist
/gel

STATE OF NEW YORK
MARK W. GLYNN
LICENSED PROFESSIONAL ENGINEER
LICENSE NO. 057491

Mark W. Glynn, P.E.
Consulting Engineer, Principal

Appendix A

Subsurface Investigation Logs

Site Redevelopment
47 East Amherst Street
Buffalo, New York

Geotechnical Engineering Report

GGEA 18-1306

December 6, 2018

GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations

1091 Jamison Road • Elma, NY 14059

(716) 655-1717 • FAX (716) 655-2915

8K18 HOLE NO. B-1-18 SURF. ELEVATION _

PROJECT 47 East Amherst Street LOCATION _

City of Buffalo, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 11/28/18 COMPLETED 11/28/18

DEPTH IN FT | BLOWS ON SAMPLER

SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
1	8						Gray asphalt pavement. 0.2	Asphalt pavement to 0.2 feet over mostly crushed stone fill to 0.8 feet over coarse silty soil fill with little sand, trace to little gravel, trace clay, slag, and cinders to 4.1 feet over apparent limestone bedrock to auger refusal.
10		10			18		Moist gray very gravelly (SAND) fill with 40 to 60% mostly angular gravel, very fine to very coarse size sand, trace silt, compact, single grain, (SW), (GW). 0.8	
			8					
				9				
2	4							
12		3			7			
			4					
				3				
3	100/3						Extremely moist light brownish gray (SANDY-SILT) fill with 5 to 15% gravel, little sand, trace clay, slag, and cinders, compact, loose below 2.0 feet, massive soil structure, (ML). 4.5	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to auger refusal at 4.8 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
2							Gray stone fragments, hard. 4.8	No water at completion.
							Advanced augers to refusal at 4.8 feet.	EDI Bedrock Hardness Classification --- Hard: Intact hand-held specimen requires more than one hammer blow to break it. Can be faintly scratched by a steel nail.

5 10 15 20

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian R. Bartron, Geologist, (cns) SHEET 1 OF 1

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations

1091 Jamison Road • Elma, NY 14059

(716) 655-1717 • FAX (716) 655-2915

8K18 HOLE NO. B-2-18 SURF. ELEVATION _

PROJECT 47 East Amherst Street LOCATION _

City of Buffalo, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 11/28/18 COMPLETED 11/28/18

DEPTH IN FT	SN REC	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	6						Gray asphalt pavement.	Asphalt pavement to 0.3 feet over an apparent limestone bedrock to spilt spoon reufsal.
	7		100/3					0.3	
								Gray shale stone fragments, moderately soft to moderately hard.	Note: Advanced bore hole with 2" OD split spoon sampler to refusal at 0.8 feet. Bore hole was repaired with asphalt patch.
								0.8	
								Boring completed at 0.8 feet.	No water at completion.
5									EDI Bedrock Hardness Classification
									Moderately Soft: Shallow indentations (0.04 to 0.12 inch (1 to 3 mm)) can be made by firm blows with point of geologic pick. Can be peeled with pocket knife with difficulty.
10									Moderately Hard: Can not be peeled or scraped with knife. Can be distinctly scratched with a steel nail.
									Note: Drove 3 additional split spoons in the vicinity of location #2. Refusal was encountered at all locations between 0.5 and 0.8 feet below ground surface. All borings were repaired with an asphalt patch.
15									
20									

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian R. Bartron, Geologist, (cns) SHEET 1 OF 1

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations

1091 Jamison Road • Elma, NY 14059

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8K18 HOLE NO. B-3-18 SURF. ELEVATION _

PROJECT 47 East Amherst Street LOCATION _

City of Buffalo, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 11/28/18 COMPLETED 11/28/18

DEPTH IN FT | BLOWS ON SAMPLER

SN REC	0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
1	1							
14		5			10		Wet to extremely moist dark brown (SANDY-SILT) topsoil with little sand and organic matter, very loose, granular soil structure, (ML).	Coarse silty topsoil with little sand and organic matter to 0.7 feet over sandy soil fill with some gravel and slag, little silt, ash, and cinders to 2.2 feet over mostly ash and cinders fill to 4.1 feet over apparent limestone bedrock to split spoon refusal.
			5				0.7	
				6				
2	5							
18		3			5		Extremely moist to moist gravelly (SILTY-SAND) fill with 20 to 40% gravel and slag, little silt, ash, and cinders, compact, massive soil structure, (SM).	
			2					
				2				
3	100/3							
2							2.2	
							Mostly ash and cinders fill.	
							4.1	
							Gray stone fragments, moderately hard.	
							4.3	
							Split spoon refusal at 4.3 feet.	

Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to split spoon refusal at 4.3 feet. Bore hole was backfilled with cuttings to ground surface upon completion.

No water at completion.

EDI Bedrock Hardness Classification

Moderately Hard: Can not be peeled or scraped with knife. Can be distinctly scratched with a steel nail.

Note: B-3-18 drilled approximately 35 feet west of staked location.

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian R. Bartron, Geologist, (cns)

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations

1091 Jamison Road • Elma, NY 14059

(716) 655-1717 • FAX (716) 655-2915

8K18 HOLE NO. B-4-18 SURF. ELEVATION —

PROJECT 47 East Amherst Street LOCATION —

City of Buffalo, Erie County, NY

CLIENT Glynn Group Engineering & Architecture, PLLC DATE STARTED 11/28/18 COMPLETED 11/28/18

DEPTH IN FT	SN REC	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WATER TABLE AND REMARKS
	1	5						Gray asphalt pavement.	Gray asphalt pavement to 0.1 feet over mostly cinders fill to 1.0 feet over sandy soil fill with some gravel, little silt, trace slag, cinders, and ash to auger refusal.
	11		4			15		0.1	
				11				Mostly cinders fill.	
					12			1.0	
	2	8						Extremely moist to moist grayish brown gravelly (SILTY-SAND) fill with 20 to 40% gravel, little silt, trace slag, cinders, and ash.	Note: Advanced bore hole with 2 1/4" ID x 6" OD hollow stem auger casing with continuous split spoon sampling to auger refusal at 5.6 feet. Bore hole was backfilled with cuttings to ground surface upon completion.
	10		5			10			
				5					
					4				
	3	5							
5	6		4						
				100/2				5.6	
								Advanced augers to refusal at 5.6 feet.	No water at completion.
10									
15									
20									

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Brian R. Bartron, Geologist, (cns) SHEET 1 OF 1

Appendix B

Project Location Plan

Site Redevelopment
47 East Amherst Street
Buffalo, New York

Geotechnical Engineering Report

GGEA 18-1306

December 6, 2018

GGE
ENGINEERING • DESIGN
GLYNN GEOTECHNICAL ENGINEERING
415 S. TRANSIT STREET
LOCKPORT, NEW YORK 14094
VOICE (716) 625 - 6933 / FAX (716) 625-6983
www.glynngroup.com

PROJECT: 47 EAST AMHERST STREET			SHEET NO.: S1
SUBJECT: PROJECT LOCATION PLAN			
CLIENT: E.I. TEAM			
PROJ. NO.: 18-1306	SCALE: N.T.S.	DATE: 11.15.18	BY: GEL

Appendix C

Soil Boring Location Plan

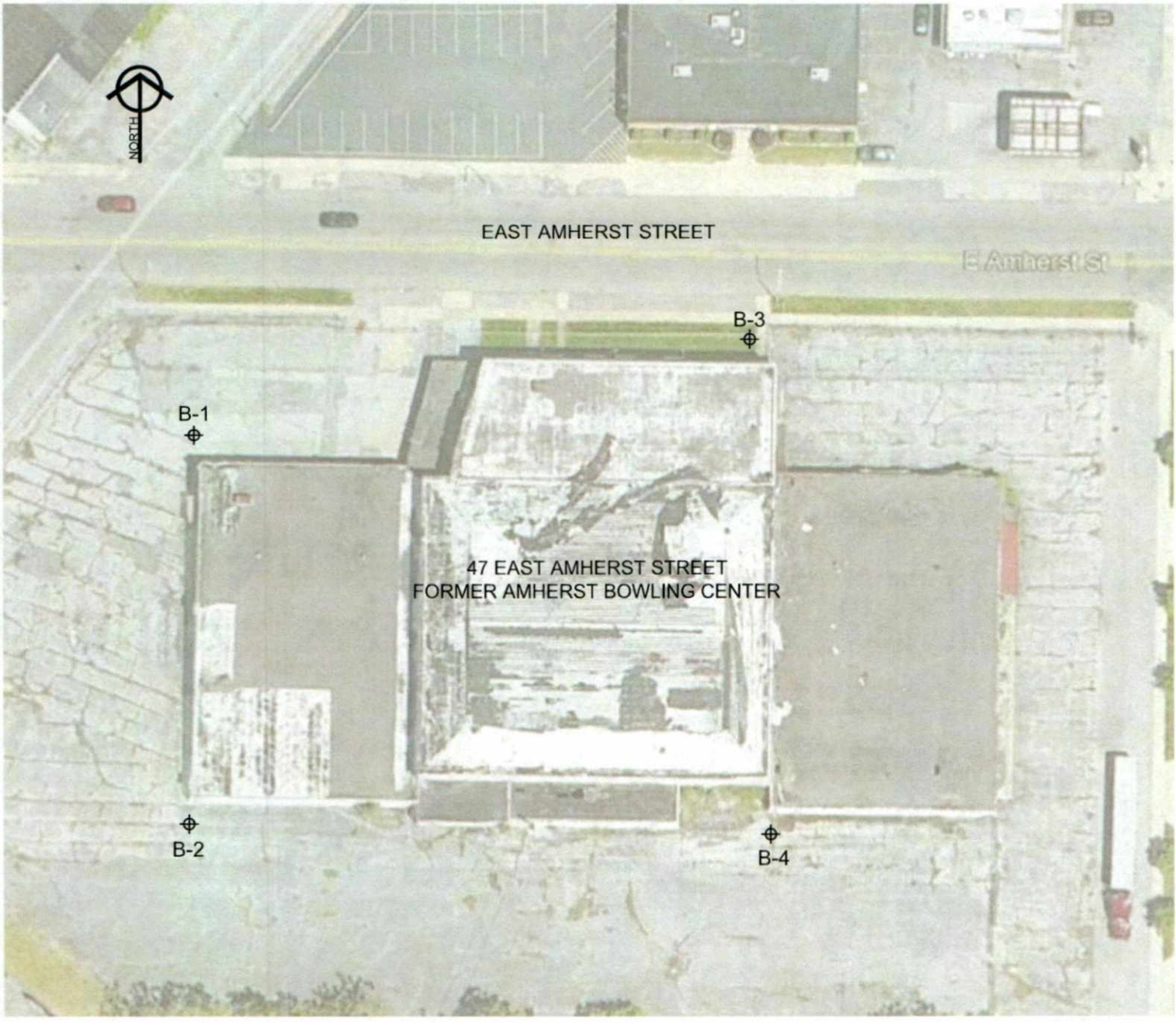
Site Redevelopment
47 East Amherst Street
Buffalo, New York

Geotechnical Engineering Report

GGEA 18-1306

December 6, 2018

GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC



GGE
ENGINEERING · DESIGN
GLYNN GEOTECHNICAL ENGINEERING
415 S. TRANSIT STREET
LOCKPORT, NEW YORK 14094
VOICE (716) 625 - 6933 / FAX (716) 625-6983
www.glynngroup.com

PROJECT: 47 EAST AMHERST STREET				SHEET NO.: S2
SUBJECT: SOIL BORING LOCATION PLAN				
CLIENT: E.I. TEAM				
PROJ. NO.: 18-1306	SCALE: 1"= 60'-0"	DATE: 11.15.18	BY: GEL	

Appendix D

Seismic Site Class and Design Category

Site Redevelopment
47 East Amherst Street
Buffalo, New York

Geotechnical Engineering Report

GGEA 18-1306

December 6, 2018

GLYNN GROUP
ENGINEERING & ARCHITECTURE, PLLC

Project : 47 East Amherst Street
Client: El Team
GGE # : 18-1306
Date: 12.06.18

B-4

Depth (di)	N Value (Ni)
2	15
3.6	10
94.4	100

ASCE 7
Equation 20.4-2

$$N = \frac{100}{\sum \frac{di}{Ni}}$$

***N* = 69.6**

ASCE 7
Table 20.3-1

$N > 50$

SITE CLASS C

Project : 47 East Amherst Street
Client: El Team
GGE # : 18-1306
Date: 12.06.18

The site is defined as **SITE CLASS C.**

F_a = Site coefficient defined in Table 1613.3.3(1). F_a = 1.2

F_v = Site coefficient defined in Table 1613.3.3(2). F_v = 1.7

S_s = The mapped spectral accelerations for short periods as determined by Figure 1613.3.1(1) S_s = 0.211

S_1 = The mapped spectral accelerations for a 1-second period as determined by Figure 1613.3.1(2) S_1 = 0.060

S_{MS} = The maximum considered earthquake spectral response accelerations for short period as determined by equation 16-37

S_{M1} = The maximum considered earthquake spectral response accelerations for 1 second period as determined by equation 16-38

S_{DS} = The design spectral response acceleration at short periods as determined by equation 16-39

S_{D1} = The design spectral response acceleration at 1 second period as determined by equation 16-40

$S_{MS} = F_a(S_s)$ = 0.253

$S_{M1} = F_v(S_1)$ = 0.102

$S_{DS} = 2/3(S_{MS})$ = 0.169

$S_{D1} = 2/3(S_{M1})$ = 0.068

Occupancy Category = I

Seismic Design Category = B