SUBSURFACE PHASE II ENVIRONMENTAL SITE ASSESSMENT

SKYWAY LOOP
61 TERRACE PARKING LOT
BUFFALO, ERIE COUNTY, NEW YORK

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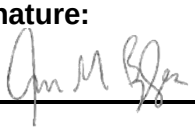
Reviewed By: Jason M. Brydges, PE	**Signature:** 	**Date:** **September 2021**	**Title:** BE3 – PM

September 2021

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1.0 INTRODUCTION

Brydges Engineering in Environment & Energy (BE3) performed a subsurface Phase II Environmental Site Assessment (ESA) at 61 Terrace (SBL #111.17-5-1.1), known as Skyway Loop, in the City of Buffalo, Erie County, New York (see **Figure 1**). The property is a street level asphalt parking lot and is located directly west of the Seneca One building, across Pearl Street. This assessment included an 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 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 irregularly-almost circular-shaped approximately 0.87-acres subject property is currently used as a surface parking lot property . The parcel is surrounded by other parking areas and a roadway complex. The property is immediately to the west of the Seneca One building located at 3 Seneca Street and directly south of Pearl Street Grill & Brewery and is partially underneath NYS Route 5, Buffalo Skyway, (see **Figure 1**)**.**

1.1.2 Physical Setting

Local area topography is generally level. Surface relief in the immediate vicinity of the subject property is relatively uniform, with overall gentle downward slopes to the south-southwest, towards the Buffalo River and Lake Erie which are less than one mile southwest, and the mouth of the Niagara River about 1 mile west. The elevation ranges from 580 to 584 feet above sea level sloping south-southwest. The general middle of the parcel is located at latitude 42º52’49.11” N; Longitude 78º52’40.66”W.

1.1.3 Historical Use

This property was historically a manufacturing facility and was converted into a parking lot sometime in the 1960s, after the construction of the Buffalo Skyway in the 1950s. Historically, there were multiple uses across the property including auto parking, a gasoline service station in the southeast portion of the property, a fire station in the northwestern part of the property, welding and a machine shop in the southwest portion of the property, mill supplies and lofts, and store fronts along the eastern side of the property. One underground storage tank (UST) was associated with the fire station.

1.1.4 Contaminants of Concern

The history and use of the subject property suggest there was potential contaminants of concern associated with fill material and past manufacturing/commercial use as well as petroleum use and storage. Potential contaminants include metals, polycyclic aromatic hydrocarbons (PAHs), petroleum related compounds, and possibly solvents. 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 subsurface soil and limited groundwater evaluation to assess the subject property relative to the potential recognized environmental conditions (RECs) identified in the Phase I ESA from on-site and adjacent concerns.

2.0 FIELD INVESTIGATIONS

The subsurface assessment field work was completed on August 12, 2021. Prior to conducting the Phase II ESA, the utility locate center was notified to mark underground utilities on the property. TREC Environmental, Inc. provided the equipment and personnel to advance the borings and install on temporary monitoring well. A photolog of field activities is included as **Appendix A** and boring logs are included in **Appendix B**.

2.1 SOIL SAMPLING

A total of 14 soil borings, designated Borings B1 through B14, were advanced at specific locations across the property (see **Figure 2**). 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 3 to 23 feet below ground surface (bgs) with most being advanced to depths between 4 and 8 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, 8 to 12 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. PID readings were not observed in any borings or over any soil. A total of 15 grab subsurface soil samples were collected at specific depths from fill material as follows:

- B1 at 0.5-2 feet below asphalt. Total depth of boring was 12 feet bgs;
- B2 at 0.5-2 feet below asphalt. Total depth of boring was 3 feet bgs;
- B3 at 0.5-2 feet below asphalt. Total depth of boring was 10 feet bgs;
- B4 at 0.5-2 feet below asphalt. Total depth of boring was 23 feet bgs;
- B4B at 4-8 feet below asphalt. Total depth of boring was 23 feet bgs;
- B5 at 2-4 feet below asphalt. Total depth of boring was 8 feet bgs;
- B6 at 0.5-2 feet below asphalt. Total depth of boring was 4 feet bgs;

- B7 at 0.5-2 feet below asphalt. Total depth of boring was 16 feet bgs;
- B8 at 0.5-2 feet below asphalt. Total depth of boring was 3.5 feet bgs;
- B9 at 6-7 feet below asphalt. Total depth of boring was 8 feet bgs;
- B10 at 0.5-2 feet below asphalt. Total depth of boring was 4 feet bgs;
- B11 at 0.5-2 feet below asphalt. Total depth of boring was 4 feet bgs;
- B12 at 0.5-2 feet below asphalt. Total depth of boring was 4 feet bgs;
- B13 at 0.5-2 feet below asphalt. Total depth of boring was 4 feet bgs; and
- B14 at 0.5-2 feet below asphalt. Total depth of boring was 4 feet bgs.

All soil borings were backfilled with the soil from the boring and sealed with an asphalt patch. The soil samples were submitted to ALS Environmental which is a NYSDEC approved laboratory for analysis. Of the fifteen soil samples collected and submitted to the laboratory, eight were analyzed and the remaining seven were placed on hold. Due to the amount of contaminants exceeding NYSDEC Restricted Residential SCOs, and the widespread of contamination at the site, the remaining samples will not be analyzed by the laboratory and will be disposed of by the laboratory.

2.2 GROUNDWATER SAMPLING

One groundwater monitoring micro-well (Well B7GW) was installed in Boring B7 in the northwest area of the property. This boring was selected to assess migration of potential contaminants from the onsite historical UST, offsite REC locations, the anticipated groundwater flow direction and because it produced enough groundwater to obtain a sample.

The well consisted of a 1-inch diameter, schedule 40 PVC casing equipped with a 5-foot, 100-slot screen and a solid PVC riser pipe extending to the surface. Screens were positioned in the water bearing zone to the bottom of the boring to ensure assessment potential for contaminates. The well was sampled using a disposable mini bailer. The well was allowed to equilibrate for about 1.5 hours prior to sampling. One groundwater sample was collected and analyzed for VOCs.

Following sampling, the PVC was removed from the ground and disposed of. The boring was then backfilled with soil cuttings and an asphalt patch was added to match the surrounding surface.

2.3 SUBSURFACE CONDITIONS

The borings indicate that shallow subsurface conditions generally consisted of fill with construction and demolition debris consisting mostly of brick with some cement, glass and cinder. Fill depths ranged from 6 to 10 feet bgs. Except for Boring B7, groundwater was not encountered within the borings.

3.0 RESULTS

Soil and groundwater samples were analyzed on a standard 10-day turnaround time. The analytical soil results were compared to the NYSDEC Unrestricted, Residential, and Restricted Residential Soil Cleanup Objectives (SCOs) listed in Table 375-6.8(a) and (b) of 6 NYCRR Part 375 (December 2006). The analytical groundwater results were compared to the NYSDEC Technical and Operational Guidance Series (TOGS) Standards or Guidance Values in Table 1

of the Division of Water TOGS (1.1.1) (June 1998). These SCOs and standards are listed in Tables 1 and 2 with the soil and groundwater results, respectively. A copy of the laboratory report is provided in Appendix C.

3.1 SOIL

All eight 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 0.5 to 2 feet bgs, except for Sample B4B which was collected from 4 to 8 feet bgs.

Metals

Metal compounds were observed in all soil samples analyzed. A summary of metals above NYSDEC SCOs is provided in **Table 1** and **Figure 2**. The following results were above NYSDEC SCOs:

- Arsenic exceeded the Restricted Residential SCOs of 16 ppm in Samples B7 and B12 at concentrations of at 32.4 ppm and 20.8 ppm, respectively;
- Chromium exceeded the Residential SCO in Sample B1 at 145 ppm;
- Copper exceeded the Unrestricted SCOs in Samples B4B at 50 ppm and B7 at 75.1 ppm and also exceeded the Restricted Residential in Sample B12 at 291 ppm;
- Lead exceeded the Unrestricted SCO in Sample B1 at 157 ppm, Sample B2 at 227 ppm, Sample B10 at 81.8 ppm, and Sample B11 at 322 ppm and was elevated above Restricted Residential SCOs in Sample B4B at 410 ppm, Sample B6 at 438 ppm, Sample B7 at 464 ppm, and Sample B12 at 1930 ppm;
- Manganese exceeded the Unrestricted SCO in Sample B1 at 1,960 ppm;
- Mercury was elevated above the Unrestricted SCO in Sample B2 at 0.203 ppm, Sample B10 at 0.392 ppm, and Sample B11 at 0.756 ppm and above the Restricted Residential SCO in Sample B4B at 1.92 ppm, Sample B6 at 1.83 ppm, Sample B7 at 5.36 ppm, and Sample B12 at 5.35 ppm;
- Zinc was elevated above the Unrestricted SCO in Samples B1 at 149 ppm, B2 at 152 ppm, B4B at 180 ppm, B6 at 292 ppm, B7 at 285 ppm, B11 at 158, and B12 at 814 ppm.

Semi-Volatile Organic Compounds (SVOCs)

Of the eight soil samples submitted for laboratory analysis, seven had elevated SVOCs, mostly PAH compounds, above NYSDEC SCOs as follows:

- Sample B2: Benzo(b)fluoranthene (1.1ppm), and Indeno(1,2,3-cd)pyrene (0.50 ppm) both above restricted residential SCOs.
- Sample B4B: Benzo(a)anthracene (3.9 ppm), Benzo(a)pyrene (4.1 ppm), Benzo(b)fluoranthene (4.3 ppm), Benzo(k)fluoranthene (1.7 ppm), Chrysene (4 ppm), Dibenz(a,h)anthracene (0.470 ppm), and Indeno(1,2,3-cd)pyrene (1.8 ppm) were all above Restricted or Restricted Residential SCOs.
- Sample B6: Benzo(a)anthracene (40 ppm), Benzo(a)pyrene (42 ppm), Benzo(b)fluoranthene (45 ppm), Benzo(k)fluoranthene (18 ppm), Chrysene (38 ppm), and Indeno(1,2,3-cd)pyrene (24 ppm) were all above Restricted or Restricted Residential SCOs.

- Sample B7: Benzo(a)anthracene (110 ppm), Benzo(a)pyrene (120 ppm), Benzo(b)fluoranthene (120 ppm, Benzo(k)fluoranthene (43 ppm), Chrysene (100 ppm), Dibenzofuran (25 ppm), Fluoranthene (280 ppm), Indeno(1,2,3-cd)pyrene (62 ppm), Phenanthrene (270 ppm), and Pyrene (250 ppm) were all above Residential or Restricted Residential SCOs.
- Sample B10: Benzo(a)anthracene (3.1 ppm), Benzo(a)pyrene (3.7 ppm), Benzo(b)fluoranthene (4 ppm), Benzo(k)fluoranthene (1.5 ppm), Chrysene (3.1 ppm), Dibenz(a,h)anthracene (0.44 ppm), and Indeno(1,2,3-cd)pyrene (1.8 ppm) were all above Residential or Restricted Residential SCOs.
- Sample B11: Benzo(a)anthracene (3.7 ppm), Benzo(a)pyrene (4.3 ppm), Benzo(b)fluoranthene (4.8 ppm), Benzo(k)fluoranthene (1.8 ppm), Chrysene (3.9 ppm), Dibenz(a,h)anthracene (0.56 ppm), and Indeno(1,2,3-cd)pyrene (2.1 ppm) were all above Residential or Restricted Residential SCOs.
- (B12) Benzo(a)anthracene (2.5 ppm), Benzo(a)pyrene (3 ppm), Benzo(b)fluoranthene (3.5 ppm), Benzo(k)fluoranthene (1.4 ppm), Chrysene (2.8 ppm), Dibenz(a,h)anthracene (0.42 ppm), and Indeno(1,2,3-cd)pyrene (1.7ppm) were all above Residential or Restricted Residential SCOs

3.2 GROUNDWATER

One groundwater sample (Sample B7GW) was collected and submitted to the laboratory. The sample was analyzed for VOCs by EPA Method 8260C. VOCs were not detected in the project sample.

4.0 CONCLUSIONS

The purpose of this assessment was to identify potential environmental impacts at 61 Terrace (Skyway Loop), Buffalo, New York. The property is a street level asphalt parking lot. Historically the property contained manufacturing facilities and was converted into a parking lot sometime in the 1960s, after the construction of the Buffalo Skyway in the 1950s. Other historical uses included a gasoline service station in the southeast portion of the property, a fire station (UST) in the northwestern part of the property, welding and machine shop in the southwest portion of the property, as well as mill supplies, lofts and store fronts along the eastern side of the property.

The laboratory results indicate that there are urban fill conditions existing at the property to at least 6 to 10 feet bgs resulting in target compounds (metals and SVOCs, primarily PAHs) above NYSDEC Unrestricted, Residential, and Restricted Residential SCOs.

5.0 WARRANTS AND LIMITATIONS

This report is based on information from limited soil and groundwater sampling and visual observations of the soils as well as a review of 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 the Douglas Development Corporation. The scope of services performed in this assessment may not be appropriate to satisfy the needs of other

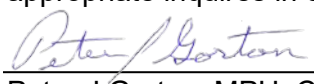
users and any use or reuse of this document or the findings, conclusions, or recommendations presented, is at the sole risk of the user.

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 61 Terrace (Skyway Loop), 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 the all appropriate inquires in conformance with the standards and practices set forth in 40 CFR 312.



9/8/2021

Peter J Gorton, MPH; CHCM — Date

FIGURES & TABLES

Historical Topo Map

2013

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

0 Miles 0.25 0.5 1 1.5

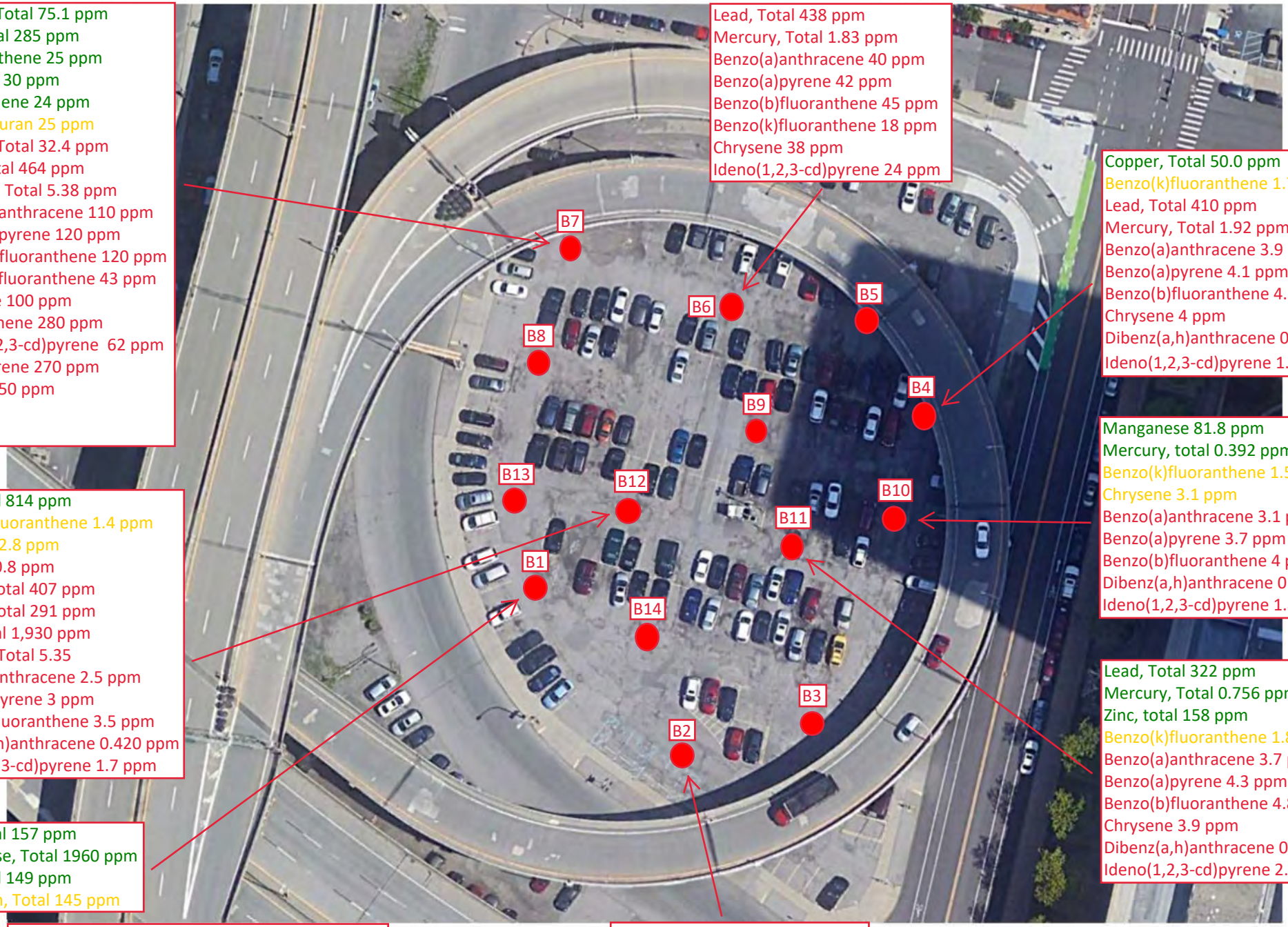
NW N NE
W E
SW S SE

TP, Buffalo NW, 2013, 7.5-minute
NE, Buffalo NE, 2013, 7.5-minute
SE, Buffalo SE, 2013, 7.5-minute
SW, Buffalo SE OE W, 2013, 7.5-minute

SITE NAME: Skyway Loop
ADDRESS: 61 Terrace
Buffalo, NY 14202
CLIENT: BE3

N

61 Terrace (Skyway Loop)



Copper, Total 75.1 ppm
Zinc, Total 285 ppm
Acenaphthene 25 ppm
Fluorene 30 ppm
Naphthalene 24 ppm
Dibenzofuran 25 ppm
Arsenic, Total 32.4 ppm
Lead, Total 464 ppm
Mercury, Total 5.38 ppm
Benzo(a)anthracene 110 ppm
Benzo(a)pyrene 120 ppm
Benzo(b)fluoranthene 120 ppm
Benzo(k)fluoranthene 43 ppm
Chrysene 100 ppm
Fluoranthene 280 ppm
Ideno(1,2,3-cd)pyrene 62 ppm
Penanthrene 270 ppm
Pyrene 250 ppm

Lead, Total 438 ppm
Mercury, Total 1.83 ppm
Benzo(a)anthracene 40 ppm
Benzo(a)pyrene 42 ppm
Benzo(b)fluoranthene 45 ppm
Benzo(k)fluoranthene 18 ppm
Chrysene 38 ppm
Ideno(1,2,3-cd)pyrene 24 ppm

Copper, Total 50.0 ppm
Benzo(k)fluoranthene 1.7 ppm
Lead, Total 410 ppm
Mercury, Total 1.92 ppm
Benzo(a)anthracene 3.9 ppm
Benzo(a)pyrene 4.1 ppm
Benzo(b)fluoranthene 4.3 ppm
Chrysene 4 ppm
Dibenz(a,h)anthracene 0.47 ppm
Ideno(1,2,3-cd)pyrene 1.8 ppm

Manganese 81.8 ppm
Mercury, total 0.392 ppm
Benzo(k)fluoranthene 1.5 ppm
Chrysene 3.1 ppm
Benzo(a)anthracene 3.1 ppm
Benzo(a)pyrene 3.7 ppm
Benzo(b)fluoranthene 4 ppm
Dibenz(a,h)anthracene 0.44 ppm
Ideno(1,2,3-cd)pyrene 1.8 ppm

Zinc, Total 814 ppm
Benzo(k)fluoranthene 1.4 ppm
Chrysene 2.8 ppm
Arsenic 20.8 ppm
Barium, Total 407 ppm
Copper, Total 291 ppm
Lead, Total 1,930 ppm
Mercury, Total 5.35
Benzo(a)anthracene 2.5 ppm
Benzo(a)pyrene 3 ppm
Benzo(b)fluoranthene 3.5 ppm
Dibenz(a,h)anthracene 0.420 ppm
Ideno(1,2,3-cd)pyrene 1.7 ppm

Lead, Total 322 ppm
Mercury, Total 0.756 ppm
Zinc, total 158 ppm
Benzo(k)fluoranthene 1.8 ppm
Benzo(a)anthracene 3.7 ppm
Benzo(a)pyrene 4.3 ppm
Benzo(b)fluoranthene 4.8 ppm
Chrysene 3.9 ppm
Dibenz(a,h)anthracene 0.56 ppm
Ideno(1,2,3-cd)pyrene 2.1 ppm

Lead, Total 157 ppm
Manganese, Total 1960 ppm
Zinc, Total 149 ppm
Chromium, Total 145 ppm

Lead, Total 227 ppm
Mercury, Total 0.203 ppm
Zinc, Total 152 ppm
Benzo(b)fluoranthene 1.1 ppm
Ideno(1,2,3-cd)pyrene 0.5ppm

Figure 2: Soil Boring Locations

Green - Above unrestricted SCOs
Yellow - Above residential SCOs
Red - Above restricted residential SCOs
Boring Locations

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS

Parameter Tested	Sample Address and Identification, Approximate Sample Depth in Feet Below Ground Surface, and Sample Date								NYSDEC Soil Cleanup Objectives (SCOs)		
	B1	B2	B4B	B6	B7	B10	B11	B12	Unrestricted	Residential	Restricted Residential
	0.5-2	0.5-2	4-8	0.5-2	0.5-2	0.5-2	0.5-2	0.5-2			
	8/12/2021										
METALS/INORGANICS											
Arsenic, Total	**11.9**	**5.5**	**9.4**	**7.7**	**32.4**	**10.8**	**6.4**	**20.8**	13	16	16
Barium, Total	**126**	**139**	**149**	**197**	**132**	**198**	**140**	**407**	350	350	400
Beryllium, Total	**0.75**	**0.72**	**0.70**	**0.50**	**0.36**	**0.81**	**0.49**	**0.48**	7.2	14	72
Cadmium, Total	**0.77**	**0.65**	**0.68**	**0.79**	**0.60**	ND	ND	**1.70**	2.5	2.5	4.3
Chromium, Total	**145**	**9.8**	**15.1**	**19.1**	**28.4**	**11.4**	**14.1**	**28.4**	30	36	180
Copper, Total	**46.6**	**44.8**	**50.0**	**32.2**	**75.1**	**37.0**	**30.9**	**291**	50	270	270
Lead, Total	**157**	**227**	**410**	**438**	**464**	**81.8**	**322**	**1,930**	63	400	400
Manganese, Total	**1,960**	**579**	**432**	**330**	**209**	**292**	**324**	**346**	1,600	2,000	2,000
Mercury, Total	**0.110**	**0.203**	**1.92**	**1.83**	**5.38**	**0.392**	**0.756**	**5.35**	0.18	0.81	0.81
Nickel, Total	**19.7**	**7.7**	**14.9**	**13.2**	**9.0**	**10.7**	**11.1**	**11.3**	30	140	310
Selenium, Total	ND	ND	ND	ND	**1.6**	ND	ND	**1.9**	3.9	36	180
Silver, Total	ND	ND	ND	ND	ND	ND	ND	**1.2**	2	36	180
Zinc, Total	**149**	**152**	**180**	**292**	**285**	**63.8**	**158**	**814**	109	2,200	10,000
SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)											
Acenaphthene	ND	ND	**0.82**	ND	**25**	ND	**0.52**	ND	20	100	100
Anthracene	ND	ND	**2**	**12**	**66**	**0.99**	**1.6**	**0.79**	100	100	100
Benzo(a)anthracene	**0.57**	**0.81**	**3.9**	**40**	**110**	**3.1**	**3.7**	**2.5**	1	1	1
Benzo(a)pyrene	**0.56**	**0.94**	**4.1**	**42**	**120**	**3.7**	**4.3**	**3**	1	1	1
Benzo(b)fluoranthene	**0.69**	**1.1**	**4.3**	**45**	**120**	**4**	**4.8**	**3.5**	1	1	1
Benzo(g,h,i)perylene	ND	**0.46**	**1.6**	**22**	**56**	**1.6**	**1.9**	**1.5**	100	100	100
Benzo(k)fluoranthene	ND	**0.39**	**1.7**	**18**	**43**	**1.5**	**1.8**	**1.4**	0.8	1	3.9
Chrysene	**0.58**	**0.85**	**4**	**38**	**100**	**3.1**	**3.9**	**2.8**	1	1	3.9
Dibenz(a,h)anthracene	ND	ND	**0.47**	ND	ND	**0.44**	**0.56**	**0.42**	0.33	0.33	0.33
Dibenzofuran	ND	ND	**0.680**	ND	**25**	ND	**ND**	ND	7	14	59
Fluoranthene	**1.4**	**1.6**	**9.7 D**	**86**	**280**	**6.2**	**7.8**	**4.9**	100	100	100
Fluorene	ND	ND	**1.2**	ND	**30**	ND	**0.52**	ND	30	100	100
Indeno(1,2,3-cd)pyrene	ND	**0.5**	**1.8**	**24**	**62**	**1.8**	**2.1**	**1.7**	0.5	0.5	0.5
Naphthalene	ND	ND	**2.1**	ND	**24**	ND	**2.4**	ND	12	100	100
Phenanthrene	**1.2**	**0.89**	**7.4**	**48**	**270**	**4**	**5.9**	**3.1**	100	100	100
Pyrene	**1.2**	**1.5**	**8**	**74**	**250**	**6.3**	**7.4**	**5**	100	100	100
Other SVOCs	ND	ND	ND	ND	ND	ND	ND	ND	Various	Various	Various

Notes: All units in parts per million (ppm)

ND Analyte not detected

11.9 Analyte detected

157 Reported concentration greater than or equal to the NYSDEC Unrestricted SCO

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

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

D Concentration is a result of dilution

TABLE 2
SUMMARY OF GROUNDWATER RESULTS

Parameter Tested	Sample Identification, Approximate Groundwater Depth Below Top of Casing (Ft), and Sample Date B7GW 10.6 8/12/21	NYSDEC TOGS 1.1.1 GA
VOLATILE ORGANIC COMPOUNDS (VOCs)		
Benzene	ND	1
Chloroform	ND	7
Tetrachloroethene (PCE)	ND	5
Trichloroethene (TCE)	ND	5
Vinyl Chloride	ND	2
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Other VOCs	ND	Various
Total TICs	ND	-

Notes: All units in microgams per liter (µg/L)
NYSDEC New York State Department of Environmental Conservation
TOGS Technical and Operational Guidance Series
ND Analyte not detected

APPENDICES

Appendix A

Field Activity Phtolog

BE3 Photolog

Date: 8/12/21

Boring B1 Location facing southeast.

Boring B1 Soil Cores.

Boring B2 Location facing southeast.

Boring B2 Soil Cores.

BE3 Photolog

Date: 8/12/21

Boring B3 Location facing northeast.

Boring B3 Soil Cores.

Boring B4 Location facing south.

Boring B4 Soil Cores.

BE3 Photolog

Date: 8/12/21

Boring B5 Location facing east.

Boring B5 Soil Cores.

Boring B6 Location facing east.

Boring B6 Soil Cores.

BE3 Photolog

Date: 8/12/21

Boring B7 Location facing south.

Boring B7 Soil Cores.

Boring B8 Location facing south.

Boring B8 Soil Cores.

BE3 Photolog

Date: 8/12/21

Boring B9 Soil Cores.

Boring B11 Soil Cores.

Boring B12 Soil Cores.

Boring B14 location facing west

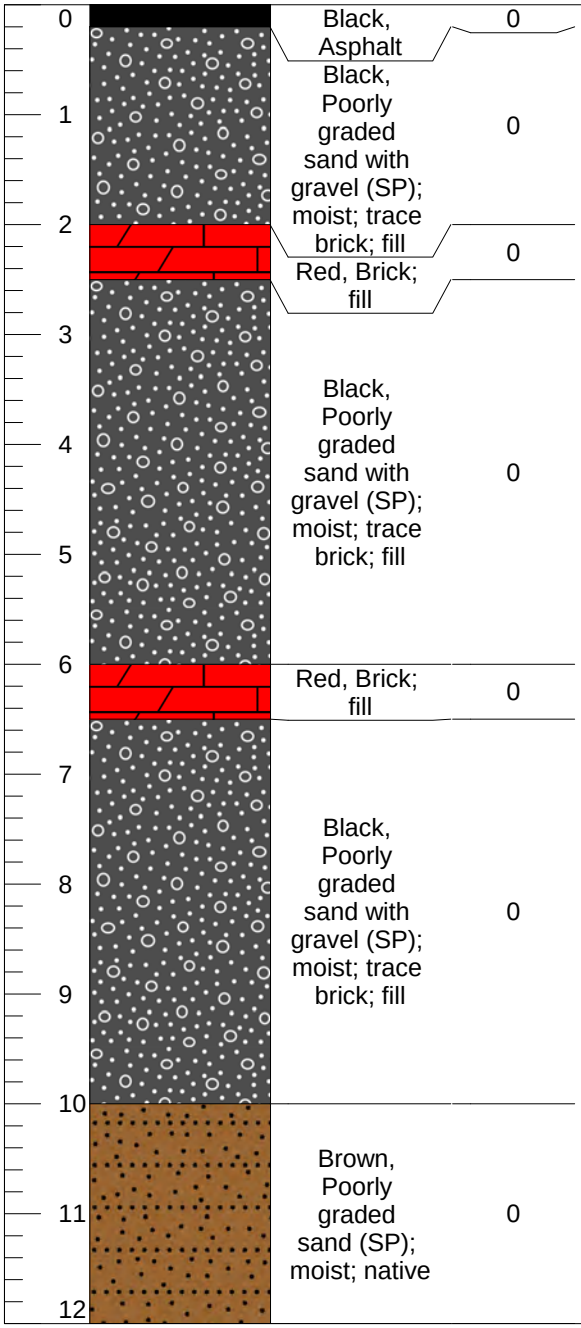
Appendix B

Boring Logs

Remedial Investigation Boring Log

Boring ID: B1
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88022° -78.87821°
Drill Date: 8/12/2021
Drill Time: 11:20AM



Soil Cores

Boring B1 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B2
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88002° -78.87795°
Drill Date: 8/12/2021
Drill Time: 11:40AM

Borehole Depth (Ft)	Soil	Description	PID PPM
0 – 0.2		Black, Asphalt	0
0.2 – 2.6		Black, Poorly graded sand with gravel (SP); moist; trace brick; fill	0
2.6 – 2.8		Red, Brick; fill	0

Soil Cores

Boring B2 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B3
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88006° -78.87771°
Drill Date: 8/12/2021
Drill Time: 11:50AM

Borehole Depth (Ft)	Soil	Description	PID PPM
0		Black, Asphalt	0
0.5			
1			
1.5		Dark Brown, Poorly graded sand (SP); moist; fill	
2			0
2.5			
3			
3.5			
4			
4.5		Red, Brick; fill	
5			
5.5			
6			0
6.5			
7			
7.5			
8			
8.5		Brown, Poorly graded sand (SP); moist; fill	
9			0
9.5			
10			

Soil Cores

Boring B3 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B4
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88044° -78.87754°
Drill Date: 8/12/2021
Drill Time: 12:10PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0		Black, Asphalt	0
2		Black, Poorly graded sand with gravel (SP); moist; trace brick; fill	0
4			
6			
8		Dark Brown, Silt (ML); moist; some brick; fill	0
10		Brown, Poorly graded sand with gravel (SP); moist; fill	0
12			
14			
16		Brown, Poorly graded sand (SP); moist; native	0
18			
20			
22			
24			

Soil Cores

Boring B4 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B5
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88057° -78.87765°
Drill Date: 8/12/2021
Drill Time: 12:55PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0		Black, Asphalt	0
0.4			
0.8			
1.2			
1.6		Dark Brown, Silty Sand with Gravel (SM); moist; fill	0
2			
2.4			
2.8			
3.2			
3.6			
4			
4.4		Red, Brick; fill	0
4.8			
5.2			
5.6			
6			
6.4			
6.8			
7.2			
7.6			

Soil Cores

Boring B5 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B6
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88056° -78.87788°
Drill Date: 8/12/2021
Drill Time: 1:10PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0		Black, Asphalt	0
0.2			
0.4			
0.6			
0.8			
1			
1.2			
1.4			
1.6			
1.8			
2		Dark Brown, Silty Sand (SM); moist; trace brick; fill	0
2.2			
2.4			
2.6			
2.8			
3			
3.2			
3.4			
3.6			
3.8			

Soil Cores

Boring B6 Location

Project: Skyway Loop

Client: Douglas Development Corporation

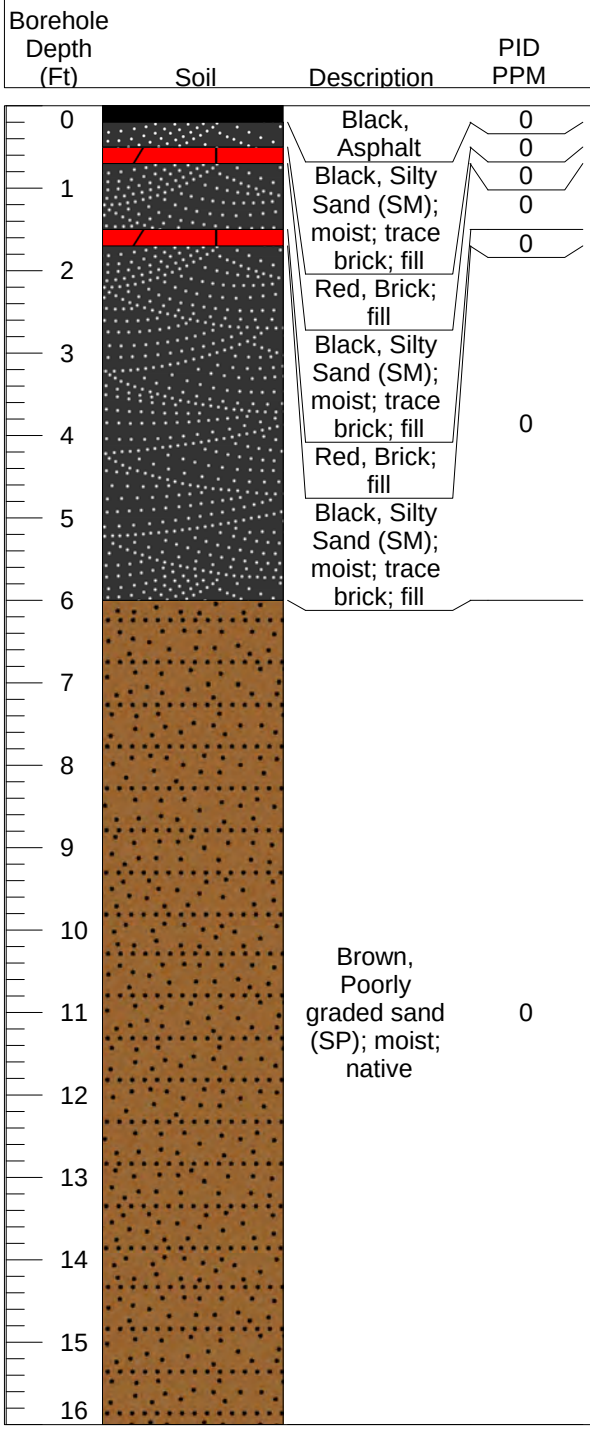
Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B7
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88065° -78.87817°
Drill Date: 8/12/2021
Drill Time: 1:20PM



Soil Cores

Boring B7 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B8
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88050° -78.87821°
Drill Date: 8/12/2021
Drill Time: 1:50PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0 – 0.2		Black, Asphalt	0
0.2 – 1.4		Black, Silty Sand (SM); moist; trace brick; fill	0
1.4 – 3.2		Dark Brown, Silty Sand (SM); moist; trace brick; fill	0
3.2 – 3.4		Red, Brick; fill	0

Soil Cores

Boring B8 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B9
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88041° -78.87781°
Drill Date: 8/12/2021
Drill Time: 2:10PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0		Black, Asphalt	0
0.4			
0.8			
1.2			
1.6		Black, Poorly graded sand with gravel (SP); moist; trace brick; fill	0
2			
2.4			
2.8			
3.2			
3.6			
4			
4.4		Red, Brick; fill	0
4.8			
5.2			
5.6			
6		Dark Brown, Silty Sand (SM); moist; fill	0
6.4			
6.8			
7.2			
7.6			

Soil Cores

Boring B9 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B10
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88030° -78.87761°
Drill Date: 8/12/2021
Drill Time: 2:25PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0		Black, Asphalt	0
0.2 – 3.8		Dark Brown, Silty Sand (SM); moist; fill	0

Map Overlay

Boring B10 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B11
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88026° -78.87777°
Drill Date: 8/12/2021
Drill Time: 2:40PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0 – 0.2		Black, Asphalt	0
0.2 – 1.8		Gray, Silty Sand with Gravel (SM); moist; trace brick; fill	0
3.6 – 3.8		Red, Brick; fill	0

Soil Cores

Boring B11 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

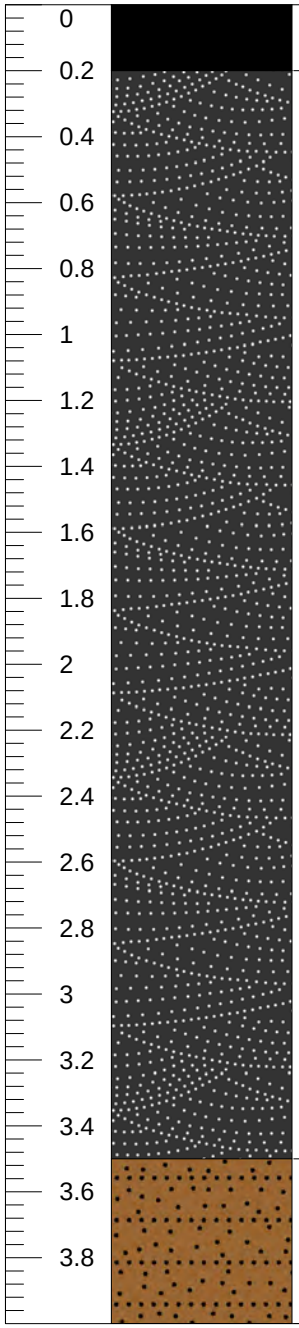
BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B12
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88030° -78.87804°
Drill Date: 8/12/2021
Drill Time: 3:00PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0 – 0.2		Black, Asphalt	0
0.2 – 1.8		Black, Silty Sand (SM); moist; fill	0
1.8 – 3.6		Brown, Poorly graded sand (SP); moist; fill	0



Soil Cores

Boring B12 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B13
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88032° -78.87825°
Drill Date: 8/12/2021
Drill Time: 3:10PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0		Black, Asphalt	0
0.2			
0.4			
0.6			
0.8			
1			
1.2			
1.4			
1.6			
1.8			
2		Dark Brown, Silty Sand (SM); moist; trace brick; fill	0
2.2			
2.4			
2.6			
2.8			
3			
3.2			
3.4			
3.6			
3.8			

Map Overlay

Boring B13 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Boring Log

Boring ID: B14
Drilling Company: TREC
Drill Type: GeoProbe
Weather: 72°F, Cloudy, Wind: NW 5MPH

Environmental Scientist: Dalton Stack
Location: 42.88017° -78.87801°
Drill Date: 8/12/2021
Drill Time: 3:30PM

Borehole Depth (Ft)	Soil	Description	PID PPM
0 – 0.2		Black, Asphalt	0
0.2 – 3.4		Black, Silty Sand (SM); moist; fill	0
3.4 – 3.8		Brown, Poorly graded sand (SP); moist; fill	0

Map Overlay

Boring B14 Location

Project: Skyway Loop

Client: Douglas Development Corporation

Address: 61 Terrace

BE3 CORP
BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Appendix C

Laboratory Data

August 26, 2021 Service Request No:R2108268

Dalton Stack
BE3 Corp
960 Busti Ave
Suite B-150
Buffalo, NY 14213

Laboratory Results for: Soils

Dear Dalton,

Enclosed are the results of the sample(s) submitted to our laboratory August 14, 2021
For your reference, these analyses have been assigned our service request number **R2108268.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Brady.Kalkman@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Brady Kalkman
Project Manager

CC: Jake Tracy

ADDRESS 1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
PHONE +1 585 288 5380 | FAX +1 585 288 8475
ALS Group USA, Corp.
dba ALS Environmental

Narrative Documents

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: BE3
Project: Soils
Sample Matrix: Soil, Water

Service Request: R2108268
Date Received: 08/14/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Nine soil, water samples were received for analysis at ALS Environmental on 08/14/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 08/18/2021: The matrix spike recovery of one or more of the spiked analytes was outside of control limits because of sample heterogeneity. The sample contained a background concentration of the analyte such that sample heterogeneity significantly affected the spike recovery calculation. No further corrective action was required.
Method 8270D, R2108268-005, -004: The control limits for one or more surrogates in the sample are not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the Method Reporting Limit (MRL). No further corrective action was appropriate.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Volatiles by GC/MS:

No significant anomalies were noted with this analysis.

Approved by _____ Date 08/26/2021

SAMPLE DETECTION SUMMARY

CLIENT ID: B1	Lab ID: R2108268-001					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	87.5				Percent	ALS SOP
Arsenic, Total	11.9			1.1	mg/Kg	6010C
Barium, Total	126			2.3	mg/Kg	6010C
Beryllium, Total	0.75			0.34	mg/Kg	6010C
Cadmium, Total	0.77			0.57	mg/Kg	6010C
Chromium, Total	145			1.1	mg/Kg	6010C
Copper, Total	46.6			2.3	mg/Kg	6010C
Lead, Total	157			5.7	mg/Kg	6010C
Manganese, Total	1960			23	mg/Kg	6010C
Mercury, Total	0.110			0.021	mg/Kg	7471B
Nickel, Total	19.7			4.6	mg/Kg	6010C
Zinc, Total	149			2.3	mg/Kg	6010C
Benz(a)anthracene	570			380	ug/Kg	8270D
Benzo(a)pyrene	560			380	ug/Kg	8270D
Benzo(b)fluoranthene	690			380	ug/Kg	8270D
Chrysene	580			380	ug/Kg	8270D
Fluoranthene	1400			380	ug/Kg	8270D
Phenanthrene	1200			380	ug/Kg	8270D
Pyrene	1200			380	ug/Kg	8270D

CLIENT ID: B2	Lab ID: R2108268-002					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	88.7				Percent	ALS SOP
Arsenic, Total	5.5			1.0	mg/Kg	6010C
Barium, Total	139			2.0	mg/Kg	6010C
Beryllium, Total	0.72			0.31	mg/Kg	6010C
Cadmium, Total	0.65			0.51	mg/Kg	6010C
Chromium, Total	9.8			1.0	mg/Kg	6010C
Copper, Total	44.8			2.0	mg/Kg	6010C
Lead, Total	227			5.1	mg/Kg	6010C
Manganese, Total	579			2.0	mg/Kg	6010C
Mercury, Total	0.203			0.022	mg/Kg	7471B
Nickel, Total	7.7			4.1	mg/Kg	6010C
Zinc, Total	152			2.0	mg/Kg	6010C
Benz(a)anthracene	810			370	ug/Kg	8270D
Benzo(a)pyrene	940			370	ug/Kg	8270D
Benzo(b)fluoranthene	1100			370	ug/Kg	8270D
Benzo(g,h,i)perylene	460			370	ug/Kg	8270D
Benzo(k)fluoranthene	390			370	ug/Kg	8270D
Chrysene	850			370	ug/Kg	8270D
Fluoranthene	1600			370	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	500			370	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

CLIENT ID: B2	Lab ID: R2108268-002					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Phenanthrene	890			370	ug/Kg	8270D
Pyrene	1500			370	ug/Kg	8270D

CLIENT ID: B4B	Lab ID: R2108268-003					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	81.4				Percent	ALS SOP
Arsenic, Total	9.4			1.2	mg/Kg	6010C
Barium, Total	149			2.3	mg/Kg	6010C
Beryllium, Total	0.70			0.35	mg/Kg	6010C
Cadmium, Total	0.68			0.58	mg/Kg	6010C
Chromium, Total	15.1			1.2	mg/Kg	6010C
Copper, Total	50.0			2.3	mg/Kg	6010C
Lead, Total	410			5.8	mg/Kg	6010C
Manganese, Total	432			2.3	mg/Kg	6010C
Mercury, Total	1.92			0.11	mg/Kg	7471B
Nickel, Total	14.9			4.6	mg/Kg	6010C
Zinc, Total	180			2.3	mg/Kg	6010C
Acenaphthene	820			410	ug/Kg	8270D
Anthracene	2000			410	ug/Kg	8270D
Benz(a)anthracene	3900			410	ug/Kg	8270D
Benzo(a)pyrene	4100			410	ug/Kg	8270D
Benzo(b)fluoranthene	4300			410	ug/Kg	8270D
Benzo(g,h,i)perylene	1600			410	ug/Kg	8270D
Benzo(k)fluoranthene	1700			410	ug/Kg	8270D
Chrysene	4000			410	ug/Kg	8270D
Dibenz(a,h)anthracene	470			410	ug/Kg	8270D
Dibenzofuran	680			410	ug/Kg	8270D
Fluoranthene	9700	D		830	ug/Kg	8270D
Fluorene	1200			410	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1800			410	ug/Kg	8270D
Naphthalene	2100			410	ug/Kg	8270D
Phenanthrene	7400			410	ug/Kg	8270D
Pyrene	8000			410	ug/Kg	8270D

CLIENT ID: B6	Lab ID: R2108268-004					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	82.7				Percent	ALS SOP
Arsenic, Total	7.7			1.2	mg/Kg	6010C
Barium, Total	197			2.4	mg/Kg	6010C
Beryllium, Total	0.50			0.36	mg/Kg	6010C
Cadmium, Total	0.79			0.60	mg/Kg	6010C
Chromium, Total	19.1			1.2	mg/Kg	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: B6	Lab ID: R2108268-004					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Copper, Total	32.2			2.4	mg/Kg	6010C
Lead, Total	438			6.0	mg/Kg	6010C
Manganese, Total	330			2.4	mg/Kg	6010C
Mercury, Total	1.83			0.11	mg/Kg	7471B
Nickel, Total	13.2			4.8	mg/Kg	6010C
Zinc, Total	292			2.4	mg/Kg	6010C
Anthracene	12000			7900	ug/Kg	8270D
Benz(a)anthracene	40000			7900	ug/Kg	8270D
Benzo(a)pyrene	42000			7900	ug/Kg	8270D
Benzo(b)fluoranthene	45000			7900	ug/Kg	8270D
Benzo(g,h,i)perylene	22000			7900	ug/Kg	8270D
Benzo(k)fluoranthene	18000			7900	ug/Kg	8270D
Chrysene	38000			7900	ug/Kg	8270D
Fluoranthene	86000			7900	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	24000			7900	ug/Kg	8270D
Phenanthrene	48000			7900	ug/Kg	8270D
Pyrene	74000			7900	ug/Kg	8270D

CLIENT ID: B7	Lab ID: R2108268-005					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	85.8				Percent	ALS SOP
Arsenic, Total	32.4			1.1	mg/Kg	6010C
Barium, Total	132			2.1	mg/Kg	6010C
Beryllium, Total	0.36			0.32	mg/Kg	6010C
Cadmium, Total	0.60			0.53	mg/Kg	6010C
Chromium, Total	28.4			1.1	mg/Kg	6010C
Copper, Total	75.1			2.1	mg/Kg	6010C
Lead, Total	464			5.3	mg/Kg	6010C
Manganese, Total	209			2.1	mg/Kg	6010C
Mercury, Total	5.38			0.64	mg/Kg	7471B
Nickel, Total	9.0			4.2	mg/Kg	6010C
Selenium, Total	1.6			1.1	mg/Kg	6010C
Zinc, Total	285			2.1	mg/Kg	6010C
Acenaphthene	25000			20000	ug/Kg	8270D
Anthracene	66000			20000	ug/Kg	8270D
Benz(a)anthracene	110000			20000	ug/Kg	8270D
Benzo(a)pyrene	120000			20000	ug/Kg	8270D
Benzo(b)fluoranthene	120000			20000	ug/Kg	8270D
Benzo(g,h,i)perylene	56000			20000	ug/Kg	8270D
Benzo(k)fluoranthene	43000			20000	ug/Kg	8270D
Chrysene	100000			20000	ug/Kg	8270D
Dibenzofuran	25000			20000	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

CLIENT ID: B7	Lab ID: R2108268-005					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Fluoranthene	280000			20000	ug/Kg	8270D
Fluorene	30000			20000	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	62000			20000	ug/Kg	8270D
Naphthalene	24000			20000	ug/Kg	8270D
Phenanthrene	270000			20000	ug/Kg	8270D
Pyrene	250000			20000	ug/Kg	8270D

CLIENT ID: B10	Lab ID: R2108268-006					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	89.7				Percent	ALS SOP
Arsenic, Total	10.8			1.1	mg/Kg	6010C
Barium, Total	198			2.2	mg/Kg	6010C
Beryllium, Total	0.81			0.33	mg/Kg	6010C
Chromium, Total	11.4			1.1	mg/Kg	6010C
Copper, Total	37.0			2.2	mg/Kg	6010C
Lead, Total	81.8			5.5	mg/Kg	6010C
Manganese, Total	292			2.2	mg/Kg	6010C
Mercury, Total	0.392			0.020	mg/Kg	7471B
Nickel, Total	10.7			4.4	mg/Kg	6010C
Zinc, Total	63.8			2.2	mg/Kg	6010C
Anthracene	990			380	ug/Kg	8270D
Benz(a)anthracene	3100			380	ug/Kg	8270D
Benzo(a)pyrene	3700			380	ug/Kg	8270D
Benzo(b)fluoranthene	4000			380	ug/Kg	8270D
Benzo(g,h,i)perylene	1600			380	ug/Kg	8270D
Benzo(k)fluoranthene	1500			380	ug/Kg	8270D
Chrysene	3100			380	ug/Kg	8270D
Dibenz(a,h)anthracene	440			380	ug/Kg	8270D
Fluoranthene	6200			380	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1800			380	ug/Kg	8270D
Phenanthrene	4000			380	ug/Kg	8270D
Pyrene	6300			380	ug/Kg	8270D

CLIENT ID: B11	Lab ID: R2108268-007					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	87.0				Percent	ALS SOP
Arsenic, Total	6.4			1.1	mg/Kg	6010C
Barium, Total	140			2.3	mg/Kg	6010C
Beryllium, Total	0.49			0.34	mg/Kg	6010C
Chromium, Total	14.1			1.1	mg/Kg	6010C
Copper, Total	30.9			2.3	mg/Kg	6010C
Lead, Total	322			5.7	mg/Kg	6010C

SAMPLE DETECTION SUMMARY

CLIENT ID: B11	Lab ID: R2108268-007					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Manganese, Total	324			2.3	mg/Kg	6010C
Mercury, Total	0.756			0.023	mg/Kg	7471B
Nickel, Total	11.1			4.6	mg/Kg	6010C
Zinc, Total	158			2.3	mg/Kg	6010C
Acenaphthene	520			400	ug/Kg	8270D
Anthracene	1600			400	ug/Kg	8270D
Benz(a)anthracene	3700			400	ug/Kg	8270D
Benzo(a)pyrene	4300			400	ug/Kg	8270D
Benzo(b)fluoranthene	4800			400	ug/Kg	8270D
Benzo(g,h,i)perylene	1900			400	ug/Kg	8270D
Benzo(k)fluoranthene	1800			400	ug/Kg	8270D
Chrysene	3900			400	ug/Kg	8270D
Dibenz(a,h)anthracene	560			400	ug/Kg	8270D
Fluoranthene	7800			400	ug/Kg	8270D
Fluorene	520			400	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	2100			400	ug/Kg	8270D
Naphthalene	2400			400	ug/Kg	8270D
Phenanthrene	5900			400	ug/Kg	8270D
Pyrene	7400			400	ug/Kg	8270D

CLIENT ID: B12	Lab ID: R2108268-008					
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Total Solids	82.9				Percent	ALS SOP
Arsenic, Total	20.8			1.1	mg/Kg	6010C
Barium, Total	407			2.3	mg/Kg	6010C
Beryllium, Total	0.48			0.34	mg/Kg	6010C
Cadmium, Total	1.70			0.57	mg/Kg	6010C
Chromium, Total	28.4			1.1	mg/Kg	6010C
Copper, Total	291			2.3	mg/Kg	6010C
Lead, Total	1930			57	mg/Kg	6010C
Manganese, Total	346			2.3	mg/Kg	6010C
Mercury, Total	5.35			0.69	mg/Kg	7471B
Nickel, Total	11.3			4.6	mg/Kg	6010C
Selenium, Total	1.9			1.1	mg/Kg	6010C
Silver, Total	1.2			1.1	mg/Kg	6010C
Zinc, Total	814			23	mg/Kg	6010C
Anthracene	790			410	ug/Kg	8270D
Benz(a)anthracene	2500			410	ug/Kg	8270D
Benzo(a)pyrene	3000			410	ug/Kg	8270D
Benzo(b)fluoranthene	3500			410	ug/Kg	8270D
Benzo(g,h,i)perylene	1500			410	ug/Kg	8270D
Benzo(k)fluoranthene	1400			410	ug/Kg	8270D

SAMPLE DETECTION SUMMARY

CLIENT ID: B12			Lab ID: R2108268-008			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Chrysene	2800			410	ug/Kg	8270D
Dibenz(a,h)anthracene	420			410	ug/Kg	8270D
Fluoranthene	4900			410	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1700			410	ug/Kg	8270D
Phenanthrene	3100			410	ug/Kg	8270D
Pyrene	5000			410	ug/Kg	8270D

Sample Receipt Information

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Client: BE3 **Service Request:**R2108268
Project: Soils

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R2108268-001	B1	8/12/2021	1120
R2108268-002	B2	8/12/2021	1140
R2108268-003	B4B	8/12/2021	1212
R2108268-004	B6	8/12/2021	1310
R2108268-005	B7	8/12/2021	1320
R2108268-006	B10	8/12/2021	1425
R2108268-007	B11	8/12/2021	1440
R2108268-008	B12	8/12/2021	1500
R2108268-009	B7GW	8/12/2021	1500

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

005989

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 2

Project Name: SKYWAY LOOP	Project Number: 8097
Project Manager: JAKE TRACY	Report CC:
Company/Address: BE3 CORP, 960 BUSTI AVE, BUFFALO, NY	
Phone #: 907 575 2005	Email: JTRACY@BE3CORP.COM
Sampler's Signature:	Sampler's Printed Name: DALTON STACK

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	GC/MS VOAs ◦ 8260 ◦ 624 ◦ CLP	GC/MS SVOAs ◦ 8270 ◦ 625	GC VOAs ◦ 8021 ◦ 601/602	PESTICIDES ◦ 8081 ◦ 608	PCBs ◦ 8082 ◦ 608	METALS: TOTAL (List in comments below)	METALS: DISSOLVED (List in comments below)								REMARKS/ ALTERNATE DESCRIPTION
							0						0								
B1		8/12/21	1120	Soil	2		✓				✓										
B2			1140				✓				✓										
B3			1150																		HOLD
B4			1210																		HOLD
B4B			1212		1		✓				✓										
B5			1255		2																HOLD
B6			1310				✓				✓										
B7			1320				✓				✓										
B8			1350																		HOLD
B9			1415																		HOLD
B10			1425				✓				✓										

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

Part 375 metals
BKL 8/16/21

See OAPP ☐

TURNAROUND REQUIREMENTS
✓ RUSH (SURCHARGES APPLY)
___ 1 day ___ 2 day ___ 3 day
___ 4 day ✓ 3 day
___ Standard (10 business days-No Surcharge)

REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
Edata ___ Yes ___ No

INVOICE INFORMATION
PO #
BILL TO: BE3 CORP

STATE WHERE SAMPLES WERE COLLECTED

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	
Printed Name: Dalton Stack	Printed Name: Matthew Marley	Printed Name:	Printed Name:	Printed Name:	
Firm: BE3 Corp	Firm: ALS	Firm:	Firm:	Firm:	
Date/Time: 8/13/21 12:00	Date/Time: 8/14/21 8:25	Date/Time:	Date/Time:	Date/Time:	

R2108268 5
BE3 Corp
Bolts

Distribution: White - Lab Copy; Yellow - Return to Originator

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

005990

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax)

Project Name: SKYWAY LOOP	Project Number: 8097
Project Manager: JAKE TRACY	Report CC:
Company/Address: BE3 CORP 960 BUSTI AVE BUFFALO, NY	
Phone #: 907 575 2005	Email: JTRACY@BE3CORP.COM
Sampler's Signature:	Sampler's Printed Name: DALTON STACK

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 | C | | | | C

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS: TOTAL (List in comments below)	METALS: DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
B11		8/12/21	1440	SOIL	2		✓				✓		
B12			1500				✓				✓		
B13			1510										HOLD
B14			1530										HOLD
B7GW		8/12/21	1500	GW	3	✓							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

DS

TURNAROUND REQUIREMENTS
✓ RUSH (SURCHARGES APPLY)
_____ 1 day ___ 2 day ___ 3 day
✓ 4 day ___ 5 day
___ Standard (10 business days-No Surcharge)

REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
___ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION
PO #
BILL TO: BE3 CORP

STATE WHERE SAMPLES WERE COLLECTED

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature	Signature	Signature	
Printed Name: Dalton Stack	Printed Name: Matthew Markey	Printed Name	Printed Name	Printed Name	
Firm: BE3Corp	Firm: ALS	Firm	Firm	Firm	
Date/Time: 8/13/21 12:00	Date/Time: 8/14/21 8:25	Date/Time	Date/Time	Date/Time	

R2108268 5
BE3 Corp
Soils

Distribution: White - Lab Copy; Yellow - Return to Originator

R2108268 5
BE3 Corp
Soils

Cooler Receipt and Preservation Check Form

Project/Client Sky Way Folder Number

Cooler received on 8/14/21 by: MM

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk, or Sulfide have sig* **bubbles**?	(Y) N NA
3	Did all bottles arrive in good **condition** (unbroken)?	Y (N)	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: (Wet Ice) **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 8/14/21 Time: 8:40 ID: IR#7 (IR#11) From: (Temp Blank) Sample Bottle

Observed Temp (°C)	11.8						
Within 0-6°C?	Y (N)	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: (Ice melted) Poorly Packed (described below) Same Day Rule

&Client Approval to Run Samples: Standing Approval Client aware at drop-off Client notified by:

All samples held in storage location: R1002 by MM on 8/14/21 at 8:50
5035 samples placed in storage location: by on at within 48 hours of sampling? Y N

Cooler Breakdown/Preservation Check**: Date: 8/16/21 Time: 1415 by:

9. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
10. Did all bottle labels and tags agree with custody papers? (YES) NO
11. Were correct containers used for the tests indicated? (YES) NO
12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO (N/A)
13. Air Samples: Cassettes / Tubes Intact Y / N with MS Y / N Canisters Pressurized Tedlar® Bags Inflated (N/A)

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2		HNO_3								
≤2		H_2SO_4								
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: Client, 0596,
Explain all Discrepancies/ Other Comments:

* B7GW all 3 vials sig headspace.
* B11, B10, B12, & B6 all broken.

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: (R)
PC Secondary Review:

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

Miscellaneous Forms

ALS Environmental—Rochester Laboratory
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623
Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the ñNotesò column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an ñimmediateò hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (Ó100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Rochester Lab ID # for State Certifications[1]

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

[1] Analyses were performed according to our laboratoryôs NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: BE3 **Service Request:** R2108268
Project: Soils

Non-Certified Analytes

Certifying Agency: New York Department of Health

Method	Matrix	Analyte
ALS SOP	Soil	Total Solids

Client: BE3 **Service Request:** R2108268
Project: Soils/

Sample Name: B1 **Date Collected:** 08/12/21
Lab Code: R2108268-001 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name: B2 **Date Collected:** 08/12/21
Lab Code: R2108268-002 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name: B4B **Date Collected:** 08/12/21
Lab Code: R2108268-003 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name: B4B **Date Collected:** 08/12/21
Lab Code: R2108268-003.R01 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
8270D	KSERCU	JMISIUREWICZ

Client: BE3 **Service Request:** R2108268
Project: Soils/

Sample Name: B6 **Date Collected:** 08/12/21
Lab Code: R2108268-004 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name: B7 **Date Collected:** 08/12/21
Lab Code: R2108268-005 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name: B10 **Date Collected:** 08/12/21
Lab Code: R2108268-006 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name: B11 **Date Collected:** 08/12/21
Lab Code: R2108268-007 **Date Received:** 08/14/21
Sample Matrix: Soil

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN

Client:	BE3	**Service Request:**	R2108268
Project:	Soils/		

Sample Name:	B11	**Date Collected:**	08/12/21
Lab Code:	R2108268-007	**Date Received:**	08/14/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name:	B12	**Date Collected:**	08/12/21
Lab Code:	R2108268-008	**Date Received:**	08/14/21
Sample Matrix:	Soil		

Analysis Method	Extracted/Digested By	Analyzed By
6010C	BDIAMOND	KMCLAEN
7471B	BDIAMOND	NMANSEN
8270D	KSERCU	JMISIUREWICZ
ALS SOP		CLOI

Sample Name:	B7GW	**Date Collected:**	08/12/21
Lab Code:	R2108268-009	**Date Received:**	08/14/21
Sample Matrix:	Water		

Analysis Method	Extracted/Digested By	Analyzed By
8260C		FNAEGLER

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9034 Sulfide Acid Soluble	9030B
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7199	3060A
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction
For analytical methods not listed, the preparation method is the same as the analytical method reference.	

Sample Results

ALS Environmental—Rochester Laboratory
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Volatile Organic Compounds by GC/MS

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Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 15:00
Sample Matrix:	Water	**Date Received:**	08/14/21 08:25
Sample Name:	B7GW	**Units:**	ug/L
Lab Code:	R2108268-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane	5.0 U	5.0	1	08/20/21 16:23	
1,1-Dichloroethane	5.0 U	5.0	1	08/20/21 16:23	
1,1-Dichloroethene	5.0 U	5.0	1	08/20/21 16:23	
1,2,4-Trimethylbenzene	5.0 U	5.0	1	08/20/21 16:23	
1,2-Dichlorobenzene	5.0 U	5.0	1	08/20/21 16:23	
1,2-Dichloroethane	5.0 U	5.0	1	08/20/21 16:23	
1,3,5-Trimethylbenzene	5.0 U	5.0	1	08/20/21 16:23	
1,3-Dichlorobenzene	5.0 U	5.0	1	08/20/21 16:23	
1,4-Dichlorobenzene	5.0 U	5.0	1	08/20/21 16:23	
1,4-Dioxane	100 U	100	1	08/20/21 16:23	
Methyl Ethyl Ketone	10 U	10	1	08/20/21 16:23	
Acetone	10 U	10	1	08/20/21 16:23	
Benzene	5.0 U	5.0	1	08/20/21 16:23	
Carbon Tetrachloride	5.0 U	5.0	1	08/20/21 16:23	
Chlorobenzene	5.0 U	5.0	1	08/20/21 16:23	
Chloroform	5.0 U	5.0	1	08/20/21 16:23	
Methylene Chloride	5.0 U	5.0	1	08/20/21 16:23	
Ethylbenzene	5.0 U	5.0	1	08/20/21 16:23	
Methyl tert-Butyl Ether	5.0 U	5.0	1	08/20/21 16:23	
Tetrachloroethene (PCE)	5.0 U	5.0	1	08/20/21 16:23	
Toluene	5.0 U	5.0	1	08/20/21 16:23	
Trichloroethene (TCE)	5.0 U	5.0	1	08/20/21 16:23	
Vinyl Chloride	5.0 U	5.0	1	08/20/21 16:23	
cis-1,2-Dichloroethene	5.0 U	5.0	1	08/20/21 16:23	
m,p-Xylenes	5.0 U	5.0	1	08/20/21 16:23	
n-Butylbenzene	5.0 U	5.0	1	08/20/21 16:23	
n-Propylbenzene	5.0 U	5.0	1	08/20/21 16:23	
o-Xylene	5.0 U	5.0	1	08/20/21 16:23	
sec-Butylbenzene	5.0 U	5.0	1	08/20/21 16:23	
tert-Butylbenzene	5.0 U	5.0	1	08/20/21 16:23	
trans-1,2-Dichloroethene	5.0 U	5.0	1	08/20/21 16:23	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 15:00
Sample Matrix:	Water	**Date Received:**	08/14/21 08:25
Sample Name:	B7GW	**Units:**	ug/L
Lab Code:	R2108268-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	85 - 122	08/20/21 16:23	
Dibromofluoromethane	95	80 - 116	08/20/21 16:23	
Toluene-d8	99	87 - 121	08/20/21 16:23	

Semivolatile Organic Compounds by GC/MS

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Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 11:20
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B1	**Units:**	ug/Kg
Lab Code:	R2108268-001	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	380 U	380	1	08/18/21 18:18	8/17/21	
m,p-Cresols	380 U	380	1	08/18/21 18:18	8/17/21	
Acenaphthene	380 U	380	1	08/18/21 18:18	8/17/21	
Acenaphthylene	380 U	380	1	08/18/21 18:18	8/17/21	
Anthracene	380 U	380	1	08/18/21 18:18	8/17/21	
Benz(a)anthracene	**570**	380	1	08/18/21 18:18	8/17/21	
Benzo(a)pyrene	**560**	380	1	08/18/21 18:18	8/17/21	
Benzo(b)fluoranthene	**690**	380	1	08/18/21 18:18	8/17/21	
Benzo(g,h,i)perylene	380 U	380	1	08/18/21 18:18	8/17/21	
Benzo(k)fluoranthene	380 U	380	1	08/18/21 18:18	8/17/21	
Chrysene	**580**	380	1	08/18/21 18:18	8/17/21	
Dibenz(a,h)anthracene	380 U	380	1	08/18/21 18:18	8/17/21	
Dibenzofuran	380 U	380	1	08/18/21 18:18	8/17/21	
Fluoranthene	**1400**	380	1	08/18/21 18:18	8/17/21	
Fluorene	380 U	380	1	08/18/21 18:18	8/17/21	
Hexachlorobenzene	380 U	380	1	08/18/21 18:18	8/17/21	
Indeno(1,2,3-cd)pyrene	380 U	380	1	08/18/21 18:18	8/17/21	
Naphthalene	380 U	380	1	08/18/21 18:18	8/17/21	
Pentachlorophenol	2000 U	2000	1	08/18/21 18:18	8/17/21	
Phenanthrene	**1200**	380	1	08/18/21 18:18	8/17/21	
Phenol	380 U	380	1	08/18/21 18:18	8/17/21	
Pyrene	**1200**	380	1	08/18/21 18:18	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	40	10 - 109	08/18/21 18:18	
2-Fluorobiphenyl	47	10 - 102	08/18/21 18:18	
2-Fluorophenol	33	10 - 88	08/18/21 18:18	
Nitrobenzene-d5	37	10 - 95	08/18/21 18:18	
Phenol-d6	38	10 - 145	08/18/21 18:18	
p-Terphenyl-d14	66	10 - 106	08/18/21 18:18	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 11:40
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B2	**Units:**	ug/Kg
Lab Code:	R2108268-002	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	370 U	370	1	08/18/21 18:47	8/17/21	
m,p-Cresols	370 U	370	1	08/18/21 18:47	8/17/21	
Acenaphthene	370 U	370	1	08/18/21 18:47	8/17/21	
Acenaphthylene	370 U	370	1	08/18/21 18:47	8/17/21	
Anthracene	370 U	370	1	08/18/21 18:47	8/17/21	
Benz(a)anthracene	**810**	370	1	08/18/21 18:47	8/17/21	
Benzo(a)pyrene	**940**	370	1	08/18/21 18:47	8/17/21	
Benzo(b)fluoranthene	**1100**	370	1	08/18/21 18:47	8/17/21	
Benzo(g,h,i)perylene	**460**	370	1	08/18/21 18:47	8/17/21	
Benzo(k)fluoranthene	**390**	370	1	08/18/21 18:47	8/17/21	
Chrysene	**850**	370	1	08/18/21 18:47	8/17/21	
Dibenz(a,h)anthracene	370 U	370	1	08/18/21 18:47	8/17/21	
Dibenzofuran	370 U	370	1	08/18/21 18:47	8/17/21	
Fluoranthene	**1600**	370	1	08/18/21 18:47	8/17/21	
Fluorene	370 U	370	1	08/18/21 18:47	8/17/21	
Hexachlorobenzene	370 U	370	1	08/18/21 18:47	8/17/21	
Indeno(1,2,3-cd)pyrene	**500**	370	1	08/18/21 18:47	8/17/21	
Naphthalene	370 U	370	1	08/18/21 18:47	8/17/21	
Pentachlorophenol	1900 U	1900	1	08/18/21 18:47	8/17/21	
Phenanthrene	**890**	370	1	08/18/21 18:47	8/17/21	
Phenol	370 U	370	1	08/18/21 18:47	8/17/21	
Pyrene	**1500**	370	1	08/18/21 18:47	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	58	10 - 109	08/18/21 18:47	
2-Fluorobiphenyl	56	10 - 102	08/18/21 18:47	
2-Fluorophenol	48	10 - 88	08/18/21 18:47	
Nitrobenzene-d5	49	10 - 95	08/18/21 18:47	
Phenol-d6	50	10 - 145	08/18/21 18:47	
p-Terphenyl-d14	87	10 - 106	08/18/21 18:47	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 12:12
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B4B	**Units:**	ug/Kg
Lab Code:	R2108268-003	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	410	U	410	1	08/18/21 19:16	8/17/21	
m,p-Cresols	410	U	410	1	08/18/21 19:16	8/17/21	
Acenaphthene	**820**		410	1	08/18/21 19:16	8/17/21	
Acenaphthylene	410	U	410	1	08/18/21 19:16	8/17/21	
Anthracene	**2000**		410	1	08/18/21 19:16	8/17/21	
Benz(a)anthracene	**3900**		410	1	08/18/21 19:16	8/17/21	
Benzo(a)pyrene	**4100**		410	1	08/18/21 19:16	8/17/21	
Benzo(b)fluoranthene	**4300**		410	1	08/18/21 19:16	8/17/21	
Benzo(g,h,i)perylene	**1600**		410	1	08/18/21 19:16	8/17/21	
Benzo(k)fluoranthene	**1700**		410	1	08/18/21 19:16	8/17/21	
Chrysene	**4000**		410	1	08/18/21 19:16	8/17/21	
Dibenz(a,h)anthracene	**470**		410	1	08/18/21 19:16	8/17/21	
Dibenzofuran	**680**		410	1	08/18/21 19:16	8/17/21	
Fluoranthene	**9700**	**D**	830	2	08/23/21 10:37	8/17/21	
Fluorene	**1200**		410	1	08/18/21 19:16	8/17/21	
Hexachlorobenzene	410	U	410	1	08/18/21 19:16	8/17/21	
Indeno(1,2,3-cd)pyrene	**1800**		410	1	08/18/21 19:16	8/17/21	
Naphthalene	**2100**		410	1	08/18/21 19:16	8/17/21	
Pentachlorophenol	2100	U	2100	1	08/18/21 19:16	8/17/21	
Phenanthrene	**7400**		410	1	08/18/21 19:16	8/17/21	
Phenol	410	U	410	1	08/18/21 19:16	8/17/21	
Pyrene	**8000**		410	1	08/18/21 19:16	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	48	10 - 109	08/18/21 19:16	
2-Fluorobiphenyl	53	10 - 102	08/18/21 19:16	
2-Fluorophenol	44	10 - 88	08/18/21 19:16	
Nitrobenzene-d5	27	10 - 95	08/18/21 19:16	
Phenol-d6	46	10 - 145	08/18/21 19:16	
p-Terphenyl-d14	88	10 - 106	08/18/21 19:16	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 13:10
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B6	**Units:**	ug/Kg
Lab Code:	R2108268-004	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	7900 U	7900	20	08/24/21 14:35	8/17/21	
m,p-Cresols	7900 U	7900	20	08/24/21 14:35	8/17/21	
Acenaphthene	7900 U	7900	20	08/24/21 14:35	8/17/21	
Acenaphthylene	7900 U	7900	20	08/24/21 14:35	8/17/21	
Anthracene	**12000**	7900	20	08/24/21 14:35	8/17/21	
Benz(a)anthracene	**40000**	7900	20	08/24/21 14:35	8/17/21	
Benzo(a)pyrene	**42000**	7900	20	08/24/21 14:35	8/17/21	
Benzo(b)fluoranthene	**45000**	7900	20	08/24/21 14:35	8/17/21	
Benzo(g,h,i)perylene	**22000**	7900	20	08/24/21 14:35	8/17/21	
Benzo(k)fluoranthene	**18000**	7900	20	08/24/21 14:35	8/17/21	
Chrysene	**38000**	7900	20	08/24/21 14:35	8/17/21	
Dibenz(a,h)anthracene	7900 U	7900	20	08/24/21 14:35	8/17/21	
Dibenzofuran	7900 U	7900	20	08/24/21 14:35	8/17/21	
Fluoranthene	**86000**	7900	20	08/24/21 14:35	8/17/21	
Fluorene	7900 U	7900	20	08/24/21 14:35	8/17/21	
Hexachlorobenzene	7900 U	7900	20	08/24/21 14:35	8/17/21	
Indeno(1,2,3-cd)pyrene	**24000**	7900	20	08/24/21 14:35	8/17/21	
Naphthalene	7900 U	7900	20	08/24/21 14:35	8/17/21	
Pentachlorophenol	40000 U	40000	20	08/24/21 14:35	8/17/21	
Phenanthrene	**48000**	7900	20	08/24/21 14:35	8/17/21	
Phenol	7900 U	7900	20	08/24/21 14:35	8/17/21	
Pyrene	**74000**	7900	20	08/24/21 14:35	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	08/24/21 14:35	D
2-Fluorobiphenyl	0 *	10 - 102	08/24/21 14:35	D
2-Fluorophenol	0 *	10 - 88	08/24/21 14:35	D
Nitrobenzene-d5	0 *	10 - 95	08/24/21 14:35	D
Phenol-d6	0 *	10 - 145	08/24/21 14:35	D
p-Terphenyl-d14	0 *	10 - 106	08/24/21 14:35	D

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 13:20
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B7	**Units:**	ug/Kg
Lab Code:	R2108268-005	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	20000 U	20000	50	08/23/21 11:36	8/17/21	
m,p-Cresols	20000 U	20000	50	08/23/21 11:36	8/17/21	
Acenaphthene	**25000**	20000	50	08/23/21 11:36	8/17/21	
Acenaphthylene	20000 U	20000	50	08/23/21 11:36	8/17/21	
Anthracene	**66000**	20000	50	08/23/21 11:36	8/17/21	
Benz(a)anthracene	**110000**	20000	50	08/23/21 11:36	8/17/21	
Benzo(a)pyrene	**120000**	20000	50	08/23/21 11:36	8/17/21	
Benzo(b)fluoranthene	**120000**	20000	50	08/23/21 11:36	8/17/21	
Benzo(g,h,i)perylene	**56000**	20000	50	08/23/21 11:36	8/17/21	
Benzo(k)fluoranthene	**43000**	20000	50	08/23/21 11:36	8/17/21	
Chrysene	**100000**	20000	50	08/23/21 11:36	8/17/21	
Dibenz(a,h)anthracene	20000 U	20000	50	08/23/21 11:36	8/17/21	
Dibenzofuran	**25000**	20000	50	08/23/21 11:36	8/17/21	
Fluoranthene	**280000**	20000	50	08/23/21 11:36	8/17/21	
Fluorene	**30000**	20000	50	08/23/21 11:36	8/17/21	
Hexachlorobenzene	20000 U	20000	50	08/23/21 11:36	8/17/21	
Indeno(1,2,3-cd)pyrene	**62000**	20000	50	08/23/21 11:36	8/17/21	
Naphthalene	**24000**	20000	50	08/23/21 11:36	8/17/21	
Pentachlorophenol	100000 U	100000	50	08/23/21 11:36	8/17/21	
Phenanthrene	**270000**	20000	50	08/23/21 11:36	8/17/21	
Phenol	20000 U	20000	50	08/23/21 11:36	8/17/21	
Pyrene	**250000**	20000	50	08/23/21 11:36	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	0 *	10 - 109	08/23/21 11:36	D
2-Fluorobiphenyl	0 *	10 - 102	08/23/21 11:36	D
2-Fluorophenol	0 *	10 - 88	08/23/21 11:36	D
Nitrobenzene-d5	0 *	10 - 95	08/23/21 11:36	D
Phenol-d6	0 *	10 - 145	08/23/21 11:36	D
p-Terphenyl-d14	0 *	10 - 106	08/23/21 11:36	D

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 14:25
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B10	**Units:**	ug/Kg
Lab Code:	R2108268-006	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	380	U	380	1	08/18/21 21:38	8/17/21	
m,p-Cresols	380	U	380	1	08/18/21 21:38	8/17/21	
Acenaphthene	380	U	380	1	08/18/21 21:38	8/17/21	
Acenaphthylene	380	U	380	1	08/18/21 21:38	8/17/21	
Anthracene	**990**		380	1	08/18/21 21:38	8/17/21	
Benz(a)anthracene	**3100**		380	1	08/18/21 21:38	8/17/21	
Benzo(a)pyrene	**3700**		380	1	08/18/21 21:38	8/17/21	
Benzo(b)fluoranthene	**4000**		380	1	08/18/21 21:38	8/17/21	
Benzo(g,h,i)perylene	**1600**		380	1	08/18/21 21:38	8/17/21	
Benzo(k)fluoranthene	**1500**		380	1	08/18/21 21:38	8/17/21	
Chrysene	**3100**		380	1	08/18/21 21:38	8/17/21	
Dibenz(a,h)anthracene	**440**		380	1	08/18/21 21:38	8/17/21	
Dibenzofuran	380	U	380	1	08/18/21 21:38	8/17/21	
Fluoranthene	**6200**		380	1	08/18/21 21:38	8/17/21	
Fluorene	380	U	380	1	08/18/21 21:38	8/17/21	
Hexachlorobenzene	380	U	380	1	08/18/21 21:38	8/17/21	
Indeno(1,2,3-cd)pyrene	**1800**		380	1	08/18/21 21:38	8/17/21	
Naphthalene	380	U	380	1	08/18/21 21:38	8/17/21	
Pentachlorophenol	2000	U	2000	1	08/18/21 21:38	8/17/21	
Phenanthrene	**4000**		380	1	08/18/21 21:38	8/17/21	
Phenol	380	U	380	1	08/18/21 21:38	8/17/21	
Pyrene	**6300**		380	1	08/18/21 21:38	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	75	10 - 109	08/18/21 21:38	
2-Fluorobiphenyl	61	10 - 102	08/18/21 21:38	
2-Fluorophenol	54	10 - 88	08/18/21 21:38	
Nitrobenzene-d5	53	10 - 95	08/18/21 21:38	
Phenol-d6	56	10 - 145	08/18/21 21:38	
p-Terphenyl-d14	104	10 - 106	08/18/21 21:38	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 14:40
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B11	**Units:**	ug/Kg
Lab Code:	R2108268-007	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result		MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	400	U	400	1	08/18/21 22:07	8/17/21	
m,p-Cresols	400	U	400	1	08/18/21 22:07	8/17/21	
Acenaphthene	**520**		400	1	08/18/21 22:07	8/17/21	
Acenaphthylene	400	U	400	1	08/18/21 22:07	8/17/21	
Anthracene	**1600**		400	1	08/18/21 22:07	8/17/21	
Benz(a)anthracene	**3700**		400	1	08/18/21 22:07	8/17/21	
Benzo(a)pyrene	**4300**		400	1	08/18/21 22:07	8/17/21	
Benzo(b)fluoranthene	**4800**		400	1	08/18/21 22:07	8/17/21	
Benzo(g,h,i)perylene	**1900**		400	1	08/18/21 22:07	8/17/21	
Benzo(k)fluoranthene	**1800**		400	1	08/18/21 22:07	8/17/21	
Chrysene	**3900**		400	1	08/18/21 22:07	8/17/21	
Dibenz(a,h)anthracene	**560**		400	1	08/18/21 22:07	8/17/21	
Dibenzofuran	400	U	400	1	08/18/21 22:07	8/17/21	
Fluoranthene	**7800**		400	1	08/18/21 22:07	8/17/21	
Fluorene	**520**		400	1	08/18/21 22:07	8/17/21	
Hexachlorobenzene	400	U	400	1	08/18/21 22:07	8/17/21	
Indeno(1,2,3-cd)pyrene	**2100**		400	1	08/18/21 22:07	8/17/21	
Naphthalene	**2400**		400	1	08/18/21 22:07	8/17/21	
Pentachlorophenol	2100	U	2100	1	08/18/21 22:07	8/17/21	
Phenanthrene	**5900**		400	1	08/18/21 22:07	8/17/21	
Phenol	400	U	400	1	08/18/21 22:07	8/17/21	
Pyrene	**7400**		400	1	08/18/21 22:07	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	66	10 - 109	08/18/21 22:07	
2-Fluorobiphenyl	55	10 - 102	08/18/21 22:07	
2-Fluorophenol	49	10 - 88	08/18/21 22:07	
Nitrobenzene-d5	46	10 - 95	08/18/21 22:07	
Phenol-d6	52	10 - 145	08/18/21 22:07	
p-Terphenyl-d14	103	10 - 106	08/18/21 22:07	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 15:00
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B12	**Units:**	ug/Kg
Lab Code:	R2108268-008	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	410 U	410	1	08/18/21 22:36	8/17/21	
m,p-Cresols	410 U	410	1	08/18/21 22:36	8/17/21	
Acenaphthene	410 U	410	1	08/18/21 22:36	8/17/21	
Acenaphthylene	410 U	410	1	08/18/21 22:36	8/17/21	
Anthracene	**790**	410	1	08/18/21 22:36	8/17/21	
Benz(a)anthracene	**2500**	410	1	08/18/21 22:36	8/17/21	
Benzo(a)pyrene	**3000**	410	1	08/18/21 22:36	8/17/21	
Benzo(b)fluoranthene	**3500**	410	1	08/18/21 22:36	8/17/21	
Benzo(g,h,i)perylene	**1500**	410	1	08/18/21 22:36	8/17/21	
Benzo(k)fluoranthene	**1400**	410	1	08/18/21 22:36	8/17/21	
Chrysene	**2800**	410	1	08/18/21 22:36	8/17/21	
Dibenz(a,h)anthracene	**420**	410	1	08/18/21 22:36	8/17/21	
Dibenzofuran	410 U	410	1	08/18/21 22:36	8/17/21	
Fluoranthene	**4900**	410	1	08/18/21 22:36	8/17/21	
Fluorene	410 U	410	1	08/18/21 22:36	8/17/21	
Hexachlorobenzene	410 U	410	1	08/18/21 22:36	8/17/21	
Indeno(1,2,3-cd)pyrene	**1700**	410	1	08/18/21 22:36	8/17/21	
Naphthalene	410 U	410	1	08/18/21 22:36	8/17/21	
Pentachlorophenol	2100 U	2100	1	08/18/21 22:36	8/17/21	
Phenanthrene	**3100**	410	1	08/18/21 22:36	8/17/21	
Phenol	410 U	410	1	08/18/21 22:36	8/17/21	
Pyrene	**5000**	410	1	08/18/21 22:36	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	43	10 - 109	08/18/21 22:36	
2-Fluorobiphenyl	52	10 - 102	08/18/21 22:36	
2-Fluorophenol	37	10 - 88	08/18/21 22:36	
Nitrobenzene-d5	38	10 - 95	08/18/21 22:36	
Phenol-d6	42	10 - 145	08/18/21 22:36	
p-Terphenyl-d14	97	10 - 106	08/18/21 22:36	

Metals

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Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 11:20
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B1	**Basis:**	Dry
Lab Code:	R2108268-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**11.9**	mg/Kg	1.1	1	08/19/21 16:43	08/18/21	
Barium, Total	6010C	**126**	mg/Kg	2.3	1	08/19/21 16:43	08/18/21	
Beryllium, Total	6010C	**0.75**	mg/Kg	0.34	1	08/19/21 16:43	08/18/21	
Cadmium, Total	6010C	**0.77**	mg/Kg	0.57	1	08/19/21 16:43	08/18/21	
Chromium, Total	6010C	**145**	mg/Kg	1.1	1	08/19/21 16:43	08/18/21	
Copper, Total	6010C	**46.6**	mg/Kg	2.3	1	08/19/21 16:43	08/18/21	
Lead, Total	6010C	**157**	mg/Kg	5.7	1	08/19/21 16:43	08/18/21	
Manganese, Total	6010C	**1960**	mg/Kg	23	10	08/20/21 17:29	08/18/21	
Mercury, Total	7471B	**0.110**	mg/Kg	0.021	1	08/20/21 13:06	08/18/21	
Nickel, Total	6010C	**19.7**	mg/Kg	4.6	1	08/19/21 16:43	08/18/21	
Selenium, Total	6010C	1.1 U	mg/Kg	1.1	1	08/19/21 16:43	08/18/21	
Silver, Total	6010C	1.1 U	mg/Kg	1.1	1	08/19/21 16:43	08/18/21	
Zinc, Total	6010C	**149**	mg/Kg	2.3	1	08/19/21 16:43	08/18/21	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 11:40
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B2	**Basis:**	Dry
Lab Code:	R2108268-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**5.5**	mg/Kg	1.0	1	08/19/21 16:46	08/18/21	
Barium, Total	6010C	**139**	mg/Kg	2.0	1	08/19/21 16:46	08/18/21	
Beryllium, Total	6010C	**0.72**	mg/Kg	0.31	1	08/19/21 16:46	08/18/21	
Cadmium, Total	6010C	**0.65**	mg/Kg	0.51	1	08/19/21 16:46	08/18/21	
Chromium, Total	6010C	**9.8**	mg/Kg	1.0	1	08/19/21 16:46	08/18/21	
Copper, Total	6010C	**44.8**	mg/Kg	2.0	1	08/19/21 16:46	08/18/21	
Lead, Total	6010C	**227**	mg/Kg	5.1	1	08/19/21 16:46	08/18/21	
Manganese, Total	6010C	**579**	mg/Kg	2.0	1	08/19/21 16:46	08/18/21	
Mercury, Total	7471B	**0.203**	mg/Kg	0.022	1	08/20/21 13:09	08/18/21	
Nickel, Total	6010C	**7.7**	mg/Kg	4.1	1	08/19/21 16:46	08/18/21	
Selenium, Total	6010C	1.0 U	mg/Kg	1.0	1	08/19/21 16:46	08/18/21	
Silver, Total	6010C	1.0 U	mg/Kg	1.0	1	08/19/21 16:46	08/18/21	
Zinc, Total	6010C	**152**	mg/Kg	2.0	1	08/19/21 16:46	08/18/21	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 12:12
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B4B	**Basis:**	Dry
Lab Code:	R2108268-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**9.4**	mg/Kg	1.2	1	08/19/21 16:49	08/18/21	
Barium, Total	6010C	**149**	mg/Kg	2.3	1	08/19/21 16:49	08/18/21	
Beryllium, Total	6010C	**0.70**	mg/Kg	0.35	1	08/19/21 16:49	08/18/21	
Cadmium, Total	6010C	**0.68**	mg/Kg	0.58	1	08/19/21 16:49	08/18/21	
Chromium, Total	6010C	**15.1**	mg/Kg	1.2	1	08/19/21 16:49	08/18/21	
Copper, Total	6010C	**50.0**	mg/Kg	2.3	1	08/19/21 16:49	08/18/21	
Lead, Total	6010C	**410**	mg/Kg	5.8	1	08/19/21 16:49	08/18/21	
Manganese, Total	6010C	**432**	mg/Kg	2.3	1	08/19/21 16:49	08/18/21	
Mercury, Total	7471B	**1.92**	mg/Kg	0.11	5	08/20/21 13:37	08/18/21	
Nickel, Total	6010C	**14.9**	mg/Kg	4.6	1	08/19/21 16:49	08/18/21	
Selenium, Total	6010C	1.2 U	mg/Kg	1.2	1	08/19/21 16:49	08/18/21	
Silver, Total	6010C	1.2 U	mg/Kg	1.2	1	08/19/21 16:49	08/18/21	
Zinc, Total	6010C	**180**	mg/Kg	2.3	1	08/19/21 16:49	08/18/21	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 13:10
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B6	**Basis:**	Dry
Lab Code:	R2108268-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**7.7**	mg/Kg	1.2	1	08/19/21 16:53	08/18/21	
Barium, Total	6010C	**197**	mg/Kg	2.4	1	08/19/21 16:53	08/18/21	
Beryllium, Total	6010C	**0.50**	mg/Kg	0.36	1	08/19/21 16:53	08/18/21	
Cadmium, Total	6010C	**0.79**	mg/Kg	0.60	1	08/19/21 16:53	08/18/21	
Chromium, Total	6010C	**19.1**	mg/Kg	1.2	1	08/19/21 16:53	08/18/21	
Copper, Total	6010C	**32.2**	mg/Kg	2.4	1	08/19/21 16:53	08/18/21	
Lead, Total	6010C	**438**	mg/Kg	6.0	1	08/19/21 16:53	08/18/21	
Manganese, Total	6010C	**330**	mg/Kg	2.4	1	08/19/21 16:53	08/18/21	
Mercury, Total	7471B	**1.83**	mg/Kg	0.11	5	08/20/21 13:40	08/18/21	
Nickel, Total	6010C	**13.2**	mg/Kg	4.8	1	08/19/21 16:53	08/18/21	
Selenium, Total	6010C	1.2 U	mg/Kg	1.2	1	08/19/21 16:53	08/18/21	
Silver, Total	6010C	1.2 U	mg/Kg	1.2	1	08/19/21 16:53	08/18/21	
Zinc, Total	6010C	**292**	mg/Kg	2.4	1	08/19/21 16:53	08/18/21	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 13:20
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B7	**Basis:**	Dry
Lab Code:	R2108268-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**32.4**	mg/Kg	1.1	1	08/19/21 16:56	08/18/21	
Barium, Total	6010C	**132**	mg/Kg	2.1	1	08/19/21 16:56	08/18/21	
Beryllium, Total	6010C	**0.36**	mg/Kg	0.32	1	08/19/21 16:56	08/18/21	
Cadmium, Total	6010C	**0.60**	mg/Kg	0.53	1	08/19/21 16:56	08/18/21	
Chromium, Total	6010C	**28.4**	mg/Kg	1.1	1	08/19/21 16:56	08/18/21	
Copper, Total	6010C	**75.1**	mg/Kg	2.1	1	08/19/21 16:56	08/18/21	
Lead, Total	6010C	**464**	mg/Kg	5.3	1	08/19/21 16:56	08/18/21	
Manganese, Total	6010C	**209**	mg/Kg	2.1	1	08/19/21 16:56	08/18/21	
Mercury, Total	7471B	**5.38**	mg/Kg	0.64	30	08/20/21 13:43	08/18/21	
Nickel, Total	6010C	**9.0**	mg/Kg	4.2	1	08/19/21 16:56	08/18/21	
Selenium, Total	6010C	**1.6**	mg/Kg	1.1	1	08/19/21 16:56	08/18/21	
Silver, Total	6010C	1.1 U	mg/Kg	1.1	1	08/19/21 16:56	08/18/21	
Zinc, Total	6010C	**285**	mg/Kg	2.1	1	08/19/21 16:56	08/18/21	

Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 14:25
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B10	**Basis:**	Dry
Lab Code:	R2108268-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**10.8**	mg/Kg	1.1	1	08/19/21 16:59	08/18/21	
Barium, Total	6010C	**198**	mg/Kg	2.2	1	08/19/21 16:59	08/18/21	
Beryllium, Total	6010C	**0.81**	mg/Kg	0.33	1	08/19/21 16:59	08/18/21	
Cadmium, Total	6010C	0.55 U	mg/Kg	0.55	1	08/19/21 16:59	08/18/21	
Chromium, Total	6010C	**11.4**	mg/Kg	1.1	1	08/19/21 16:59	08/18/21	
Copper, Total	6010C	**37.0**	mg/Kg	2.2	1	08/19/21 16:59	08/18/21	
Lead, Total	6010C	**81.8**	mg/Kg	5.5	1	08/19/21 16:59	08/18/21	
Manganese, Total	6010C	**292**	mg/Kg	2.2	1	08/19/21 16:59	08/18/21	
Mercury, Total	7471B	**0.392**	mg/Kg	0.020	1	08/20/21 13:19	08/18/21	
Nickel, Total	6010C	**10.7**	mg/Kg	4.4	1	08/19/21 16:59	08/18/21	
Selenium, Total	6010C	1.1 U	mg/Kg	1.1	1	08/19/21 16:59	08/18/21	
Silver, Total	6010C	1.1 U	mg/Kg	1.1	1	08/19/21 16:59	08/18/21	
Zinc, Total	6010C	**63.8**	mg/Kg	2.2	1	08/19/21 16:59	08/18/21	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 14:40
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B11	**Basis:**	Dry
Lab Code:	R2108268-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**6.4**	mg/Kg	1.1	1	08/19/21 17:02	08/18/21	
Barium, Total	6010C	**140**	mg/Kg	2.3	1	08/19/21 17:02	08/18/21	
Beryllium, Total	6010C	**0.49**	mg/Kg	0.34	1	08/19/21 17:02	08/18/21	
Cadmium, Total	6010C	0.57 U	mg/Kg	0.57	1	08/19/21 17:02	08/18/21	
Chromium, Total	6010C	**14.1**	mg/Kg	1.1	1	08/19/21 17:02	08/18/21	
Copper, Total	6010C	**30.9**	mg/Kg	2.3	1	08/19/21 17:02	08/18/21	
Lead, Total	6010C	**322**	mg/Kg	5.7	1	08/19/21 17:02	08/18/21	
Manganese, Total	6010C	**324**	mg/Kg	2.3	1	08/19/21 17:02	08/18/21	
Mercury, Total	7471B	**0.756**	mg/Kg	0.023	1	08/20/21 13:22	08/18/21	
Nickel, Total	6010C	**11.1**	mg/Kg	4.6	1	08/19/21 17:02	08/18/21	
Selenium, Total	6010C	1.1 U	mg/Kg	1.1	1	08/19/21 17:02	08/18/21	
Silver, Total	6010C	1.1 U	mg/Kg	1.1	1	08/19/21 17:02	08/18/21	
Zinc, Total	6010C	**158**	mg/Kg	2.3	1	08/19/21 17:02	08/18/21	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 15:00
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B12	**Basis:**	Dry
Lab Code:	R2108268-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	**20.8**	mg/Kg	1.1	1	08/19/21 17:06	08/18/21	
Barium, Total	6010C	**407**	mg/Kg	2.3	1	08/19/21 17:06	08/18/21	
Beryllium, Total	6010C	**0.48**	mg/Kg	0.34	1	08/19/21 17:06	08/18/21	
Cadmium, Total	6010C	**1.70**	mg/Kg	0.57	1	08/19/21 17:06	08/18/21	
Chromium, Total	6010C	**28.4**	mg/Kg	1.1	1	08/19/21 17:06	08/18/21	
Copper, Total	6010C	**291**	mg/Kg	2.3	1	08/19/21 17:06	08/18/21	
Lead, Total	6010C	**1930**	mg/Kg	57	10	08/20/21 17:38	08/18/21	
Manganese, Total	6010C	**346**	mg/Kg	2.3	1	08/19/21 17:06	08/18/21	
Mercury, Total	7471B	**5.35**	mg/Kg	0.69	30	08/20/21 13:45	08/18/21	
Nickel, Total	6010C	**11.3**	mg/Kg	4.6	1	08/19/21 17:06	08/18/21	
Selenium, Total	6010C	**1.9**	mg/Kg	1.1	1	08/19/21 17:06	08/18/21	
Silver, Total	6010C	**1.2**	mg/Kg	1.1	1	08/19/21 17:06	08/18/21	
Zinc, Total	6010C	**814**	mg/Kg	23	10	08/20/21 17:38	08/18/21	

General Chemistry

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Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 11:20
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B1	**Basis:**	As Received
Lab Code:	R2108268-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**87.5**	Percent	-	1	08/17/21 09:05	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 11:40
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B2	**Basis:**	As Received
Lab Code:	R2108268-002		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**88.7**	Percent	-	1	08/17/21 09:05	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 12:12
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B4B	**Basis:**	As Received
Lab Code:	R2108268-003		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**81.4**	Percent	-	1	08/17/21 09:05	

Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 13:10
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B6	**Basis:**	As Received
Lab Code:	R2108268-004		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**82.7**	Percent	-	1	08/17/21 09:05	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 13:20
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B7	**Basis:**	As Received
Lab Code:	R2108268-005		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**85.8**	Percent	-	1	08/17/21 09:05	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 14:25
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B10	**Basis:**	As Received
Lab Code:	R2108268-006		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**89.7**	Percent	-	1	08/17/21 09:05	

Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 14:40
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B11	**Basis:**	As Received
Lab Code:	R2108268-007		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**87.0**	Percent	-	1	08/17/21 09:05	

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21 15:00
Sample Matrix:	Soil	**Date Received:**	08/14/21 08:25
Sample Name:	B12	**Basis:**	As Received
Lab Code:	R2108268-008		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Total Solids	ALS SOP	**82.9**	Percent	-	1	08/17/21 09:05	

QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Client: BE3 **Service Request:** R2108268
Project: Soils
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: EPA 5030C

Sample Name	Lab Code	4-Bromofluorobenzene 85-122	Dibromofluoromethane 80-116	Toluene-d8 87-121
B7GW	R2108268-009	91	95	99
Method Blank	RQ2110170-04	89	93	96
Lab Control Sample	RQ2110170-03	95	99	99

Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2110170-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
1,1,1-Trichloroethane	5.0 U	5.0	1	08/20/21 11:28	
1,1-Dichloroethane	5.0 U	5.0	1	08/20/21 11:28	
1,1-Dichloroethene	5.0 U	5.0	1	08/20/21 11:28	
1,2,4-Trimethylbenzene	5.0 U	5.0	1	08/20/21 11:28	
1,2-Dichlorobenzene	5.0 U	5.0	1	08/20/21 11:28	
1,2-Dichloroethane	5.0 U	5.0	1	08/20/21 11:28	
1,3,5-Trimethylbenzene	5.0 U	5.0	1	08/20/21 11:28	
1,3-Dichlorobenzene	5.0 U	5.0	1	08/20/21 11:28	
1,4-Dichlorobenzene	5.0 U	5.0	1	08/20/21 11:28	
1,4-Dioxane	100 U	100	1	08/20/21 11:28	
Methyl Ethyl Ketone	10 U	10	1	08/20/21 11:28	
Acetone	10 U	10	1	08/20/21 11:28	
Benzene	5.0 U	5.0	1	08/20/21 11:28	
Carbon Tetrachloride	5.0 U	5.0	1	08/20/21 11:28	
Chlorobenzene	5.0 U	5.0	1	08/20/21 11:28	
Chloroform	5.0 U	5.0	1	08/20/21 11:28	
Methylene Chloride	5.0 U	5.0	1	08/20/21 11:28	
Ethylbenzene	5.0 U	5.0	1	08/20/21 11:28	
Methyl tert-Butyl Ether	5.0 U	5.0	1	08/20/21 11:28	
Tetrachloroethene (PCE)	5.0 U	5.0	1	08/20/21 11:28	
Toluene	5.0 U	5.0	1	08/20/21 11:28	
Trichloroethene (TCE)	5.0 U	5.0	1	08/20/21 11:28	
Vinyl Chloride	5.0 U	5.0	1	08/20/21 11:28	
cis-1,2-Dichloroethene	5.0 U	5.0	1	08/20/21 11:28	
m,p-Xylenes	5.0 U	5.0	1	08/20/21 11:28	
n-Butylbenzene	5.0 U	5.0	1	08/20/21 11:28	
n-Propylbenzene	5.0 U	5.0	1	08/20/21 11:28	
o-Xylene	5.0 U	5.0	1	08/20/21 11:28	
sec-Butylbenzene	5.0 U	5.0	1	08/20/21 11:28	
tert-Butylbenzene	5.0 U	5.0	1	08/20/21 11:28	
trans-1,2-Dichloroethene	5.0 U	5.0	1	08/20/21 11:28	

Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	RQ2110170-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: EPA 5030C

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	85 - 122	08/20/21 11:28	
Dibromofluoromethane	93	80 - 116	08/20/21 11:28	
Toluene-d8	96	87 - 121	08/20/21 11:28	

Client: BE3 **Service Request:** R2108268
Project: Soils **Date Analyzed:** 08/20/21
Sample Matrix: Water

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Units:ug/L
Basis:NA

Lab Control Sample
RQ2110170-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane	8260C	22.1	20.0	111	75-125
1,1-Dichloroethane	8260C	21.9	20.0	110	80-124
1,1-Dichloroethene	8260C	21.0	20.0	105	71-118
1,2,4-Trimethylbenzene	8260C	20.3	20.0	101	81-126
1,2-Dichlorobenzene	8260C	19.1	20.0	96	80-119
1,2-Dichloroethane	8260C	20.0	20.0	100	71-127
1,3,5-Trimethylbenzene	8260C	20.2	20.0	101	81-128
1,3-Dichlorobenzene	8260C	19.7	20.0	99	83-121
1,4-Dichlorobenzene	8260C	18.3	20.0	92	79-119
1,4-Dioxane	8260C	302	400	76	44-154
Methyl Ethyl Ketone	8260C	17.8	20.0	89	61-137
Acetone	8260C	17.2	20.0	86	40-161
Benzene	8260C	20.3	20.0	102	79-119
Carbon Tetrachloride	8260C	21.7	20.0	108	70-127
Chlorobenzene	8260C	19.9	20.0	99	80-121
Chloroform	8260C	19.5	20.0	98	79-120
Methylene Chloride	8260C	19.8	20.0	99	73-122
Ethylbenzene	8260C	19.8	20.0	99	76-120
Methyl tert-Butyl Ether	8260C	19.2	20.0	96	75-118
Tetrachloroethene (PCE)	8260C	20.3	20.0	102	72-125
Toluene	8260C	20.7	20.0	104	79-119
Trichloroethene (TCE)	8260C	19.4	20.0	97	74-122
Vinyl Chloride	8260C	24.6	20.0	123	74-159
cis-1,2-Dichloroethene	8260C	20.7	20.0	104	80-121
m,p-Xylenes	8260C	40.2	40.0	100	80-126
n-Butylbenzene	8260C	21.7	20.0	109	78-133
n-Propylbenzene	8260C	20.8	20.0	104	78-131
o-Xylene	8260C	19.7	20.0	99	79-123
sec-Butylbenzene	8260C	20.9	20.0	105	75-129
tert-Butylbenzene	8260C	20.9	20.0	104	76-126
trans-1,2-Dichloroethene	8260C	21.7	20.0	108	73-118

Semivolatile Organic Compounds by GC/MS

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Client: BE3 **Service Request:** R2108268
Project: Soils
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	2,4,6-Tribromophenol 10-109	2-Fluorobiphenyl 10-102	2-Fluorophenol 10-88
B1	R2108268-001	40	47	33
B2	R2108268-002	58	56	48
B4B	R2108268-003	48	53	44
B6	R2108268-004	0*	0*	0*
B7	R2108268-005	0*	0*	0*
B10	R2108268-006	75	61	54
B11	R2108268-007	66	55	49
B12	R2108268-008	43	52	37
Method Blank	RQ2109956-01	62	53	58
Lab Control Sample	RQ2109956-02	65	62	56
Duplicate Lab Control Sample	RQ2109956-03	65	58	50
B4B MS	RQ2109956-04	63	50	46
B4B DMS	RQ2109956-05	60	53	52

Client: BE3 **Service Request:** R2108268
Project: Soils
Sample Matrix: Soil

SURROGATE RECOVERY SUMMARY

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Nitrobenzene-d5 10-95	Phenol-d6 10-145	p-Terphenyl-d14 10-106
B1	R2108268-001	37	38	66
B2	R2108268-002	49	50	87
B4B	R2108268-003	27	46	88
B6	R2108268-004	0*	0*	0*
B7	R2108268-005	0*	0*	0*
B10	R2108268-006	53	56	104
B11	R2108268-007	46	52	103
B12	R2108268-008	38	42	97
Method Blank	RQ2109956-01	54	56	103
Lab Control Sample	RQ2109956-02	53	56	94
Duplicate Lab Control Sample	RQ2109956-03	48	53	100
B4B MS	RQ2109956-04	37	47	93
B4B DMS	RQ2109956-05	38	57	95

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	08/12/21
Sample Matrix:	Soil	**Date Received:**	08/14/21
		Date Analyzed:	08/18/21
		Date Extracted:	08/17/21

Duplicate Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Sample Name:	B4B	**Units:**	ug/Kg
Lab Code:	R2108268-003	**Basis:**	Dry
Analysis Method:	8270D		
Prep Method:	EPA 3546		

		Matrix Spike			Duplicate Matrix Spike					
		RQ2109956-04			RQ2109956-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Cresol	430 U	2080	4370	48	2370	4260	56	47-90	13	30
m,p-Cresols	430 U	2180	4370	50	2460	4260	58	47-90	12	30
Acenaphthene	820	3540	4370	62	4050	4260	76	52-91	13	30
Acenaphthylene	430 U	2880	4370	66	3240	4260	76	53-97	12	30
Anthracene	2000	6110	4370	93	7730	4260	134 *	63-98	23	30
Benz(a)anthracene	3900	9150 E	4370	121 *	10300 E	4260	152 *	59-99	12	30
Benzo(a)pyrene	4100	10600 E	4370	148 *	11500 E	4260	174 *	71-129	9	30
Benzo(b)fluoranthene	4300	10200 E	4370	135 *	11600 E	4260	171 *	59-101	13	30
Benzo(g,h,i)perylene	1600	4950	4370	77	5160	4260	83	67-113	4	30
Benzo(k)fluoranthene	1700	6070	4370	100	6730	4260	118 *	64-107	10	30
Chrysene	4000	9400 E	4370	123 *	10400 E	4260	149 *	62-103	10	30
Dibenz(a,h)anthracene	470	3430	4370	68	3350	4260	68	58-119	2	30
Dibenzofuran	680	3500	4370	64	4230	4260	83	52-93	19	30
Fluoranthene	9700 D	14700 E	4370	113 *	16500 E	4260	159 *	59-104	12	30
Fluorene	1200	4420	4370	74	5330	4260	97 *	54-93	19	30
Hexachlorobenzene	430 U	3070	4370	70	3050	4260	72	55-97	<1	30
Indeno(1,2,3-cd)pyrene	1800	5360	4370	82	5490	4260	87	64-114	2	30
Naphthalene	2100	2230	4370	3 *	2770	4260	16 *	48-85	22	30
Pentachlorophenol	2200 U	2790	4370	64	2700	4260	63	34-118	3	30
Phenanthrene	7400	13900 E	4370	148 *	16300 E	4260	208 *	60-95	16	30
Phenol	430 U	2030	4370	46	2350	4260	55	44-90	15	30
Pyrene	8000	14800 E	4370	155 *	16600 E	4260	200 *	65-107	11	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Analytical Report

Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	RQ2109956-01	**Basis:**	Dry

Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
o-Cresol	340 U	340	1	08/18/21 16:53	8/17/21	
m,p-Cresols	340 U	340	1	08/18/21 16:53	8/17/21	
Acenaphthene	340 U	340	1	08/18/21 16:53	8/17/21	
Acenaphthylene	340 U	340	1	08/18/21 16:53	8/17/21	
Anthracene	340 U	340	1	08/18/21 16:53	8/17/21	
Benz(a)anthracene	340 U	340	1	08/18/21 16:53	8/17/21	
Benzo(a)pyrene	340 U	340	1	08/18/21 16:53	8/17/21	
Benzo(b)fluoranthene	340 U	340	1	08/18/21 16:53	8/17/21	
Benzo(g,h,i)perylene	340 U	340	1	08/18/21 16:53	8/17/21	
Benzo(k)fluoranthene	340 U	340	1	08/18/21 16:53	8/17/21	
Chrysene	340 U	340	1	08/18/21 16:53	8/17/21	
Dibenz(a,h)anthracene	340 U	340	1	08/18/21 16:53	8/17/21	
Dibenzofuran	340 U	340	1	08/18/21 16:53	8/17/21	
Fluoranthene	340 U	340	1	08/18/21 16:53	8/17/21	
Fluorene	340 U	340	1	08/18/21 16:53	8/17/21	
Hexachlorobenzene	340 U	340	1	08/18/21 16:53	8/17/21	
Indeno(1,2,3-cd)pyrene	340 U	340	1	08/18/21 16:53	8/17/21	
Naphthalene	340 U	340	1	08/18/21 16:53	8/17/21	
Pentachlorophenol	1800 U	1800	1	08/18/21 16:53	8/17/21	
Phenanthrene	340 U	340	1	08/18/21 16:53	8/17/21	
Phenol	340 U	340	1	08/18/21 16:53	8/17/21	
Pyrene	340 U	340	1	08/18/21 16:53	8/17/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	62	10 - 109	08/18/21 16:53	
2-Fluorobiphenyl	53	10 - 102	08/18/21 16:53	
2-Fluorophenol	58	10 - 88	08/18/21 16:53	
Nitrobenzene-d5	54	10 - 95	08/18/21 16:53	
Phenol-d6	56	10 - 145	08/18/21 16:53	
p-Terphenyl-d14	103	10 - 106	08/18/21 16:53	

Client: BE3 **Service Request:** R2108268
Project: Soils **Date Analyzed:** 08/18/21
Sample Matrix: Soil

Duplicate Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS using Microwave Digestion

Units:ug/Kg
Basis: Dry

		Lab Control Sample			Duplicate Lab Control Sample					
		RQ2109956-02			RQ2109956-03					
Analyte Name	**Analytical Method**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Cresol	8270D	1850	3280	56	1680	3130	54	47-90	10	30
m,p-Cresols	8270D	1850	3280	56	1710	3130	55	47-90	7	30
Acenaphthene	8270D	2040	3280	62	1930	3130	61	52-91	6	30
Acenaphthylene	8270D	2210	3280	67	2090	3130	67	53-97	5	30
Anthracene	8270D	2330	3280	71	2340	3130	75	63-98	<1	30
Benz(a)anthracene	8270D	2210	3280	67	2360	3130	75	59-99	7	30
Benzo(a)pyrene	8270D	2870	3280	87	3010	3130	96	71-129	5	30
Benzo(b)fluoranthene	8270D	2320	3280	71	2400	3130	76	59-101	3	30
Benzo(g,h,i)perylene	8270D	2240	3280	68	2320	3130	74	67-113	4	30
Benzo(k)fluoranthene	8270D	2500	3280	76	2610	3130	83	64-107	4	30
Chrysene	8270D	2400	3280	73	2490	3130	80	62-103	4	30
Dibenz(a,h)anthracene	8270D	2420	3280	74	2530	3130	81	58-119	4	30
Dibenzofuran	8270D	2100	3280	64	2000	3130	64	52-93	5	30
Fluoranthene	8270D	2350	3280	72	2440	3130	78	59-104	4	30
Fluorene	8270D	2100	3280	64	2030	3130	65	54-93	4	30
Hexachlorobenzene	8270D	2100	3280	64	2160	3130	69	55-97	3	30
Indeno(1,2,3-cd)pyrene	8270D	2250	3280	69	2390	3130	76	64-114	6	30
Naphthalene	8270D	1720	3280	52	1530	3130	49	48-85	12	30
Pentachlorophenol	8270D	2590	3280	79	2810	3130	90	34-118	8	30
Phenanthrene	8270D	2300	3280	70	2320	3130	74	60-95	<1	30
Phenol	8270D	1780	3280	54	1620	3130	52	44-90	10	30
Pyrene	8270D	2570	3280	78	2700	3130	86	65-107	5	30

Metals

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Client:	BE3	**Service Request:**	R2108268
Project:	Soils	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	Dry
Lab Code:	R2108268-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	1.0 U	mg/Kg	1.0	1	08/19/21 16:04	08/18/21	
Barium, Total	6010C	2.0 U	mg/Kg	2.0	1	08/19/21 16:04	08/18/21	
Beryllium, Total	6010C	0.30 U	mg/Kg	0.30	1	08/19/21 16:04	08/18/21	
Cadmium, Total	6010C	0.50 U	mg/Kg	0.50	1	08/19/21 16:04	08/18/21	
Chromium, Total	6010C	1.0 U	mg/Kg	1.0	1	08/19/21 16:04	08/18/21	
Copper, Total	6010C	2.0 U	mg/Kg	2.0	1	08/19/21 16:04	08/18/21	
Lead, Total	6010C	5.0 U	mg/Kg	5.0	1	08/19/21 16:04	08/18/21	
Manganese, Total	6010C	2.0 U	mg/Kg	2.0	1	08/19/21 16:04	08/18/21	
Mercury, Total	7471B	0.020 U	mg/Kg	0.020	1	08/20/21 12:15	08/18/21	
Nickel, Total	6010C	4.0 U	mg/Kg	4.0	1	08/19/21 16:04	08/18/21	
Selenium, Total	6010C	1.0 U	mg/Kg	1.0	1	08/19/21 16:04	08/18/21	
Silver, Total	6010C	1.0 U	mg/Kg	1.0	1	08/19/21 16:04	08/18/21	
Zinc, Total	6010C	2.0 U	mg/Kg	2.0	1	08/19/21 16:04	08/18/21	

Client: BE3
Project: Soils
Sample Matrix: Soil

Service Request: R2108268
Date Analyzed: 08/19/21 - 08/20/21

Lab Control Sample Summary
Inorganic Parameters

Units:mg/Kg
Basis: Dry

Lab Control Sample
R2108268-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic, Total	6010C	3.8	4.0	95	80-120
Barium, Total	6010C	203	200	101	80-120
Beryllium, Total	6010C	4.95	5.00	99	80-120
Cadmium, Total	6010C	5.03	5.00	101	80-120
Chromium, Total	6010C	20.4	20.0	102	80-120
Copper, Total	6010C	24.6	25.0	98	80-120
Lead, Total	6010C	49.4	50.0	99	80-120
Manganese, Total	6010C	49.6	50.0	99	80-120
Mercury, Total	7471B	0.103	0.100	103	80-120
Nickel, Total	6010C	50.2	50.0	100	80-120
Selenium, Total	6010C	88.9	101	88	80-120
Silver, Total	6010C	4.8	5.0	95	80-120
Zinc, Total	6010C	48.3	50.0	97	80-120