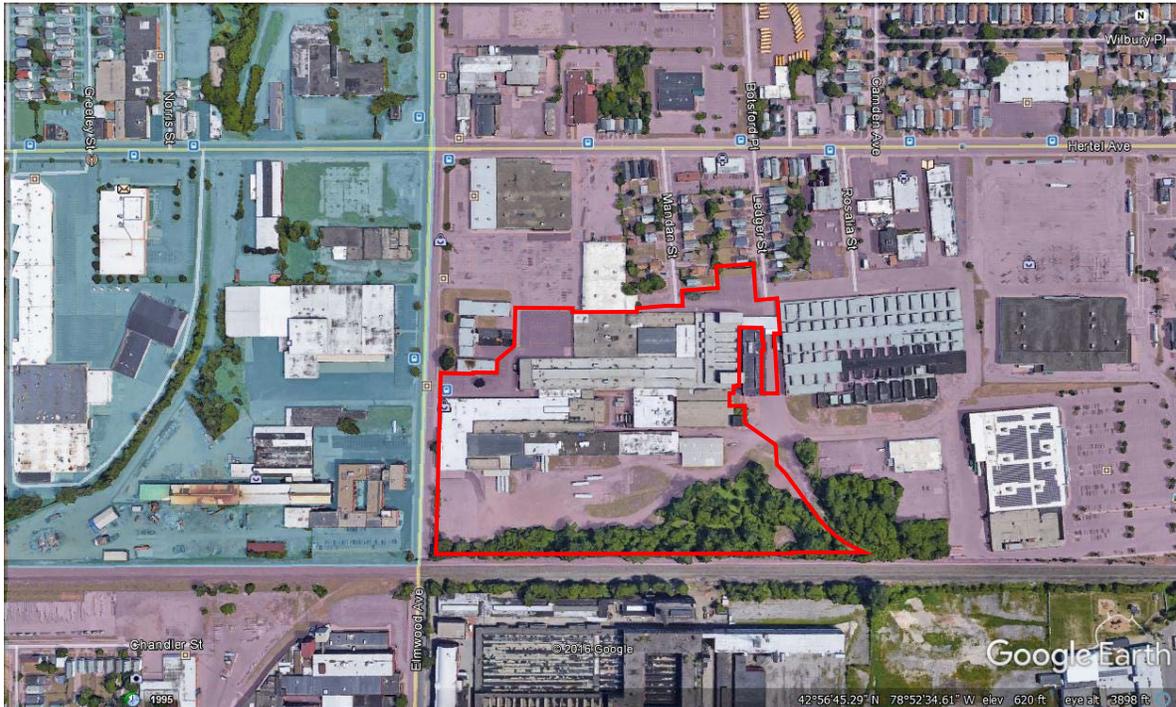


INTERIM REMEDIAL MEASURE PROJECT SUMMARY
for
Hot Spot Removal

BROWNFIELDS CLEANUP PROGRAM
For
MOD-PAC CORP. SITE
1801 Elmwood Avenue, Buffalo, New York 14207
BCP # C915314



Prepared For:
MOD-PAC CORP.
1801 Elmwood, Buffalo, New York 14203
HEI Project No: e1601

Hazard Evaluations, Inc.
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August 12, 2019

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Appendix A	Field Notes
Appendix B	CAMP Data
Appendix C	Analytical Testing Results
Appendix D	Soil Disposal Manifests
Appendix E	BSA Documentation

1.0 INTRODUCTION

This Interim Remedial Measure (IRM) Project Summary incorporates remedial activities which were undertaken at the MOD-PAC CORP. (MOD-PAC) facility located in the City of Buffalo, New York (Site), as shown on Figure 1 and Figure 2. The Applicant, MOD-PAC CORP., was accepted into the Brownfield Cleanup Program (BCP) as a Participant.

This IRM Project Summary for Hot Spot Removal presents the interim remedial steps that were implemented at the Site to address areas of soil contamination exceeding either Commercial Use soil cleanup objectives (CUSCO) and/or Site Specific Action Limits (SSAL) that were identified during the Remedial Investigation (RI). Approximately 3,100 tons of contaminated soil/fill materials were removed and disposed off-Site.

2.0 INTERIM REMEDIAL MEASURES

2.1 IRM Tasks

The Site has a historical industrial use past for over the past 100 years. Due to its historical usage, significant amounts of fill materials are present throughout the Site, and present at the surface in the southern portion. Fill materials in the southern portion range in depth from 4 feet to over 19 feet below ground surface; therefore, general excavation and removal of impacted soil/fill materials was not practical nor economically feasible.

The following SSALs were developed for and assigned to the Site for soil below the cover system:

<u>Analyte</u>	<u>SSAL</u>
Arsenic	30 mg/kg
Lead	1,500 mg/kg
Copper	270 mg/kg (CUSCO)
Cadmium	9.3 mg/kg (CUSCO)
Total PAHs	500 mg/kg

Five areas of significant contaminant concentrations or hot spots were identified exceeding the SSALs assigned for the Site, as shown on Figure 2, and described below

- SB101 (0.5-3.5') – Arsenic at 36.9 mg/kg; lead 1,570 mg/kg
- TP103 (1-2.5') – Lead at 3,310 mg/kg
- TP104 (2-5') – Arsenic at 109 mg/kg
- TP108 (4-5.5') – Arsenic at 46.4 mg/kg; copper at 314 mg/kg; cadmium at 10.2 mg/kg
- SS102 (0-2") Duplicate – Surface soil sample – Arsenic at 141 ug/kg

2.2 Soil Excavation

Soil excavation of the hot spot areas started on April 1, 2019 and were completed on April 5, 2019. Field notes documented during this time are presented in Attachment A.

As part of the Community Air Monitoring Plan (CAMP), CAMP monitors were set up at both upwind and downwind locations prior to soil excavation activities on each day. CAMP data is presented in Attachment B and is further summarized in Section 4.0 below. Excavated areas are shown in Figure 2 and described below.

- **TP104** – The 40 foot by 40 foot excavation was started and completed on April 1, 2019, and extended approximately 5 feet deep. A former brick foundation for a chimney and concrete wall were located in the northeastern corner of the excavation.
- **TP103** – The excavation was started and completed on April 2, 2019. The 40 foot by 40 foot excavation was completed to approximately 5 feet deep. A concrete crawl space structure was located in the southwest corner of the excavation. Additionally, a discontinuous former building foundation was located along the western excavation limits.
- **SB101** – The excavation was started and completed on April 2, 2019. The asphalt-paved parking lot layer was removed and the excavation was completed to approximately 40 feet by 40 feet by 5 feet deep. An approximate 15-foot by 20-foot slag layer and groundwater were encountered within the excavation. Perched groundwater condition was present within the slag material, resulting in approximately 20,000 gallons of groundwater, which was pumped out of the excavation and placed within an E-tank, staged west of the excavation. The groundwater was sampled, analyzed, and permitted to be discharged into the Buffalo Sewer Authority (BSA) Wastewater Treatment Plant through a stormwater drain located on-Site. Further information regarding groundwater sampling, analysis, and permitting is described in Section 6.0 below.
- **TP108** – The excavation was started on April 3, 2019 and completed on April 4, 2019. The 60 foot by 60 foot excavation was completed to depths ranging from 6 to 8 feet deep. Concrete walls and a former foundation wall were located within the excavation. Additionally, a compact cinder layer was located approximately 4 to 5.5 feet below grade (bg), which required a breaker bar attachment for removal. A concrete footer was also present in the excavation. The northern portion of the excavation was completed to approximately 8 feet below grade, and 6 feet in the southern portion, due to decreasing presence of fill material.
- **SS102** – The excavation was started on April 4, 2019 and completed on April 5, 2019. The 20 foot by 40 foot excavation was completed to approximately 20 feet by 40 feet by one-foot deep to remove impacted surface soil.

Confirmatory soil samples were collected from each excavated area from the sidewalls and bottom of each excavation, as describe in Section 3.0 below. Sidewall and bottom soil samples were initially screened for total volatile compounds using an organic vapor meter

(OVM) equipped with a photoionization detector (PID). All samples were less than Site background levels (less than 5.0 parts per million (ppm)). Excavated soils were staged on-site in a stockpile, placed on 6-mil polyethylene sheeting, located in the southern portion of the Site, for future off-site disposal.

Temporary construction fencing was paced around excavations SB101, TP103, TP104, and TP-108 to prevent unauthorized personnel from entering these areas. SS102 is located within a courtyard area, surrounded by the MOD-PAC manufacturing building and a locked gate access, and was one-foot deep; therefore, was not fenced.

3.0 ANALYTICAL AND FOLLOW-UP

Based on known contamination at the Site, soil samples were analyzed for SSAL arsenic, lead, copper and cadmium only. Analytical results are summarized on Table 1, and included in Attachment C.

3.1 Confirmatory Soil Sample Collection

Confirmatory soil samples were collected from the sidewalls and bottom of each excavation, as described below.

- TP104 – Two north wall, two south wall, two east wall, two west wall, and two bottom soil samples (10 soil samples total).
- TP103 – One north wall, one south wall, two east wall, two west wall, and two bottom soil samples (8 soil samples total).
- SB101 – One north wall, two south wall, one east wall, two west wall, and two bottom soil samples (8 soil samples total).
- TP108 – Two north wall, two south wall, two east wall, two west wall, and two bottom soil samples (10 soil samples total).
- SS102 – One north wall, one south wall, one east wall, one west wall, and one bottom soil samples (5 soil samples total).

3.2 Confirmatory Soil Sample Analysis

Confirmatory soil sample results indicated that most of the sample results were below the Site SSAL with the following few exceptions:

- TP104 east wall arsenic concentration was reported at 39.8 mg/kg, which exceeded the Site SSAL of 30 mg/kg.
- SS102 north wall copper concentration was reported at 1,850 mg/kg, which exceeded Site SSAL of 270 mg/kg.

Further excavation efforts were completed in these two areas to address these impacted soils

3.3 Follow-Up Soil Excavation

The east wall at TP104 and north wall SS102 exceeded the Site's SSAL for arsenic and

copper, respectively. Additional soil excavation was completed in these limited areas on April 16 and 17, 2019. Field notes documented during this time are presented in Attachment A.

- **TP104** – An additional 5-foot by 40-foot by 5-foot deep area was removed from the eastern wall, and a confirmatory east wall sample, TP104Ex – EW (041719), was collected. Excavated soils were staged on-Site in a stockpile, placed on 6-mil polyethylene sheeting, located in the southern portion of the Site, for future off-site disposal.
- **SS102** – An additional 5-foot by 20-foot by one-foot deep area was removed from the northern wall, and a confirmatory north wall sample, SS102Ex – NW (041619), was collected. Excavated soils were staged on-Site in a stockpile, placed on 6-mil polyethylene sheeting, located in the southern portion of the Site, for future off-site disposal.

3.4 Follow-Up Analysis

The two additional confirmatory samples, identified as TP104Ex – EW (041719), SS102Ex – NW (041619), were analyzed for arsenic and copper, respectively. Arsenic was reported at a concentration of 3.5 mg/kg, which is below SSAL of 30 mg/kg; and copper was reported at a concentration of 40 mg/kg, below the SSAL of 270 mg/kg.

3.5 Excavation Backfill

TP103, TP104, and TP108 were not backfilled, and will be graded as required for future development.

The excavation at SB101 is located within an existing roadway and was backfilled with No. 2 crusher run stone. After backfilling, the area was topped with asphalt millings generated during the parking lot improvements conducted in the Fall of 2018.

SS102 includes excavation of surface fill materials to a depth of approximately one-foot. The excavation area was not backfilled as part of this IRM, but was marked off with posts and hazard tape.

4.0 CAMP MONITORING

A Community Air Monitoring Plan (CAMP) was implemented during IRM activities and included particulate monitoring. CAMP monitors were positioned at both upwind and downwind locations prior to excavation activities. Results from the CAMP data indicated a dust exceedance at the downwind location during the last 30 minutes of monitoring on April 17, 2019. No other exceedances were documented during remedial activities. CAMP data is presented in Attachment B.

Weather data collected during the time span in which remedial activities occurred indicated a general weather pattern of rainfall events/wet periods during earlier activities and little to no rainfall events/drying during later activities. In that regard, HEI can assume rainfall events/wet periods which occurred prior would have moistened the upper layers of the stockpiled soil and suppressed the generation of dust. The dust exceedance occurred on a day with little to no rainfall and the disturbance of the dryer, underlying soils could have enhanced dust conditions at the Site.

In addition, the MOC-PAC facility was accepting materials by truck loads at the loading dock, located near the excavation areas. The access road to the loading dock is a dirt driveway and is not paved. In that regard, the exceedance may have been associated with truck traffic at the facility.

5.0 SOIL CHARACTERIZATION AND DISPOSAL

Several soil samples were collected from the stockpiled soil for landfill characterization, including toxicity characteristic leaching procedures (TLCP) VOCs, TCLP SVOCs, TCLP Metals, PCBs, pesticides, herbicides, ignitability, corrosivity, and reactivity. Based on analytical testing results, the impacted soil was approved for disposal by Waste Management.

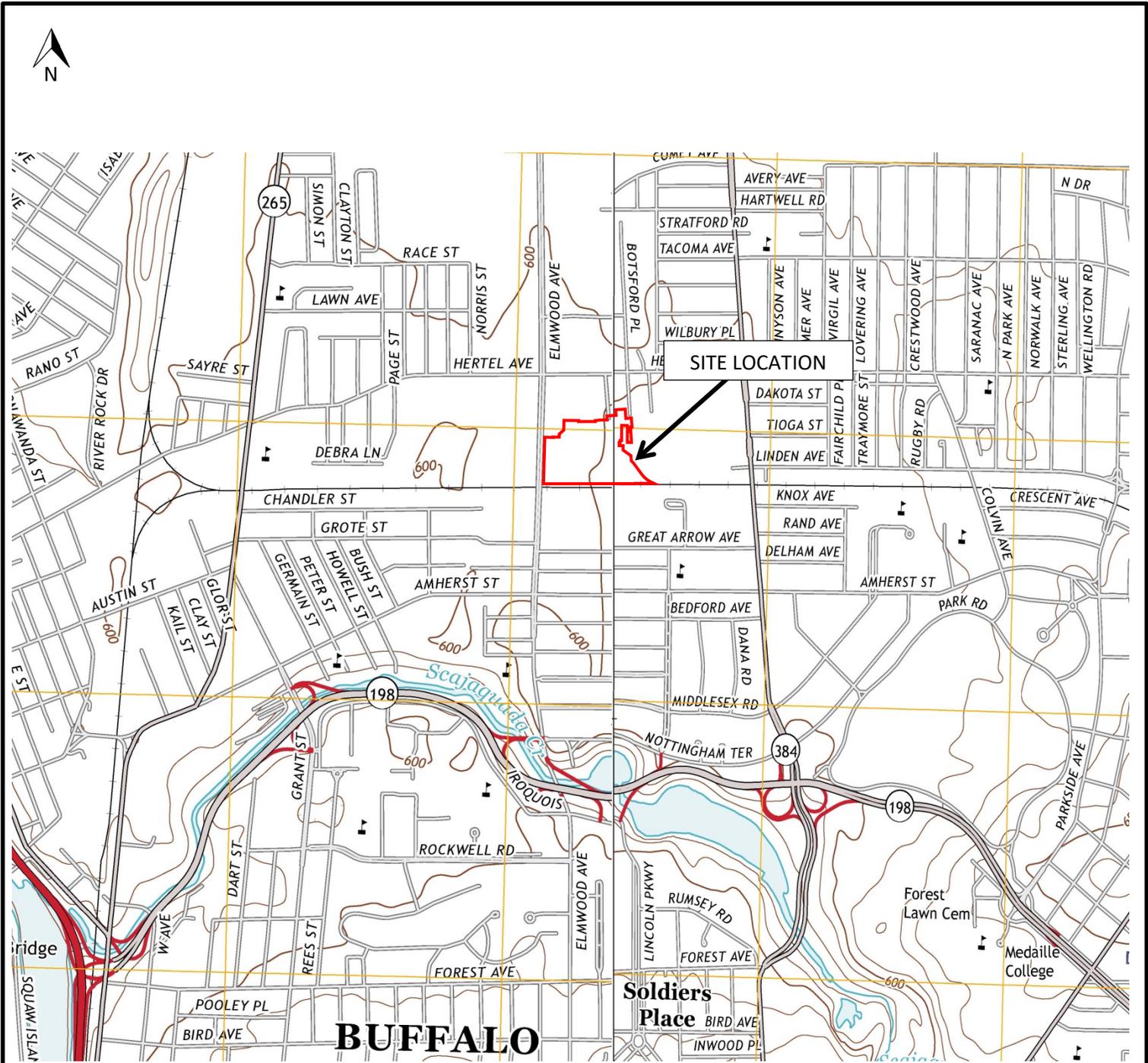
Stockpiled soils were loaded into dump trucks and were transported off-site to the Waste Management Chaffee Landfill, Chaffee NY. Approximately 3,100 tons of soil was removed and disposed off-Site. Waste disposal manifest receipts are presented in Attachment D.

6.0 GROUNDWATER DISCHARGE

Perched groundwater conditions were encountered while excavating SB101. Groundwater was pumped out and placed within an E-tank, staged west of the excavation. Groundwater samples were collected and analyzed according to the Buffalo Sewer Authority's (BSA) requirements, which included VOCs, SVOCs, Metals, PCBs, pesticides, total extractable hydrocarbons, total suspended solids, total dissolved solids, total solids, biochemical oxygen demand, total phosphates, and acidity/basicity (pH).

A BSA Temporary Discharge Permit Application was filed for the temporary discharge of the groundwater from the E-tank and, based on the analytical results, the application was approved. A BSA Temporary Discharge Permit (permit no. 19-05-TP263) was granted for the temporary discharge of treated groundwater to the BSA Wastewater Treatment Plant from a stormwater drain located at the MOD-PAC facility on May 9, 2019. Approximately 20,000 gallons of groundwater was discharged to the BSA Wastewater Treatment Plant. The E-tank was cleaned and transported off-Site. BSA Management documents are presented in Attachment E.

FIGURES



THIS DRAWING IS FOR ILLUSTRATIVE AND INFORMATIONAL PURPOSES ONLY AND WAS ADAPTED FROM USGS, BUFFALO, NE & NW QUADRANGLE (2016).

HAZARD EVALUATIONS, INC.		
<i>Phase I/II Audits – Site Investigations – Facility Inspections</i>		
LOCATION PLAN		
MOD-PAC CORP.		
1801 ELMWOOD AVENUE		
BUFFALO, NEW YORK		
DRAWN BY: MB	SCALE: NOT TO SCALE	PROJECT: e1605
CHECKED BY: MW	DATE: 06/2019	FIGURE NO: 1

GRAPHIC SCALE



(IN FEET)
1 inch = 100 ft.

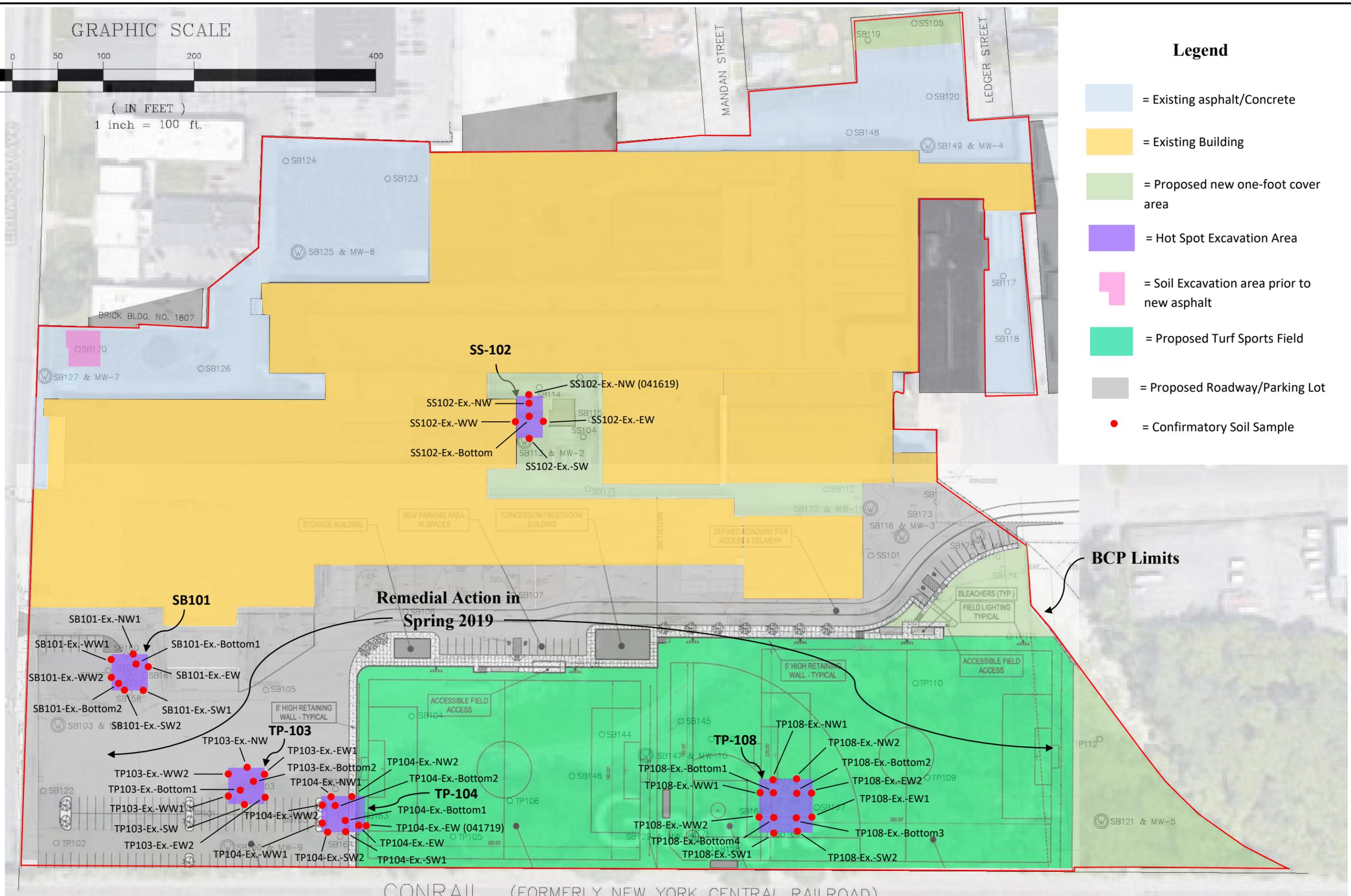


ELMWOOD AVENUE (FORMERLY MACPHERSON STREET)

ELMWOOD AVENUE (FORMERLY MACPHERSON STREET)

Legend

- = Existing asphalt/Concrete
- = Existing Building
- = Proposed new one-foot cover area
- = Hot Spot Excavation Area
- = Soil Excavation area prior to new asphalt
- = Proposed Turf Sports Field
- = Proposed Roadway/Parking Lot
- = Confirmatory Soil Sample



CONRAIL (FORMERLY NEW YORK CENTRAL RAILROAD)

WITTMAN GEOSCIENCES, PLLC

IRM Hotspot Excavation and Sample Locations

DRAWN BY: MMW

SCALE: 1" = 100'

PROJECT: 18-103

1801 Elmwood, Buffalo, NY

CHECKED BY: MMW

DATE: 08/2019

FIGURE NO: 2

TABLES

TABLE 1
MOD-PAC CORP., 1801 Elmwood Ave, Buffalo, NY
IRM Excavation Confirmatory Soil Sample Results

Parameter	SSAL	SB101 EX.-NW	SB101 EX.-SW1	SB101 EX.-SW2	SB101 EX.-WW2	SB101 EX.-WW1	SB101 EX.-EW	SB101 EX.-BOTTOM1	SB101 EX.-BOTTOM2	SB101 EX.-BOTTOM2 DUPLICATE	
		4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
		L1913201-05	L1913201-06	L1913201-07	L1913201-08	L1913201-02	L1913201-09	L1913201-01	L1913201-03	L1913201-04	
Metals (mg/kg)											
Arsenic, Total	30	8.96	5.11	2.23	5.66	20	3.07	4.7	4.1	4.44	
Cadmium, Total	9.3	2.06	1.56	0.526	1.45	6.5	0.707	1.62	1.64	1.74	
Copper, Total	270	46.5	7.42	3.84	4.95	52.4	7.01	19.4	18.8	19.3	
Lead, Total	1500	584	37.4	86.4	71	210	29.2	9.81	11.8	12.3	

Parameter	SSAL	TP103 EX.-NW	TP103 EX.-SW	TP103 EX.-WW1	TP103 EX.-WW2	TP103 EX.-EW1	TP103 EX.-EW2	TP103 EX.-BOTTOM1	TP103 EX.-BOTTOM2
		4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019	4/2/2019
		L1912944-16	L1912944-19	L1912944-12	L1912944-15	L1912944-17	L1912944-18	L1912944-13	L1912944-14
Total Metals									
Arsenic, Total	30	7.2	19.3	6.87	10.1	5.7	24.3	19.8	3.77
Cadmium, Total	9.3	0.433 U	0.495 U	0.502 U	0.451 U	0.504 U	2.4 U	5.25 U	0.479 U
Copper, Total	270	22.4	37	28.6	31	22.9	144	34.4	18.7
Lead, Total	1500	221	73.9	204	163	135	410	144	8.22

Parameter	SSAL	TP104 EX.-NW1	TP104 EX.-NW2	TP104 EX.-SW1	TP104 EX.-SW2	TP104 EX.-WW1	TP104 EX.-WW2	TP104 EX.-WW2 DUPLICATE	TP104 EX.-EW	TP104 EX.-EW (041719)	TP104 EX.-BOTTOM1	TP104 EX.-BOTTOM2
		4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/1/2019	4/17/2019	4/1/2019	4/1/2019
		L1912944-09	L1912944-10	L1912944-01	L1912944-03	L1912944-05	L1912944-06	L1912944-07	L1912944-08	L1915737-02	L1912944-02	L1912944-11
Total Metals												
Arsenic, Total	30	15.5	4.46	12.8	24.7	11.2	10.2	9.44	39.8	3.35	10.2	3.87
Cadmium, Total	9.3	0.082 J	0.45 U	0.577 U	4.85 U	0.574 U	0.501 U	0.057 J	0.454 U	NT	2.69 U	0.475 U
Copper, Total	270	19.2	7.1	81.2	52.9	29.3	24.7	22.4	33.5	NT	15.4	22.2
Lead, Total	1500	212	69.5	92.9	202	50.6	117	148	44	NT	13.9	9.02

Parameter	SSAL	TP108 EX.-NW1	TP108 EX.-NW2	TP108 EX.-SW1	TP108 EX.-SW2	TP108 EX.-WW1	TP108 EX.-WW2	TP108 EX.-EW1	TP108 EX.-EW2
		4/5/2019	4/5/2019	4/5/2019	4/5/2019	4/5/2019	4/5/2019	4/5/2019	4/5/2019
		L1912944-22	L1912944-23	L1912944-28	L1912944-29	L1912944-30	L1912944-31	L1912944-26	L1912944-27
Total Metals									
Arsenic, Total	30	12.8	10.1	8.8	8.1	19.7	22.6	10.5	11.8
Cadmium, Total	9.3	3.58	2.04	1.5	2.18	3.14	3.67	4.14	3.75
Copper, Total	270	61.3	54.3	35	42.1	77.6	127	34.1	34.7
Lead, Total	1500	151	163	96.8	118	112	236	90.6	389

Parameter	SSAL	TP108 EX.-BOTTOM1	TP108 EX.-BOTTOM 2	TP108 EX.-BOTTOM3	TP108 EX.-BOTTOM4	TP108 EX.-UC001	TP108 EX.-UC002	TP108 EX.-UC003
		4/4/2019	4/5/2019	4/5/2019	4/5/2019	4/3/2019	4/3/2019	4/3/2019
		L1913892-10	L1912944-21	L1912944-24	L1912944-25	L1913892-01	L1913892-02	L1913892-03
Total Metals								
Arsenic, Total	30	4.52	3.67	4.28	3.8	4.03	5.51	5.17
Cadmium, Total	9.3	0.398 J	0.544	0.725	0.424 J	0.466 U	0.504 U	0.464 U
Copper, Total	270	19.2	12.9	9.14	6.05	14.8	16.9	16.9
Lead, Total	1500	9.26	12.7	17.1	8.8	9.41	12.7	13.5

Parameter	SSAL	SS102 EX.-NW	SS102 EX.-NW (041619)	SS102 EX.-WW	SS102 EX.-WW DUPLICATE	SS102 EX.-SW	SS102 EX.-EW	SS102 EX.-BOTTOM
		4/4/2019	4/16/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019	4/4/2019
		L1913892-04	L1915737-01	L1913892-05	L1913892-06	L1913892-07	L1913892-08	L1913892-09
Total Metals								
Arsenic, Total	30	18.2	NT	16.3	15.6	20.6	5.95	7.86
Cadmium, Total	9.3	1.15	NT	0.651	0.494	3.65	0.822	0.544
Copper, Total	270	1850	40.4	36.4	30.9	50.2	15.4	14.1
Lead, Total	1500	189	NT	98.3	201	342	37.9	113

Notes:

1. Analytical testing performed by Alpha Analytical. Compounds detected in one or more samples are presented in this table. Refer to Appendix for the full analytical report.
2. mg/kg = parts per million.
3. ND = not detected above method detection limit; NT = not tested; NV = no value.
4. SSAL = Site Specific Action Levels
5. U = not detected above method detection limit; J = estimated value
6. Shading indicates: Exceeds SSAL

Appendix A

Field Notes

4/1/19 1801 Elmwood Ave, Buffalo, NY

IRM for 'Hot Spot Removal' BPH#2958314

HEI arrived onsite @ 8:00am

HEI set up camp monitors @ both up/
down wind locations.

HEI coordinated with contractor 'Dirtworks

Dirtworks began clearing an area in
the southern portion of the site to
be used for a staging area for the
impacted soil.

Dirtworks removed 'staged overburden soils'
from the previous parking lot excavation
in order to reach the proposed TP104
hot spot.

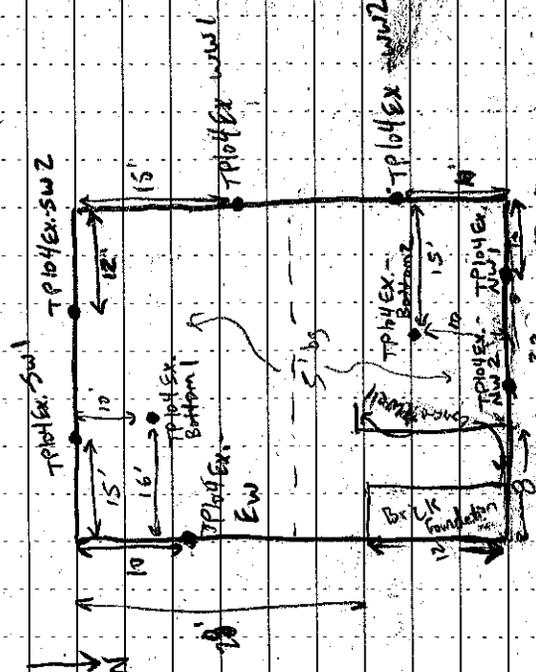
Excavation of TP104 began at 10:45am

Within TP104 Excavation in the East-
Central area a brick wall was observed.
This wall was left in place.

Scale: 1 square = _____

Rite in the Rain

In the South wall area between (2.5-4.5)



TP104 Ex. 40' x 40' x 5' D

HEI left side @ 4pm.

Note: A former brick foundation for a chimney was located in the NE corner of the excavation. Additionally, a concrete wall was located adjacent to the foundation.

All samples less than background levels, <5.0 ppm

4/2/19 1801 Elmwood Ave Med-Fac corp

BUP #C915314

Weather: 40°F mostly cloudy

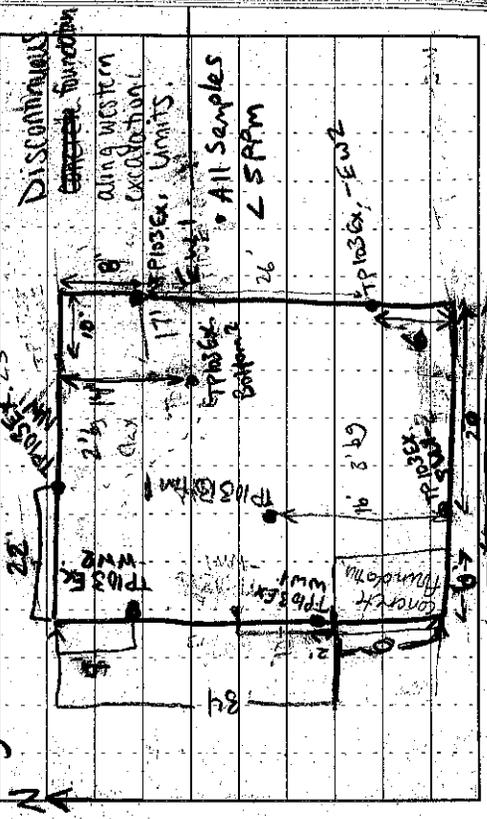
HEI arrived on-site @ 8am

HEI set up the CAMP monitors in both the up/down wind positions

Dirtworks began excavating TP103 @ 8am.

TP103 Dimensions 40' x 40' x 3' D.

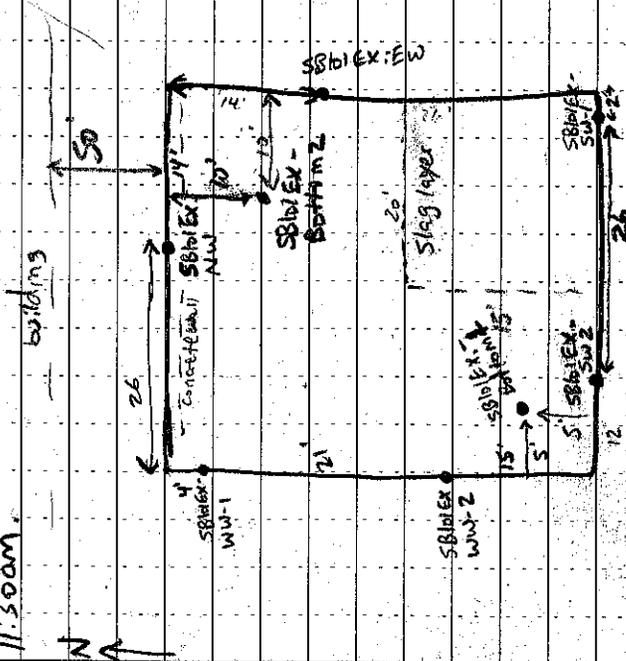
in the NE corner the excavation within TP103 a concrete structure was discovered in the southwest corner of the dig. It consisted of a crawl space structure.



130 4/2/19 continued

Dirtworks began excavating SB101C

11:30am



HE left site @ 3:55pm

Note: @ 1pm Michele Withman, Mark Wang, Dan Reschert, arrived on-site to view excavation progress.

Scale: 1 square =

Scale: 1 square =

Site in the Rain

4/3/19 1801 Elmwood Ave. Buffalo, NY

Mod-Pac BCP# C915314

(HotSpot Removal)

weather 40°F windy/sunny

HEI arrived on-site @ 8am.

set up CAMP monitors @ both up/down

wind positions.

Dirtworks began excavating 'TP108 Excavation'

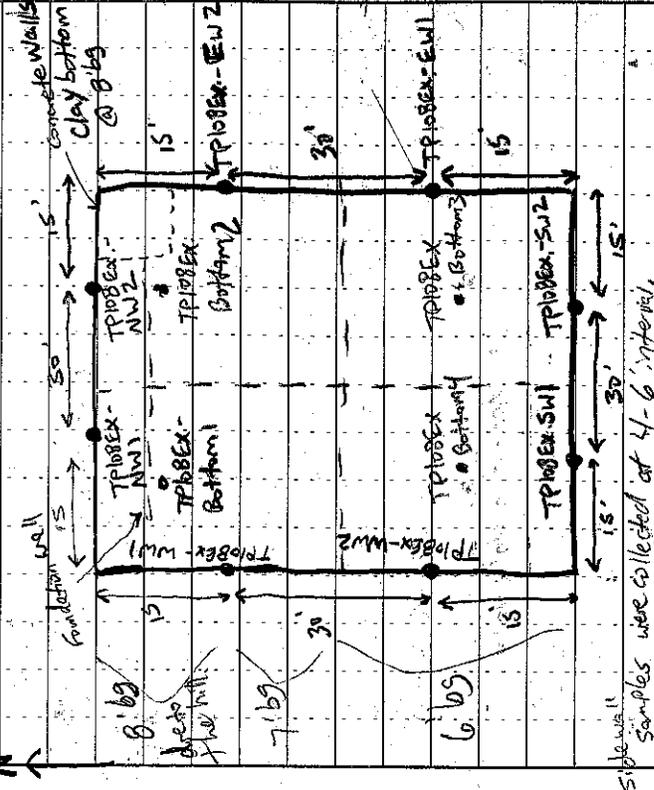
It was decided that the (0-2') interval of Red/Brown Clay & silt would be segregated from the impacted soils due to no visual/direct evidence was noted. Approx: 2.40' x 4.0' x 2' area. The other 20' was about 2' clay.

The 'impacted cinder layer' was located at approx. 4' - 5.5' bg. This layer was very rigid in nature and was difficult to excavate out.

It was decided that the contractor 'Dirtworks' would remove as much of the cinder layer as possible without using a 'breaker bar' attachment in the excavator, within the entire excavation limit.

If necessary Dirtworks would return tomorrow to break up the contaminated layer and remove it.

Total Excavation: 60' W x 60' L x 6' - 8' D



HEI will collect three (3) Confirmatory

Samples of the upper Clay layer to be kept on site. Sample for (the SSALs)

TP108EX: UC001 - 003.

HEI will collect the confirmatory Soil Samples

at TP108EX. Form narrow on.

HEI left site @ 3:20pm

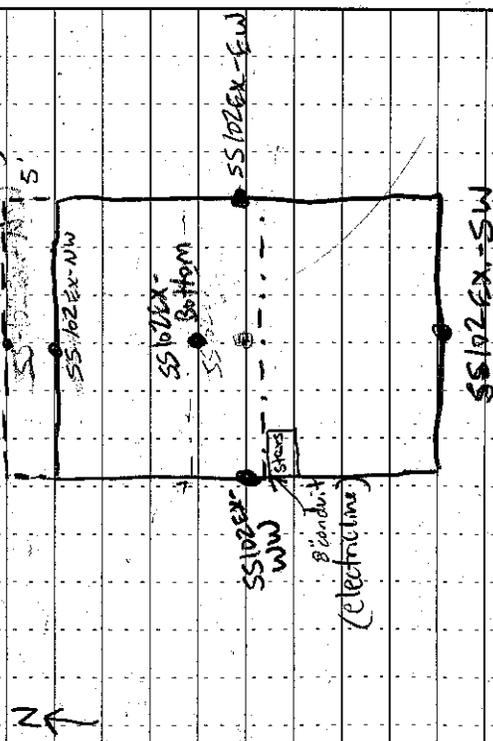
4/4/19 1801 Elmwood Ave Bulfalo, NY
Mod-Pac Corp 'Hot Spot Removal'
weather 40°f Sunny

- HEI arrived on-site @ 8am and coordinated with Dirtworks.
- HEI set up CAMP monitors in both up/down wind.
- Dirtworks finished excavating 'TP108' to the point where a 'breaker' was needed to remove the competent cinder layer.

- At 10:30am Dirtworks began excavating

Soil @ SS102. Dimensions 20'x4'x1'0"

SS102EX-NW(4/19)



Scale: 1 square =

HEI covered the soil pile and left the site @ 2:40pm.

4/5/19 1801 Elmwood Ave, Mod-Pac Corp

ICM 'Hot Spot Removal'

weather 42°f Rain

- HEI arrived on-site @ 8am and set up CAMP monitors in both up/down wind locations.
- Dirtworks completed TP108 Ex. around 2:30pm.

Note: The excavation bottom was irregular in both due to the 'Northern Portion' was completed within the side of a knoll of fill (8' to 15' high). A concrete footer was observed too. As the excavation extended to the south, the depth became shallower due to less fill materials were noted.

- HEI collected representative sidewalls & Bottom samples in accordance to DER-10.

Dirtworks fenced off the excavation and covered the soil pile with poly.

HEI left the site @ 3:55pm.

Scale: 1 square =

100' in the field

4/16/19 1801 Elmwood Ave Buffalo, NY

Hotspot removal @ SS102

HEI arrived on-site @ 8:15 am and coordinated with Dirtworks.

SS102 Ex North wall had copper exceed the SSAT of 27 mg/kg.

HEI excavated an additional 5' to the north and collected an additional sidewall sample labeled 'SS102EX-NW(041619)'

The excavated soil was staged on and under poly with the other 'Hotspot soils'.

HEI left the site @ 10:00 am

4/17/19 1801 Elmwood Ave Buffalo, NY

'I-EM Hotspot removal' @ TP104 weather 40°F sunny

HEI arrived on-site @ 8 am

HEI set up both the up/down wind CAMP monitors.

Scale: 1 square =

HEI directed Dirtworks to perform additional excavation @ TP104 East wall due to. The confirmatory sample was found to have Arsenic @ a concentration of 39 mg/kg over the (30 mg/kg) SSAT.

The east wall was excavated an additional 5' to remove the impacted soil.

once the soil was removed, the eastern sidewall was sampled to confirm the impacted soil was removed.

The impacted area appeared to be removed as more clay soils were observed.

TP104 Ex. - EW (041719) sample was collected 10' to the north of the south wall at the 2-4 range.

The removed soil was staged on and covered with poly.

HEI left the site @ 9:30 am.

Scale: 1 square =

Return to site

4/22/19 1801 Elmwood Ave. Buffalo, NY

Weather 50-60°F mostly Sunny.

HEE arrived on-site @ 7:00am.

HEE set up both up/down wind CAMP
monitors up.

- There were 20 trucks running the 'impaired'
soil off-site to WM Chaffee.

- At 1pm, Danny from ARC showed up to
talk with Nick w/ Diagnostics.

- Trucks were cut off if they did not return
by ~ 2:45pm.

- 60 trucks were hauled off-site.

- 120 truckloads total from Friday &
Monday.

- HEE left site @ 3:50pm

Appendix B

CAMP Data

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	TP104 Excavation (Downwind)
Test Start Time	8:09:58 AM
Test Start Date	4/1/2019
Test Length [D:H:M]	0:07:10
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.01
Mass Minimum [mg/m3]	0.005
Mass Maximum [mg/m3]	0.032
Mass TWA [mg/m3]	0.009
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	43

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.024		
1200	0.014		
1800	0.009		
2400	0.02		
3000	0.021		
3600	0.019		
4200	0.032		
4800	0.015		
5400	0.012		
6000	0.008		
6600	0.009		
7200	0.018		
7800	0.014		
8400	0.01		
9000	0.008		
9600	0.007		
10200	0.008		
10800	0.009		
11400	0.007		
12000	0.007		
12600	0.008		
13200	0.009		
13800	0.008		
14400	0.005		
15000	0.006		
15600	0.006		
16200	0.007		

16800	0.008
17400	0.008
18000	0.007
18600	0.007
19200	0.008
19800	0.006
20400	0.006
21000	0.006
21600	0.006
22200	0.006
22800	0.006
23400	0.005
24000	0.005
24600	0.005
25200	0.005
25800	0.005

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	TP103 & SB101 Excavation (Downwind)
Test Start Time	8:18:27 AM
Test Start Date	4/2/2019
Test Length [D:H:M]	0:06:30
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.021
Mass Minimum [mg/m3]	0.01
Mass Maximum [mg/m3]	0.062
Mass TWA [mg/m3]	0.017
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	39

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.017		
1200	0.019		
1800	0.018		
2400	0.019		
3000	0.016		
3600	0.015		
4200	0.018		
4800	0.017		
5400	0.016		
6000	0.011		
6600	0.01		
7200	0.01		
7800	0.01		
8400	0.013		
9000	0.015		
9600	0.019		
10200	0.016		
10800	0.016		
11400	0.025		
12000	0.026		
12600	0.031		
13200	0.03		
13800	0.034		
14400	0.025		
15000	0.049		
15600	0.029		
16200	0.015		

16800	0.013
17400	0.062
18000	0.016
18600	0.042
19200	0.022
19800	0.02
20400	0.026
21000	0.024
21600	0.017
22200	0.015
22800	0.024
23400	0.016

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	TP108 Excavation (Downwind)
Test Start Time	8:06:54 AM
Test Start Date	4/3/2019
Test Length [D:H:M]	0:06:50
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.044
Mass Minimum [mg/m3]	0.021
Mass Maximum [mg/m3]	0.062
Mass TWA [mg/m3]	0.037
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	41

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.036		
1200	0.04		
1800	0.045		
2400	0.051		
3000	0.057		
3600	0.056		
4200	0.059		
4800	0.058		
5400	0.057		
6000	0.062		
6600	0.06		
7200	0.057		
7800	0.056		
8400	0.057		
9000	0.052		
9600	0.052		
10200	0.047		
10800	0.047		
11400	0.047		
12000	0.043		
12600	0.044		
13200	0.043		
13800	0.042		
14400	0.045		
15000	0.045		
15600	0.045		
16200	0.047		

16800	0.039
17400	0.038
18000	0.042
18600	0.042
19200	0.042
19800	0.037
20400	0.031
21000	0.029
21600	0.029
22200	0.025
22800	0.023
23400	0.021
24000	0.023
24600	0.021

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	SS-102 Excavation (Downwind)
Test Start Time	8:12:10 AM
Test Start Date	4/4/2019
Test Length [D:H:M]	0:01:30
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.013
Mass Minimum [mg/m3]	0.008
Mass Maximum [mg/m3]	0.018
Mass TWA [mg/m3]	0.002
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	9

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.015		
1200	0.018		
1800	0.018		
2400	0.012		
3000	0.011		
3600	0.009		
4200	0.013		
4800	0.009		
5400	0.008		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	TP108 Excavation (Downwind)
Test Start Time	10:57:50 AM
Test Start Date	4/4/2019
Test Length [D:H:M]	0:01:50
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.008
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.01
Mass TWA [mg/m3]	0.002
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	11

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.008		
1200	0.008		
1800	0.008		
2400	0.009		
3000	0.009		
3600	0.008		
4200	0.008		
4800	0.008		
5400	0.006		
6000	0.007		
6600	0.01		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	TP 108 Excavation (Downwind)
Test Start Time	8:05:29 AM
Test Start Date	4/5/2019
Test Length [D:H:M]	0:07:10
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.016
Mass Minimum [mg/m3]	0.011
Mass Maximum [mg/m3]	0.023
Mass TWA [mg/m3]	0.015
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	43

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.012		
1200	0.012		
1800	0.012		
2400	0.011		
3000	0.012		
3600	0.012		
4200	0.014		
4800	0.015		
5400	0.015		
6000	0.015		
6600	0.016		
7200	0.016		
7800	0.016		
8400	0.017		
9000	0.017		
9600	0.017		
10200	0.017		
10800	0.018		
11400	0.018		
12000	0.02		
12600	0.022		
13200	0.019		
13800	0.017		
14400	0.022		
15000	0.023		
15600	0.021		
16200	0.021		

16800	0.017
17400	0.017
18000	0.015
18600	0.015
19200	0.015
19800	0.015
20400	0.016
21000	0.017
21600	0.017
22200	0.017
22800	0.016
23400	0.016
24000	0.016
24600	0.017
25200	0.018
25800	0.018

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 1 Large Debris Management (Downwind)
Test Start Time	8:15:52 AM
Test Start Date	4/8/2019
Test Length [D:H:M]	0:07:10
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.021
Mass Minimum [mg/m3]	0.016
Mass Maximum [mg/m3]	0.033
Mass TWA [mg/m3]	0.019
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	43

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.033		
1200	0.03		
1800	0.028		
2400	0.027		
3000	0.025		
3600	0.023		
4200	0.021		
4800	0.02		
5400	0.019		
6000	0.02		
6600	0.02		
7200	0.02		
7800	0.021		
8400	0.02		
9000	0.021		
9600	0.022		
10200	0.021		
10800	0.022		
11400	0.02		
12000	0.019		
12600	0.018		
13200	0.019		
13800	0.02		
14400	0.021		
15000	0.019		
15600	0.019		
16200	0.018		

16800	0.017
17400	0.017
18000	0.018
18600	0.018
19200	0.019
19800	0.017
20400	0.016
21000	0.017
21600	0.021
22200	0.02
22800	0.02
23400	0.02
24000	0.021
24600	0.021
25200	0.024
25800	0.024

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 2 Large Debris Management (Downwind)
Test Start Time	8:05:31 AM
Test Start Date	4/9/2019
Test Length [D:H:M]	0:07:10
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.019
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.035
Mass TWA [mg/m3]	0.017
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	43

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.028		
1200	0.03		
1800	0.032		
2400	0.033		
3000	0.035		
3600	0.035		
4200	0.033		
4800	0.033		
5400	0.032		
6000	0.031		
6600	0.033		
7200	0.03		
7800	0.031		
8400	0.027		
9000	0.026		
9600	0.031		
10200	0.029		
10800	0.026		
11400	0.023		
12000	0.02		
12600	0.019		
13200	0.018		
13800	0.014		
14400	0.012		
15000	0.012		
15600	0.012		
16200	0.012		

16800	0.012
17400	0.012
18000	0.011
18600	0.01
19200	0.009
19800	0.006
20400	0.007
21000	0.007
21600	0.02
22200	0.006
22800	0.007
23400	0.006
24000	0.006
24600	0.006
25200	0.006
25800	0.007

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 3 Large Debris Management (Downwind)
Test Start Time	8:11:01 AM
Test Start Date	4/10/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.006
Mass Minimum [mg/m3]	0.003
Mass Maximum [mg/m3]	0.011
Mass TWA [mg/m3]	0.005
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	42

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.003		
1200	0.003		
1800	0.004		
2400	0.007		
3000	0.006		
3600	0.005		
4200	0.004		
4800	0.007		
5400	0.004		
6000	0.006		
6600	0.003		
7200	0.005		
7800	0.011		
8400	0.009		
9000	0.008		
9600	0.009		
10200	0.005		
10800	0.007		
11400	0.006		
12000	0.006		
12600	0.006		
13200	0.007		
13800	0.008		
14400	0.007		
15000	0.007		
15600	0.007		
16200	0.008		

16800	0.005
17400	0.003
18000	0.003
18600	0.003
19200	0.004
19800	0.005
20400	0.004
21000	0.006
21600	0.007
22200	0.007
22800	0.006
23400	0.007
24000	0.007
24600	0.006
25200	0.006

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 4 Large Debris Management (Downwind)
Test Start Time	7:54:29 AM
Test Start Date	4/11/2019
Test Length [D:H:M]	0:07:10
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.014
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.04
Mass TWA [mg/m3]	0.013
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	43

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.019		
1200	0.011		
1800	0.032		
2400	0.023		
3000	0.006		
3600	0.008		
4200	0.006		
4800	0.013		
5400	0.04		
6000	0.012		
6600	0.029		
7200	0.01		
7800	0.023		
8400	0.012		
9000	0.027		
9600	0.02		
10200	0.011		
10800	0.013		
11400	0.018		
12000	0.031		
12600	0.015		
13200	0.01		
13800	0.009		
14400	0.009		
15000	0.01		
15600	0.01		
16200	0.01		

16800	0.011
17400	0.01
18000	0.01
18600	0.011
19200	0.011
19800	0.011
20400	0.011
21000	0.011
21600	0.011
22200	0.011
22800	0.011
23400	0.01
24000	0.011
24600	0.013
25200	0.011
25800	0.011

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 5 Large Debris Management (Downwind)
Test Start Time	8:02:18 AM
Test Start Date	4/12/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.017
Mass Minimum [mg/m3]	0.012
Mass Maximum [mg/m3]	0.05
Mass TWA [mg/m3]	0.015
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	42

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.014		
1200	0.013		
1800	0.014		
2400	0.024		
3000	0.017		
3600	0.013		
4200	0.014		
4800	0.016		
5400	0.013		
6000	0.012		
6600	0.015		
7200	0.014		
7800	0.015		
8400	0.014		
9000	0.015		
9600	0.013		
10200	0.014		
10800	0.015		
11400	0.015		
12000	0.013		
12600	0.013		
13200	0.013		
13800	0.015		
14400	0.028		
15000	0.013		
15600	0.012		
16200	0.016		

16800	0.013
17400	0.014
18000	0.012
18600	0.012
19200	0.013
19800	0.013
20400	0.014
21000	0.028
21600	0.046
22200	0.023
22800	0.024
23400	0.05
24000	0.016
24600	0.013
25200	0.015

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 6 Large Debris Management (Downwind)
Test Start Time	8:06:07 AM
Test Start Date	4/15/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.006
Mass Minimum [mg/m3]	0.001
Mass Maximum [mg/m3]	0.01
Mass TWA [mg/m3]	0.005
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	42

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.003		
1200	0.003		
1800	0.002		
2400	0.002		
3000	0.003		
3600	0.001		
4200	0.002		
4800	0.002		
5400	0.005		
6000	0.004		
6600	0.003		
7200	0.003		
7800	0.005		
8400	0.007		
9000	0.007		
9600	0.009		
10200	0.009		
10800	0.009		
11400	0.006		
12000	0.006		
12600	0.006		
13200	0.006		
13800	0.007		
14400	0.005		
15000	0.006		
15600	0.006		
16200	0.006		

16800	0.005
17400	0.006
18000	0.006
18600	0.006
19200	0.007
19800	0.008
20400	0.008
21000	0.008
21600	0.009
22200	0.009
22800	0.009
23400	0.01
24000	0.009
24600	0.008
25200	0.009

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 7 Large Debris Management (Downwind)
Test Start Time	8:13:25 AM
Test Start Date	4/16/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.012
Mass Minimum [mg/m3]	0.009
Mass Maximum [mg/m3]	0.017
Mass TWA [mg/m3]	0.011
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	42

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.009		
1200	0.009		
1800	0.011		
2400	0.01		
3000	0.011		
3600	0.011		
4200	0.012		
4800	0.011		
5400	0.011		
6000	0.011		
6600	0.011		
7200	0.012		
7800	0.013		
8400	0.015		
9000	0.012		
9600	0.012		
10200	0.012		
10800	0.012		
11400	0.013		
12000	0.012		
12600	0.013		
13200	0.014		
13800	0.013		
14400	0.014		
15000	0.012		
15600	0.017		
16200	0.013		

16800	0.016
17400	0.016
18000	0.012
18600	0.015
19200	0.012
19800	0.013
20400	0.011
21000	0.011
21600	0.011
22200	0.011
22800	0.01
23400	0.01
24000	0.011
24600	0.011
25200	0.012

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 8 Large Debris Management (Downwind)
Test Start Time	8:11:00 AM
Test Start Date	4/17/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.027
Mass Minimum [mg/m3]	0.003
Mass Maximum [mg/m3]	0.61
Mass TWA [mg/m3]	0.023
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	42

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.023		
1200	0.019		
1800	0.017		
2400	0.012		
3000	0.012		
3600	0.01		
4200	0.009		
4800	0.007		
5400	0.006		
6000	0.005		
6600	0.004		
7200	0.004		
7800	0.004		
8400	0.004		
9000	0.004		
9600	0.004		
10200	0.003		
10800	0.003		
11400	0.005		
12000	0.004		
12600	0.005		
13200	0.003		
13800	0.003		
14400	0.003		
15000	0.004		
15600	0.006		
16200	0.006		

16800	0.007
17400	0.01
18000	0.013
18600	0.013
19200	0.011
19800	0.008
20400	0.012
21000	0.011
21600	0.007
22200	0.014
22800	0.005
23400	0.045
24000	0.61
24600	0.16
25200	0.009

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 1 Soil Loadout (Downwind)
Test Start Time	6:59:23 AM
Test Start Date	4/19/2019
Test Length [D:H:M]	0:08:53
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.04
Mass Minimum [mg/m3]	0
Mass Maximum [mg/m3]	0.062
Mass TWA [mg/m3]	0.031
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	38

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.027		
1200	0.028		
1800	0.028		
2400	0.033		
3000	0.03		
3600	0.052		
4200	0.034		
4800	0.028		
5400	0.034		
6000	0.027		
6600	0.04		
7200	0.038		
7800	0.039		
8400	0.042		
9000	0.044		
9600	0.045		
10200	0.05		
10800	0.053		
11400	0.052		
12000	0.054		
12600	0.06		
13200	0.062		
13800	0.06		
14400	0.046		
15000	0.034		
15600	0.036		
16200	0.038		

16800	0.037
17400	0.037
18000	0.04
18600	0.043
19200	0.043
19800	0.044
20400	0.04
21000	0.036
21600	0.042
22200	0.041
31993	0

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 2 Soil Loadout (Downwind)
Test Start Time	7:13:31 AM
Test Start Date	4/22/2019
Test Length [D:H:M]	0:07:40
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.024
Mass Minimum [mg/m3]	0.012
Mass Maximum [mg/m3]	0.039
Mass TWA [mg/m3]	0.023
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	46

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.033		
1200	0.032		
1800	0.031		
2400	0.031		
3000	0.033		
3600	0.034		
4200	0.031		
4800	0.038		
5400	0.029		
6000	0.026		
6600	0.027		
7200	0.037		
7800	0.03		
8400	0.032		
9000	0.03		
9600	0.03		
10200	0.028		
10800	0.024		
11400	0.025		
12000	0.026		
12600	0.026		
13200	0.025		
13800	0.024		
14400	0.022		
15000	0.02		
15600	0.013		
16200	0.014		

16800	0.015
17400	0.012
18000	0.013
18600	0.017
19200	0.024
19800	0.021
20400	0.018
21000	0.017
21600	0.021
22200	0.018
22800	0.015
23400	0.015
24000	0.016
24600	0.016
25200	0.017
25800	0.039
26400	0.029
27000	0.024
27600	0.025

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530162206
Firmware Version	3.8
Calibration Date	2/20/2019
Test Name	Day 3 Soil Loadout (Downwind)
Test Start Time	6:55:37 AM
Test Start Date	4/23/2019
Test Length [D:H:M]	0:03:10
Test Interval [M:S]	10:00
Mass Average [mg/m3]	0.012
Mass Minimum [mg/m3]	0.007
Mass Maximum [mg/m3]	0.021
Mass TWA [mg/m3]	0.005
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	19

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
600	0.021		
1200	0.015		
1800	0.015		
2400	0.014		
3000	0.014		
3600	0.013		
4200	0.012		
4800	0.011		
5400	0.011		
6000	0.011		
6600	0.011		
7200	0.012		
7800	0.012		
8400	0.011		
9000	0.009		
9600	0.008		
10200	0.007		
10800	0.007		
11400	0.008		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	TP104 Excavation (Upwind)
Test Start Time	8:04:06 AM
Test Start Date	4/1/2019
Test Length [D:H:M]	0:07:15
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.011
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.036
Mass TWA [mg/m3]	0.01
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	29

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.036		
1800	0.019		
2700	0.018		
3600	0.018		
4500	0.026		
5400	0.018		
6300	0.008		
7200	0.007		
8100	0.013		
9000	0.007		
9900	0.007		
10800	0.016		
11700	0.017		
12600	0.006		
13500	0.008		
14400	0.008		
15300	0.007		
16200	0.007		
17100	0.013		
18000	0.008		
18900	0.008		
19800	0.008		
20700	0.007		
21600	0.007		
22500	0.006		
23400	0.006		
24300	0.006		

25200
26100

0.006
0.007

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	TP103 & SB101 Excavation (Upwind)
Test Start Time	8:10:31 AM
Test Start Date	4/2/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.01
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.021
Mass TWA [mg/m3]	0.009
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	28

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.012		
1800	0.013		
2700	0.014		
3600	0.011		
4500	0.016		
5400	0.012		
6300	0.013		
7200	0.01		
8100	0.01		
9000	0.015		
9900	0.021		
10800	0.011		
11700	0.009		
12600	0.009		
13500	0.01		
14400	0.01		
15300	0.009		
16200	0.007		
17100	0.006		
18000	0.007		
18900	0.008		
19800	0.008		
20700	0.008		
21600	0.008		
22500	0.008		
23400	0.008		
24300	0.009		

25200

0.009

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	TP108 Excavation (Upwind)
Test Start Time	8:15:17 AM
Test Start Date	4/3/2019
Test Length [D:H:M]	0:06:45
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.032
Mass Minimum [mg/m3]	0.008
Mass Maximum [mg/m3]	0.051
Mass TWA [mg/m3]	0.027
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	27

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.034		
1800	0.04		
2700	0.048		
3600	0.049		
4500	0.051		
5400	0.05		
6300	0.048		
7200	0.045		
8100	0.044		
9000	0.04		
9900	0.037		
10800	0.035		
11700	0.031		
12600	0.029		
13500	0.03		
14400	0.033		
15300	0.029		
16200	0.024		
17100	0.025		
18000	0.029		
18900	0.03		
19800	0.024		
20700	0.019		
21600	0.015		
22500	0.011		
23400	0.012		
24300	0.008		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	SS-102 Excavation (Upwind)
Test Start Time	8:12:36 AM
Test Start Date	4/4/2019
Test Length [D:H:M]	0:01:30
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.016
Mass Minimum [mg/m3]	0.009
Mass Maximum [mg/m3]	0.02
Mass TWA [mg/m3]	0.003
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	6

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.019		
1800	0.02		
2700	0.018		
3600	0.016		
4500	0.012		
5400	0.009		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	TP108 Excavation (Upwind)
Test Start Time	10:19:25 AM
Test Start Date	4/4/2019
Test Length [D:H:M]	0:02:45
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.008
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.011
Mass TWA [mg/m3]	0.003
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	11

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.009		
1800	0.007		
2700	0.007		
3600	0.008		
4500	0.008		
5400	0.008		
6300	0.007		
7200	0.007		
8100	0.006		
9000	0.011		
9900	0.007		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	TP108 Excavation (Upwind)
Test Start Time	8:09:26 AM
Test Start Date	4/5/2019
Test Length [D:H:M]	0:07:15
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.017
Mass Minimum [mg/m3]	0.012
Mass Maximum [mg/m3]	0.022
Mass TWA [mg/m3]	0.015
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	29

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.013		
1800	0.012		
2700	0.013		
3600	0.013		
4500	0.016		
5400	0.016		
6300	0.016		
7200	0.017		
8100	0.017		
9000	0.017		
9900	0.017		
10800	0.017		
11700	0.018		
12600	0.019		
13500	0.016		
14400	0.016		
15300	0.017		
16200	0.02		
17100	0.02		
18000	0.018		
18900	0.02		
19800	0.022		
20700	0.016		
21600	0.015		
22500	0.015		
23400	0.015		
24300	0.016		

25200
26100

0.017
0.016

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 1 Large Debris Management (Upwind)
Test Start Time	8:07:58 AM
Test Start Date	4/8/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.02
Mass Minimum [mg/m3]	0.014
Mass Maximum [mg/m3]	0.051
Mass TWA [mg/m3]	0.017
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	28

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.031		
1800	0.027		
2700	0.026		
3600	0.023		
4500	0.021		
5400	0.018		
6300	0.018		
7200	0.018		
8100	0.019		
9000	0.02		
9900	0.051		
10800	0.023		
11700	0.019		
12600	0.018		
13500	0.019		
14400	0.017		
15300	0.017		
16200	0.016		
17100	0.014		
18000	0.015		
18900	0.014		
19800	0.014		
20700	0.014		
21600	0.014		
22500	0.017		
23400	0.015		
24300	0.017		

25200

0.016

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 2 Large Debris Management (Upwind)
Test Start Time	7:54:56 AM
Test Start Date	4/9/2019
Test Length [D:H:M]	0:07:15
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.02
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.036
Mass TWA [mg/m3]	0.018
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	29

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.029		
1800	0.029		
2700	0.033		
3600	0.034		
4500	0.034		
5400	0.034		
6300	0.031		
7200	0.032		
8100	0.033		
9000	0.028		
9900	0.027		
10800	0.036		
11700	0.028		
12600	0.023		
13500	0.021		
14400	0.016		
15300	0.013		
16200	0.012		
17100	0.012		
18000	0.013		
18900	0.014		
19800	0.009		
20700	0.007		
21600	0.007		
22500	0.006		
23400	0.008		
24300	0.008		

25200
26100

0.007
0.007

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 3 Large Debris Management (Upwind)
Test Start Time	7:56:13 AM
Test Start Date	4/10/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.006
Mass Minimum [mg/m3]	0.004
Mass Maximum [mg/m3]	0.009
Mass TWA [mg/m3]	0.006
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	28

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.007		
1800	0.005		
2700	0.006		
3600	0.005		
4500	0.005		
5400	0.004		
6300	0.006		
7200	0.006		
8100	0.004		
9000	0.005		
9900	0.006		
10800	0.007		
11700	0.008		
12600	0.006		
13500	0.007		
14400	0.008		
15300	0.009		
16200	0.008		
17100	0.008		
18000	0.009		
18900	0.004		
19800	0.005		
20700	0.005		
21600	0.005		
22500	0.008		
23400	0.008		
24300	0.008		

25200

0.008

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 4 Large Debris Management (Upwind)
Test Start Time	8:06:26 AM
Test Start Date	4/11/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.009
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.015
Mass TWA [mg/m3]	0.008
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	28

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.007		
1800	0.008		
2700	0.006		
3600	0.007		
4500	0.009		
5400	0.011		
6300	0.008		
7200	0.007		
8100	0.008		
9000	0.015		
9900	0.007		
10800	0.009		
11700	0.009		
12600	0.009		
13500	0.009		
14400	0.009		
15300	0.01		
16200	0.01		
17100	0.01		
18000	0.01		
18900	0.011		
19800	0.011		
20700	0.011		
21600	0.011		
22500	0.01		
23400	0.01		
24300	0.011		

25200

0.01

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 5 Large Debris Management (Upwind)
Test Start Time	7:54:51 AM
Test Start Date	4/12/2019
Test Length [D:H:M]	0:07:15
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.008
Mass Minimum [mg/m3]	0.005
Mass Maximum [mg/m3]	0.012
Mass TWA [mg/m3]	0.007
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	29

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.012		
1800	0.012		
2700	0.011		
3600	0.011		
4500	0.01		
5400	0.012		
6300	0.01		
7200	0.009		
8100	0.009		
9000	0.009		
9900	0.008		
10800	0.008		
11700	0.008		
12600	0.008		
13500	0.007		
14400	0.007		
15300	0.007		
16200	0.007		
17100	0.007		
18000	0.007		
18900	0.006		
19800	0.006		
20700	0.006		
21600	0.007		
22500	0.006		
23400	0.005		
24300	0.006		

25200
26100

0.008
0.011

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 6 Large Debris Management (Upwind)
Test Start Time	7:58:17 AM
Test Start Date	4/15/2019
Test Length [D:H:M]	0:07:15
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.022
Mass Minimum [mg/m3]	0.003
Mass Maximum [mg/m3]	0.073
Mass TWA [mg/m3]	0.02
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	29

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.003		
1800	0.003		
2700	0.003		
3600	0.003		
4500	0.003		
5400	0.004		
6300	0.012		
7200	0.017		
8100	0.039		
9000	0.028		
9900	0.026		
10800	0.028		
11700	0.023		
12600	0.021		
13500	0.022		
14400	0.018		
15300	0.013		
16200	0.011		
17100	0.018		
18000	0.03		
18900	0.027		
19800	0.02		
20700	0.026		
21600	0.018		
22500	0.033		
23400	0.027		
24300	0.073		

25200
26100

0.052
0.029

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 7 Large Debris Management (Upwind)
Test Start Time	8:02:59 AM
Test Start Date	4/16/2019
Test Length [D:H:M]	0:07:00
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.012
Mass Minimum [mg/m3]	0.009
Mass Maximum [mg/m3]	0.016
Mass TWA [mg/m3]	0.01
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	28

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.01		
1800	0.011		
2700	0.009		
3600	0.012		
4500	0.016		
5400	0.014		
6300	0.011		
7200	0.011		
8100	0.011		
9000	0.016		
9900	0.01		
10800	0.012		
11700	0.01		
12600	0.01		
13500	0.011		
14400	0.012		
15300	0.011		
16200	0.011		
17100	0.012		
18000	0.012		
18900	0.012		
19800	0.014		
20700	0.011		
21600	0.01		
22500	0.011		
23400	0.011		
24300	0.011		

25200

0.013

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 8 Large Debris Management (Upwind)
Test Start Time	8:29:24 AM
Test Start Date	4/17/2019
Test Length [D:H:M]	0:06:45
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.002
Mass Minimum [mg/m3]	0
Mass Maximum [mg/m3]	0.015
Mass TWA [mg/m3]	0.001
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	27

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.015		
1800	0.009		
2700	0.007		
3600	0.006		
4500	0.004		
5400	0.002		
6300	0.001		
7200	0.001		
8100	0.001		
9000	0		
9900	0		
10800	0		
11700	0		
12600	0		
13500	0		
14400	0		
15300	0		
16200	0		
17100	0		
18000	0		
18900	0		
19800	0		
20700	0		
21600	0		
22500	0		
23400	0		
24300	0		

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 1 Soil Loadout (Upwind)
Test Start Time	6:55:10 AM
Test Start Date	4/19/2019
Test Length [D:H:M]	0:07:45
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.038
Mass Minimum [mg/m3]	0.016
Mass Maximum [mg/m3]	0.061
Mass TWA [mg/m3]	0.037
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	31

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.029		
1800	0.031		
2700	0.034		
3600	0.05		
4500	0.034		
5400	0.031		
6300	0.03		
7200	0.035		
8100	0.048		
9000	0.049		
9900	0.046		
10800	0.051		
11700	0.052		
12600	0.055		
13500	0.061		
14400	0.058		
15300	0.038		
16200	0.035		
17100	0.036		
18000	0.035		
18900	0.041		
19800	0.042		
20700	0.038		
21600	0.037		
22500	0.04		
23400	0.035		
24300	0.026		

25200	0.027
26100	0.028
27000	0.021
27900	0.016

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 2 Soil Loadout (Upwind)
Test Start Time	7:09:38 AM
Test Start Date	4/22/2019
Test Length [D:H:M]	0:07:45
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.02
Mass Minimum [mg/m3]	0.009
Mass Maximum [mg/m3]	0.035
Mass TWA [mg/m3]	0.02
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	31

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.035		
1800	0.031		
2700	0.031		
3600	0.035		
4500	0.03		
5400	0.03		
6300	0.025		
7200	0.027		
8100	0.029		
9000	0.03		
9900	0.028		
10800	0.026		
11700	0.023		
12600	0.024		
13500	0.023		
14400	0.02		
15300	0.017		
16200	0.011		
17100	0.01		
18000	0.009		
18900	0.011		
19800	0.012		
20700	0.013		
21600	0.013		
22500	0.012		
23400	0.012		
24300	0.013		

25200	0.013
26100	0.013
27000	0.014
27900	0.014

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530143312
Firmware Version	3.7
Calibration Date	12/14/2018
Test Name	Day 3 Soil Loadout (Upwind)
Test Start Time	6:50:35 AM
Test Start Date	4/23/2019
Test Length [D:H:M]	0:03:15
Test Interval [M:S]	15:00
Mass Average [mg/m3]	0.015
Mass Minimum [mg/m3]	0.006
Mass Maximum [mg/m3]	0.025
Mass TWA [mg/m3]	0.006
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	13

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
900	0.025		
1800	0.021		
2700	0.016		
3600	0.015		
4500	0.013		
5400	0.014		
6300	0.015		
7200	0.018		
8100	0.019		
9000	0.013		
9900	0.012		
10800	0.006		
11700	0.009		

Appendix C

Analytical Testing Results



ANALYTICAL REPORT

Lab Number:	L1912944
Client:	Hazard Evaluations, Inc. 3636 North Buffalo Road Orchard Park, NY 14127
ATTN:	Michele Wittman
Phone:	(716) 667-3130
Project Name:	IRM 'HOTSPOT REMOVAL'
Project Number:	E1605
Report Date:	04/12/19

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1912944-01	TP104 EX.-SW1	SOIL	MOD-PAC BUFFALO, NY	04/01/19 11:20	04/01/19
L1912944-02	TP104 EX.-BOTTOM1	SOIL	MOD-PAC BUFFALO, NY	04/01/19 11:50	04/01/19
L1912944-03	TP104 EX.-SW2	SOIL	MOD-PAC BUFFALO, NY	04/01/19 12:20	04/01/19
L1912944-04	RINSATE BLANK (040119)	WATER	MOD-PAC BUFFALO, NY	04/01/19 13:00	04/01/19
L1912944-05	TP104 EX.-WW1	SOIL	MOD-PAC BUFFALO, NY	04/01/19 13:30	04/01/19
L1912944-06	TP104 EX.-WW2	SOIL	MOD-PAC BUFFALO, NY	04/01/19 13:40	04/01/19
L1912944-07	TP104 EX.-WW2 DUPLICATE	SOIL	MOD-PAC BUFFALO, NY	04/01/19 13:40	04/01/19
L1912944-08	TP104 EX.-EW	SOIL	MOD-PAC BUFFALO, NY	04/01/19 13:55	04/01/19
L1912944-09	TP104 EX.-NW1	SOIL	MOD-PAC BUFFALO, NY	04/01/19 14:05	04/01/19
L1912944-10	TP104 EX.-NW2	SOIL	MOD-PAC BUFFALO, NY	04/01/19 14:10	04/01/19
L1912944-11	TP104 EX.-BOTTOM2	SOIL	MOD-PAC BUFFALO, NY	04/01/19 14:30	04/01/19
L1912944-12	TP103 EX.-WW1	SOIL	MOD-PAC BUFFALO, NY	04/02/19 09:10	04/02/19
L1912944-13	TP103 EX.-BOTTOM1	SOIL	MOD-PAC BUFFALO, NY	04/02/19 09:30	04/02/19
L1912944-14	TP103 EX.-BOTTOM2	SOIL	MOD-PAC BUFFALO, NY	04/02/19 09:50	04/02/19
L1912944-15	TP103 EX.-WW2	SOIL	MOD-PAC BUFFALO, NY	04/02/19 09:20	04/02/19
L1912944-16	TP103 EX.-NW	SOIL	MOD-PAC BUFFALO, NY	04/02/19 10:00	04/02/19
L1912944-17	TP103 EX.-EW1	SOIL	MOD-PAC BUFFALO, NY	04/02/19 10:15	04/02/19
L1912944-18	TP103 EX.-EW2	SOIL	MOD-PAC BUFFALO, NY	04/02/19 10:25	04/02/19
L1912944-19	TP103 EX.-SW	SOIL	MOD-PAC BUFFALO, NY	04/02/19 10:45	04/02/19
L1912944-20	RINSATE BLANK (040519)	WATER	MOD-PAC BUFFALO, NY	04/05/19 13:30	04/05/19
L1912944-21	TP108 EX-BOTTOM 2	SOIL	MOD-PAC BUFFALO, NY	04/05/19 13:45	04/05/19
L1912944-22	TP108 EX.-NW1	SOIL	MOD-PAC BUFFALO, NY	04/05/19 13:50	04/05/19
L1912944-23	TP108 EX.-NW2	SOIL	MOD-PAC BUFFALO, NY	04/05/19 13:55	04/05/19
L1912944-24	TP108 EX.-BOTTOM3	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:00	04/05/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1912944-25	TP108 EX.-BOTTOM4	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:10	04/05/19
L1912944-26	TP108 EX.-EW1	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:15	04/05/19
L1912944-27	TP108 EX.-EW2	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:20	04/05/19
L1912944-28	TP108 EX.-SW1	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:30	04/05/19
L1912944-29	TP108 EX.-SW2	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:35	04/05/19
L1912944-30	TP108 EX.-WW1	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:40	04/05/19
L1912944-31	TP108 EX.-WW2	SOIL	MOD-PAC BUFFALO, NY	04/05/19 14:50	04/05/19

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

Case Narrative

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

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

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

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

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

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

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

Case Narrative (continued)

Report Submission

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

Sample Receipt

L1912944-17: The collection date and time on the chain of custody was 02-APR-19 10:15; however, the collection date/time on the container label was 02-APR-19 10:20. At the client's request, the collection date/time is reported as 02-APR-19 10:15.

Total Metals

L1912944-02, -03, -13 and -18: The sample has an elevated detection limit for cadmium due to the dilution required by matrix interferences encountered during analysis.

The WG1222697-3/-4 MS/MSD recoveries, performed on L1912944-12, are outside the acceptance criteria for cadmium (51%/68%). A post digestion spike was performed and yielded an unacceptable recovery of 74%. The serial dilution recovery was not applicable; therefore, this element fails the matrix test and the result reported in the native sample should be considered estimated. In addition the WG1222697-3/-4 MS/MSD RPD is above the acceptance criteria for cadmium (32%).

The WG1222697-3/-4 MS/MSD recoveries for lead (450%/346%), performed on L1912944-12, do not apply because the sample concentration is greater than four times the spike amount added.

The WG1224669-3/-4 MS/MSD recoveries, performed on L1912944-22, are outside the acceptance criteria for copper (74%/277%) and lead (MSD at 24%). A post digestion spike was performed and yielded unacceptable recoveries for copper (72%). The serial dilution recovery was not acceptable; therefore, this element fails the matrix test and the result reported in the native sample should be considered estimated. In addition, the WG1224669-3/-4 MS/MSD RPDs for copper (37%) and lead (22%) are above the acceptance criteria.

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

Authorized Signature:

 Cristin Walker

Title: Technical Director/Representative

Date: 04/12/19

METALS

Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-01

Date Collected: 04/01/19 11:20

Client ID: TP104 EX.-SW1

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 67%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	12.8		mg/kg	0.577	0.120	1	04/03/19 20:00	04/05/19 13:11	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.577	0.057	1	04/03/19 20:00	04/05/19 13:11	EPA 3050B	1,6010D	LC
Copper, Total	81.2		mg/kg	0.577	0.149	1	04/03/19 20:00	04/05/19 13:11	EPA 3050B	1,6010D	LC
Lead, Total	92.9		mg/kg	2.88	0.154	1	04/03/19 20:00	04/05/19 13:11	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-02

Date Collected: 04/01/19 11:50

Client ID: TP104 EX.-BOTTOM1

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	10.2		mg/kg	0.538	0.112	1	04/03/19 20:00	04/05/19 13:15	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	2.69	0.264	5	04/03/19 20:00	04/05/19 17:54	EPA 3050B	1,6010D	AB
Copper, Total	15.4		mg/kg	0.538	0.139	1	04/03/19 20:00	04/05/19 13:15	EPA 3050B	1,6010D	LC
Lead, Total	13.9		mg/kg	2.69	0.144	1	04/03/19 20:00	04/05/19 13:15	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-03

Date Collected: 04/01/19 12:20

Client ID: TP104 EX.-SW2

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	24.7		mg/kg	0.485	0.101	1	04/03/19 20:00	04/05/19 14:12	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	4.85	0.476	10	04/03/19 20:00	04/05/19 17:58	EPA 3050B	1,6010D	AB
Copper, Total	52.9		mg/kg	0.485	0.125	1	04/03/19 20:00	04/05/19 14:12	EPA 3050B	1,6010D	LC
Lead, Total	202		mg/kg	2.43	0.130	1	04/03/19 20:00	04/05/19 14:12	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-04

Date Collected: 04/01/19 13:00

Client ID: RINSATE BLANK (040119)

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	ND		mg/l	0.005	0.002	1	04/02/19 21:10	04/04/19 17:18	EPA 3005A	1,6010D	MC
Cadmium, Total	ND		mg/l	0.005	0.001	1	04/02/19 21:10	04/04/19 17:18	EPA 3005A	1,6010D	MC
Copper, Total	ND		mg/l	0.010	0.002	1	04/02/19 21:10	04/04/19 17:18	EPA 3005A	1,6010D	MC
Lead, Total	ND		mg/l	0.010	0.003	1	04/02/19 21:10	04/04/19 17:18	EPA 3005A	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-05

Date Collected: 04/01/19 13:30

Client ID: TP104 EX.-WW1

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 68%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	11.2		mg/kg	0.574	0.119	1	04/03/19 20:00	04/05/19 14:17	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.574	0.056	1	04/03/19 20:00	04/05/19 14:17	EPA 3050B	1,6010D	LC
Copper, Total	29.3		mg/kg	0.574	0.148	1	04/03/19 20:00	04/05/19 14:17	EPA 3050B	1,6010D	LC
Lead, Total	50.6		mg/kg	2.87	0.154	1	04/03/19 20:00	04/05/19 14:17	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-06

Date Collected: 04/01/19 13:40

Client ID: TP104 EX.-WW2

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 76%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	10.2		mg/kg	0.501	0.104	1	04/03/19 20:00	04/05/19 14:21	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.501	0.049	1	04/03/19 20:00	04/05/19 14:21	EPA 3050B	1,6010D	LC
Copper, Total	24.7		mg/kg	0.501	0.129	1	04/03/19 20:00	04/05/19 14:21	EPA 3050B	1,6010D	LC
Lead, Total	117		mg/kg	2.50	0.134	1	04/03/19 20:00	04/05/19 14:21	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-07

Date Collected: 04/01/19 13:40

Client ID: TP104 EX.-WW2 DUPLICATE

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 75%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	9.44		mg/kg	0.518	0.108	1	04/03/19 20:00	04/05/19 14:25	EPA 3050B	1,6010D	LC
Cadmium, Total	0.057	J	mg/kg	0.518	0.051	1	04/03/19 20:00	04/05/19 14:25	EPA 3050B	1,6010D	LC
Copper, Total	22.4		mg/kg	0.518	0.134	1	04/03/19 20:00	04/05/19 14:25	EPA 3050B	1,6010D	LC
Lead, Total	148		mg/kg	2.59	0.139	1	04/03/19 20:00	04/05/19 14:25	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-08

Date Collected: 04/01/19 13:55

Client ID: TP104 EX.-EW

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	39.8		mg/kg	0.454	0.094	1	04/03/19 20:00	04/05/19 14:30	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.454	0.045	1	04/03/19 20:00	04/05/19 14:30	EPA 3050B	1,6010D	LC
Copper, Total	33.5		mg/kg	0.454	0.117	1	04/03/19 20:00	04/05/19 14:30	EPA 3050B	1,6010D	LC
Lead, Total	44.0		mg/kg	2.27	0.122	1	04/03/19 20:00	04/05/19 14:30	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-09

Date Collected: 04/01/19 14:05

Client ID: TP104 EX.-NW1

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	15.5		mg/kg	0.483	0.100	1	04/03/19 20:00	04/05/19 14:34	EPA 3050B	1,6010D	LC
Cadmium, Total	0.082	J	mg/kg	0.483	0.047	1	04/03/19 20:00	04/05/19 14:34	EPA 3050B	1,6010D	LC
Copper, Total	19.2		mg/kg	0.483	0.125	1	04/03/19 20:00	04/05/19 14:34	EPA 3050B	1,6010D	LC
Lead, Total	212		mg/kg	2.42	0.129	1	04/03/19 20:00	04/05/19 14:34	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-10

Date Collected: 04/01/19 14:10

Client ID: TP104 EX.-NW2

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.46		mg/kg	0.450	0.094	1	04/03/19 20:00	04/05/19 14:38	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.450	0.044	1	04/03/19 20:00	04/05/19 14:38	EPA 3050B	1,6010D	LC
Copper, Total	7.10		mg/kg	0.450	0.116	1	04/03/19 20:00	04/05/19 14:38	EPA 3050B	1,6010D	LC
Lead, Total	69.5		mg/kg	2.25	0.121	1	04/03/19 20:00	04/05/19 14:38	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-11

Date Collected: 04/01/19 14:30

Client ID: TP104 EX.-BOTTOM2

Date Received: 04/01/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.87		mg/kg	0.475	0.099	1	04/03/19 20:00	04/05/19 14:43	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.475	0.047	1	04/03/19 20:00	04/05/19 14:43	EPA 3050B	1,6010D	LC
Copper, Total	22.2		mg/kg	0.475	0.122	1	04/03/19 20:00	04/05/19 14:43	EPA 3050B	1,6010D	LC
Lead, Total	9.02		mg/kg	2.37	0.127	1	04/03/19 20:00	04/05/19 14:43	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-12

Date Collected: 04/02/19 09:10

Client ID: TP103 EX.-WW1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.87		mg/kg	0.502	0.104	1	04/03/19 20:00	04/05/19 12:53	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.502	0.049	1	04/03/19 20:00	04/05/19 12:53	EPA 3050B	1,6010D	LC
Copper, Total	28.6		mg/kg	0.502	0.130	1	04/03/19 20:00	04/05/19 12:53	EPA 3050B	1,6010D	LC
Lead, Total	204		mg/kg	2.51	0.135	1	04/03/19 20:00	04/05/19 12:53	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-13

Date Collected: 04/02/19 09:30

Client ID: TP103 EX.-BOTTOM1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 73%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	19.8		mg/kg	0.525	0.109	1	04/03/19 20:00	04/05/19 14:47	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	5.25	0.515	10	04/03/19 20:00	04/05/19 18:02	EPA 3050B	1,6010D	AB
Copper, Total	34.4		mg/kg	0.525	0.136	1	04/03/19 20:00	04/05/19 14:47	EPA 3050B	1,6010D	LC
Lead, Total	144		mg/kg	2.63	0.141	1	04/03/19 20:00	04/05/19 14:47	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-14

Date Collected: 04/02/19 09:50

Client ID: TP103 EX.-BOTTOM2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.77		mg/kg	0.479	0.100	1	04/03/19 20:00	04/05/19 14:51	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.479	0.047	1	04/03/19 20:00	04/05/19 14:51	EPA 3050B	1,6010D	LC
Copper, Total	18.7		mg/kg	0.479	0.124	1	04/03/19 20:00	04/05/19 14:51	EPA 3050B	1,6010D	LC
Lead, Total	8.22		mg/kg	2.40	0.128	1	04/03/19 20:00	04/05/19 14:51	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-15

Date Collected: 04/02/19 09:20

Client ID: TP103 EX.-WW2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	10.1		mg/kg	0.451	0.094	1	04/03/19 20:00	04/05/19 15:42	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.451	0.044	1	04/03/19 20:00	04/05/19 15:42	EPA 3050B	1,6010D	LC
Copper, Total	31.0		mg/kg	0.451	0.116	1	04/03/19 20:00	04/05/19 15:42	EPA 3050B	1,6010D	LC
Lead, Total	163		mg/kg	2.25	0.121	1	04/03/19 20:00	04/05/19 15:42	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'

Lab Number: L1912944

Project Number: E1605

Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-16

Date Collected: 04/02/19 10:00

Client ID: TP103 EX.-NW

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 90%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.20		mg/kg	0.433	0.090	1	04/03/19 20:00	04/05/19 15:47	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.433	0.042	1	04/03/19 20:00	04/05/19 15:47	EPA 3050B	1,6010D	LC
Copper, Total	22.4		mg/kg	0.433	0.112	1	04/03/19 20:00	04/05/19 15:47	EPA 3050B	1,6010D	LC
Lead, Total	221		mg/kg	2.16	0.116	1	04/03/19 20:00	04/05/19 15:47	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-17

Date Collected: 04/02/19 10:15

Client ID: TP103 EX.-EW1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.70		mg/kg	0.504	0.105	1	04/03/19 20:00	04/05/19 15:51	EPA 3050B	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.504	0.049	1	04/03/19 20:00	04/05/19 15:51	EPA 3050B	1,6010D	LC
Copper, Total	22.9		mg/kg	0.504	0.130	1	04/03/19 20:00	04/05/19 15:51	EPA 3050B	1,6010D	LC
Lead, Total	135		mg/kg	2.52	0.135	1	04/03/19 20:00	04/05/19 15:51	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-18

Date Collected: 04/02/19 10:25

Client ID: TP103 EX.-EW2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	24.3		mg/kg	0.480	0.100	1	04/03/19 20:00	04/05/19 15:56	EPA 3050B	1,6010D	AB
Cadmium, Total	ND		mg/kg	2.40	0.235	5	04/03/19 20:00	04/05/19 18:06	EPA 3050B	1,6010D	AB
Copper, Total	144		mg/kg	0.480	0.124	1	04/03/19 20:00	04/05/19 15:56	EPA 3050B	1,6010D	AB
Lead, Total	410		mg/kg	2.40	0.129	1	04/03/19 20:00	04/05/19 15:56	EPA 3050B	1,6010D	AB



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-19

Date Collected: 04/02/19 10:45

Client ID: TP103 EX.-SW

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	19.3		mg/kg	0.495	0.103	1	04/03/19 20:00	04/05/19 16:00	EPA 3050B	1,6010D	AB
Cadmium, Total	ND		mg/kg	0.495	0.049	1	04/03/19 20:00	04/05/19 16:00	EPA 3050B	1,6010D	AB
Copper, Total	37.0		mg/kg	0.495	0.128	1	04/03/19 20:00	04/05/19 16:00	EPA 3050B	1,6010D	AB
Lead, Total	73.9		mg/kg	2.48	0.133	1	04/03/19 20:00	04/05/19 16:00	EPA 3050B	1,6010D	AB



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-20

Date Collected: 04/05/19 13:30

Client ID: RINSATE BLANK (040519)

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	ND		mg/l	0.005	0.002	1	04/09/19 14:25	04/11/19 14:45	EPA 3005A	1,6010D	LC
Cadmium, Total	ND		mg/l	0.005	0.001	1	04/09/19 14:25	04/11/19 14:45	EPA 3005A	1,6010D	LC
Copper, Total	ND		mg/l	0.010	0.002	1	04/09/19 14:25	04/11/19 21:13	EPA 3005A	1,6010D	AB
Lead, Total	ND		mg/l	0.010	0.003	1	04/09/19 14:25	04/11/19 14:45	EPA 3005A	1,6010D	LC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-21

Date Collected: 04/05/19 13:45

Client ID: TP108 EX-BOTTOM 2

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.67		mg/kg	0.499	0.104	1	04/09/19 17:05	04/11/19 05:06	EPA 3050B	1,6010D	MC
Cadmium, Total	0.544		mg/kg	0.499	0.049	1	04/09/19 17:05	04/11/19 17:11	EPA 3050B	1,6010D	MC
Copper, Total	12.9		mg/kg	0.499	0.129	1	04/09/19 17:05	04/11/19 05:06	EPA 3050B	1,6010D	MC
Lead, Total	12.7		mg/kg	2.50	0.134	1	04/09/19 17:05	04/11/19 05:06	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-22

Date Collected: 04/05/19 13:50

Client ID: TP108 EX.-NW1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	12.8		mg/kg	0.454	0.094	1	04/09/19 17:05	04/11/19 00:00	EPA 3050B	1,6010D	MC
Cadmium, Total	3.58		mg/kg	0.454	0.045	1	04/09/19 17:05	04/11/19 00:00	EPA 3050B	1,6010D	MC
Copper, Total	61.3		mg/kg	0.454	0.117	1	04/09/19 17:05	04/11/19 00:00	EPA 3050B	1,6010D	MC
Lead, Total	151		mg/kg	2.27	0.122	1	04/09/19 17:05	04/11/19 00:00	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-23

Date Collected: 04/05/19 13:55

Client ID: TP108 EX.-NW2

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	10.1		mg/kg	0.478	0.099	1	04/09/19 17:05	04/11/19 05:10	EPA 3050B	1,6010D	MC
Cadmium, Total	2.04		mg/kg	0.478	0.047	1	04/09/19 17:05	04/11/19 17:15	EPA 3050B	1,6010D	MC
Copper, Total	54.3		mg/kg	0.478	0.123	1	04/09/19 17:05	04/11/19 05:10	EPA 3050B	1,6010D	MC
Lead, Total	163		mg/kg	2.39	0.128	1	04/09/19 17:05	04/11/19 05:10	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-24

Date Collected: 04/05/19 14:00

Client ID: TP108 EX.-BOTTOM3

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.28		mg/kg	0.525	0.109	1	04/09/19 17:05	04/11/19 05:15	EPA 3050B	1,6010D	MC
Cadmium, Total	0.725		mg/kg	0.525	0.052	1	04/09/19 17:05	04/11/19 17:20	EPA 3050B	1,6010D	MC
Copper, Total	9.14		mg/kg	0.525	0.136	1	04/09/19 17:05	04/11/19 05:15	EPA 3050B	1,6010D	MC
Lead, Total	17.1		mg/kg	2.63	0.141	1	04/09/19 17:05	04/11/19 05:15	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-25

Date Collected: 04/05/19 14:10

Client ID: TP108 EX.-BOTTOM4

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.80		mg/kg	0.433	0.090	1	04/09/19 17:05	04/11/19 05:19	EPA 3050B	1,6010D	MC
Cadmium, Total	0.424	J	mg/kg	0.433	0.042	1	04/09/19 17:05	04/11/19 17:25	EPA 3050B	1,6010D	MC
Copper, Total	6.05		mg/kg	0.433	0.112	1	04/09/19 17:05	04/11/19 05:19	EPA 3050B	1,6010D	MC
Lead, Total	8.80		mg/kg	2.16	0.116	1	04/09/19 17:05	04/11/19 05:19	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-26

Date Collected: 04/05/19 14:15

Client ID: TP108 EX.-EW1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	10.5		mg/kg	0.462	0.096	1	04/09/19 17:05	04/11/19 05:24	EPA 3050B	1,6010D	MC
Cadmium, Total	4.14		mg/kg	0.462	0.045	1	04/09/19 17:05	04/11/19 17:53	EPA 3050B	1,6010D	MC
Copper, Total	34.1		mg/kg	0.462	0.119	1	04/09/19 17:05	04/11/19 05:24	EPA 3050B	1,6010D	MC
Lead, Total	90.6		mg/kg	2.31	0.124	1	04/09/19 17:05	04/11/19 05:24	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-27

Date Collected: 04/05/19 14:20

Client ID: TP108 EX.-EW2

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	11.8		mg/kg	0.490	0.102	1	04/09/19 17:05	04/11/19 05:28	EPA 3050B	1,6010D	MC
Cadmium, Total	3.75		mg/kg	0.490	0.048	1	04/09/19 17:05	04/11/19 17:58	EPA 3050B	1,6010D	MC
Copper, Total	34.7		mg/kg	0.490	0.126	1	04/09/19 17:05	04/11/19 05:28	EPA 3050B	1,6010D	MC
Lead, Total	389		mg/kg	2.45	0.131	1	04/09/19 17:05	04/11/19 05:28	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-28

Date Collected: 04/05/19 14:30

Client ID: TP108 EX.-SW1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 82%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	8.80		mg/kg	0.467	0.097	1	04/09/19 17:05	04/11/19 05:32	EPA 3050B	1,6010D	MC
Cadmium, Total	1.50		mg/kg	0.467	0.046	1	04/09/19 17:05	04/11/19 18:03	EPA 3050B	1,6010D	MC
Copper, Total	35.0		mg/kg	0.467	0.120	1	04/09/19 17:05	04/11/19 05:32	EPA 3050B	1,6010D	MC
Lead, Total	96.8		mg/kg	2.34	0.125	1	04/09/19 17:05	04/11/19 05:32	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-29

Date Collected: 04/05/19 14:35

Client ID: TP108 EX.-SW2

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	8.10		mg/kg	0.502	0.104	1	04/09/19 17:05	04/11/19 05:37	EPA 3050B	1,6010D	MC
Cadmium, Total	2.18		mg/kg	0.502	0.049	1	04/09/19 17:05	04/11/19 18:08	EPA 3050B	1,6010D	MC
Copper, Total	42.1		mg/kg	0.502	0.130	1	04/09/19 17:05	04/11/19 05:37	EPA 3050B	1,6010D	MC
Lead, Total	118		mg/kg	2.51	0.135	1	04/09/19 17:05	04/11/19 05:37	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-30

Date Collected: 04/05/19 14:40

Client ID: TP108 EX.-WW1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	19.7		mg/kg	0.438	0.091	1	04/09/19 17:05	04/11/19 18:13	EPA 3050B	1,6010D	MC
Cadmium, Total	3.14		mg/kg	0.438	0.043	1	04/09/19 17:05	04/11/19 18:13	EPA 3050B	1,6010D	MC
Copper, Total	77.6		mg/kg	0.438	0.113	1	04/09/19 17:05	04/11/19 18:13	EPA 3050B	1,6010D	MC
Lead, Total	112		mg/kg	2.19	0.117	1	04/09/19 17:05	04/11/19 18:13	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-31

Date Collected: 04/05/19 14:50

Client ID: TP108 EX.-WW2

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	22.6		mg/kg	0.459	0.095	1	04/09/19 17:05	04/11/19 18:18	EPA 3050B	1,6010D	MC
Cadmium, Total	3.67		mg/kg	0.459	0.045	1	04/09/19 17:05	04/11/19 18:18	EPA 3050B	1,6010D	MC
Copper, Total	127		mg/kg	0.459	0.118	1	04/09/19 17:05	04/11/19 18:18	EPA 3050B	1,6010D	MC
Lead, Total	236		mg/kg	2.29	0.123	1	04/09/19 17:05	04/11/19 18:18	EPA 3050B	1,6010D	MC



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 04 Batch: WG1222286-1										
Arsenic, Total	0.003	J	mg/l	0.005	0.002	1	04/02/19 21:10	04/04/19 16:55	1,6010D	MC
Cadmium, Total	ND		mg/l	0.005	0.001	1	04/02/19 21:10	04/04/19 16:55	1,6010D	MC
Copper, Total	ND		mg/l	0.010	0.002	1	04/02/19 21:10	04/04/19 16:55	1,6010D	MC
Lead, Total	ND		mg/l	0.010	0.003	1	04/02/19 21:10	04/04/19 16:55	1,6010D	MC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03,05-19 Batch: WG1222697-1										
Arsenic, Total	ND		mg/kg	0.400	0.083	1	04/03/19 20:00	04/05/19 12:45	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.400	0.039	1	04/03/19 20:00	04/05/19 12:45	1,6010D	LC
Copper, Total	ND		mg/kg	0.400	0.103	1	04/03/19 20:00	04/05/19 12:45	1,6010D	LC
Lead, Total	ND		mg/kg	2.00	0.107	1	04/03/19 20:00	04/05/19 12:45	1,6010D	LC

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 20 Batch: WG1224639-1										
Arsenic, Total	ND		mg/l	0.005	0.002	1	04/09/19 14:25	04/11/19 15:13	1,6010D	AB
Cadmium, Total	ND		mg/l	0.005	0.001	1	04/09/19 14:25	04/11/19 15:13	1,6010D	AB
Copper, Total	ND		mg/l	0.010	0.002	1	04/09/19 14:25	04/11/19 20:57	1,6010D	AB
Lead, Total	ND		mg/l	0.010	0.003	1	04/09/19 14:25	04/11/19 15:13	1,6010D	AB

Prep Information

Digestion Method: EPA 3005A



Project Name: IRM 'HOTSPOT REMOVAL'

Lab Number: L1912944

Project Number: E1605

Report Date: 04/12/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 21-31 Batch: WG1224669-1									
Arsenic, Total	ND	mg/kg	0.400	0.083	1	04/09/19 17:05	04/10/19 23:52	1,6010D	MC
Cadmium, Total	ND	mg/kg	0.400	0.039	1	04/09/19 17:05	04/10/19 23:52	1,6010D	MC
Copper, Total	ND	mg/kg	0.400	0.103	1	04/09/19 17:05	04/10/19 23:52	1,6010D	MC
Lead, Total	ND	mg/kg	2.00	0.107	1	04/09/19 17:05	04/10/19 23:52	1,6010D	MC

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 04 Batch: WG1222286-2								
Arsenic, Total	103		-		80-120	-		
Cadmium, Total	106		-		80-120	-		
Copper, Total	96		-		80-120	-		
Lead, Total	102		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03,05-19 Batch: WG1222697-2 SRM Lot Number: D101-540								
Arsenic, Total	106		-		83-117	-		
Cadmium, Total	101		-		83-117	-		
Copper, Total	102		-		83-116	-		
Lead, Total	99		-		83-117	-		
Total Metals - Mansfield Lab Associated sample(s): 20 Batch: WG1224639-2								
Arsenic, Total	102		-		80-120	-		
Cadmium, Total	101		-		80-120	-		
Copper, Total	94		-		80-120	-		
Lead, Total	99		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 21-31 Batch: WG1224669-2 SRM Lot Number: D101-540								
Arsenic, Total	107		-		83-117	-		
Cadmium, Total	103		-		83-117	-		
Copper, Total	104		-		83-116	-		
Lead, Total	106		-		83-117	-		

Matrix Spike Analysis Batch Quality Control

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1222286-3 QC Sample: L1912944-04 Client ID: RINSATE BLANK (040119)												
Arsenic, Total	ND	0.12	0.125	104		-	-		75-125	-		20
Cadmium, Total	ND	0.051	0.054	106		-	-		75-125	-		20
Copper, Total	ND	0.25	0.241	96		-	-		75-125	-		20
Lead, Total	ND	0.51	0.521	102		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03,05-19 QC Batch ID: WG1222697-3 WG1222697-4 QC Sample: L1912944-12 Client ID: TP103 EX.-WW1												
Arsenic, Total	6.87	11.8	17.4	89		18.1	92		75-125	4		20
Cadmium, Total	ND	5	2.54	51	Q	3.49	68	Q	75-125	32	Q	20
Copper, Total	28.6	24.5	47.3	76		50.6	87		75-125	7		20
Lead, Total	204	50	429	450	Q	383	346	Q	75-125	11		20
Total Metals - Mansfield Lab Associated sample(s): 20 QC Batch ID: WG1224639-3 QC Sample: L1912944-20 Client ID: RINSATE BLANK (040519)												
Arsenic, Total	ND	0.12	0.124	103		-	-		75-125	-		20
Cadmium, Total	ND	0.051	0.052	101		-	-		75-125	-		20
Copper, Total	ND	0.25	0.239	96		-	-		75-125	-		20
Lead, Total	ND	0.51	0.509	100		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 21-31 QC Batch ID: WG1224669-3 WG1224669-4 QC Sample: L1912944-22 Client ID: TP108 EX.-NW1												
Arsenic, Total	12.8	10.8	22.2	87		22.1	85		75-125	0		20
Cadmium, Total	3.58	4.6	7.81	92		9.20	121		75-125	16		20
Copper, Total	61.3	22.5	78.1	74	Q	113	227	Q	75-125	37	Q	20
Lead, Total	151	46	202	111		162	24	Q	75-125	22	Q	20

Lab Duplicate Analysis Batch Quality Control

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 04 QC Batch ID: WG1222286-4 QC Sample: L1912944-04 Client ID: RINSATE BLANK (040119)						
Arsenic, Total	ND	0.004J	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 20 QC Batch ID: WG1224639-4 QC Sample: L1912944-20 Client ID: RINSATE BLANK (040519)						
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 20 QC Batch ID: WG1224639-4 QC Sample: L1912944-20 Client ID: RINSATE BLANK (040519)						
Copper, Total	ND	ND	mg/l	NC		20



INORGANICS & MISCELLANEOUS

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-01
Client ID: TP104 EX.-SW1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 11:20
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	67.1		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-02
Client ID: TP104 EX.-BOTTOM1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 11:50
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.8		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-03
Client ID: TP104 EX.-SW2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 12:20
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.6		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-05
Client ID: TP104 EX.-WW1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 13:30
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	67.7		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-06
Client ID: TP104 EX.-WW2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 13:40
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.0		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-07
Client ID: TP104 EX.-WW2 DUPLICATE
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 13:40
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	75.4		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-08
Client ID: TP104 EX.-EW
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 13:55
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.2		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-09
Client ID: TP104 EX.-NW1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 14:05
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.7		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-10
Client ID: TP104 EX.-NW2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 14:10
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.6		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-11
Client ID: TP104 EX.-BOTTOM2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/01/19 14:30
Date Received: 04/01/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.0		%	0.100	NA	1	-	04/02/19 12:59	121,2540G	RI



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-12
Client ID: TP103 EX.-WW1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 09:10
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.6		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-13
Client ID: TP103 EX.-BOTTOM1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 09:30
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	72.6		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-14
Client ID: TP103 EX.-BOTTOM2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 09:50
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.6		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-15
Client ID: TP103 EX.-WW2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 09:20
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.5		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-16

Date Collected: 04/02/19 10:00

Client ID: TP103 EX.-NW

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.7		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-17
Client ID: TP103 EX.-EW1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 10:15
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.7		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-18

Date Collected: 04/02/19 10:25

Client ID: TP103 EX.-EW2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.1		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-19
Client ID: TP103 EX.-SW
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 10:45
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.5		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-21
Client ID: TP108 EX-BOTTOM 2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 13:45
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.4		%	0.100	NA	1	-	04/09/19 02:21	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-22
Client ID: TP108 EX.-NW1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 13:50
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.9		%	0.100	NA	1	-	04/09/19 02:21	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-23
Client ID: TP108 EX.-NW2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 13:55
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.9		%	0.100	NA	1	-	04/09/19 02:21	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-24
Client ID: TP108 EX.-BOTTOM3
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 14:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.5		%	0.100	NA	1	-	04/09/19 02:21	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-25
Client ID: TP108 EX.-BOTTOM4
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 14:10
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.4		%	0.100	NA	1	-	04/09/19 02:21	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-26

Date Collected: 04/05/19 14:15

Client ID: TP108 EX.-EW1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.1		%	0.100	NA	1	-	04/09/19 02:21	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-27

Date Collected: 04/05/19 14:20

Client ID: TP108 EX.-EW2

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.0		%	0.100	NA	1	-	04/09/19 02:21	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'

Lab Number: L1912944

Project Number: E1605

Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-28

Date Collected: 04/05/19 14:30

Client ID: TP108 EX.-SW1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.4		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-29
Client ID: TP108 EX.-SW2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 14:35
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.1		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1912944-30
Client ID: TP108 EX.-WW1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 14:40
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.8		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1912944-31

Date Collected: 04/05/19 14:50

Client ID: TP108 EX.-WW2

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.2		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM 'HOTSPOT REMOVAL'

Project Number: E1605

Lab Number: L1912944

Report Date: 04/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03,05-11 QC Batch ID: WG1222165-1 QC Sample: L1912936-01 Client ID: DUP Sample						
Solids, Total	82.2	82.6	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 12-19 QC Batch ID: WG1222360-1 QC Sample: L1912944-12 Client ID: TP103 EX.-WW1						
Solids, Total	78.6	78.8	%	0		20
General Chemistry - Westborough Lab Associated sample(s): 21-27 QC Batch ID: WG1224410-1 QC Sample: L1912944-22 Client ID: TP108 EX.-NW1						
Solids, Total	85.9	84.8	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 28-31 QC Batch ID: WG1224413-1 QC Sample: L1913785-01 Client ID: DUP Sample						
Solids, Total	86.9	85.9	%	1		20

Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent
A1	Absent
A2	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1912944-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-04A	Plastic 250ml HNO3 preserved	A	<2	<2	2.6	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-05A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-06A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-07A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-08A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-09A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-10A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-11A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.6	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-12A	Metals Only-Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-12B	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		TS(7)
L1912944-13A	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-14A	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-15A	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)

Project Name: IRM 'HOTSPOT REMOVAL'**Lab Number:** L1912944**Project Number:** E1605**Report Date:** 04/12/19**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1912944-16A	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-17A	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-18A	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-19A	Glass 60mL/2oz unpreserved	A1	NA		2.7	Y	Absent		AS-TI(180),TS(7),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-20A	Plastic 250ml HNO3 preserved	A2	<2	<2	3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-21A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-21B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-22A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-22B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-22C	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-23A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-23B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-24A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-24B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-25A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-25B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-26A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-26B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-27A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-27B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-28A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-28B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-29A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-29B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-30A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1912944-30B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)
L1912944-31A	Metals Only-Glass 60mL/2oz unpreserved	A2	NA		3.5	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Serial_No:04121917:36
Lab Number: L1912944
Report Date: 04/12/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1912944-31B	Glass 60ml unpreserved split	A2	NA		3.5	Y	Absent		TS(7)

Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM 'HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1912944
Report Date: 04/12/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM 'HOTSPOT REMOVAL'

Lab Number: L1912944

Project Number: E1605

Report Date: 04/12/19

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water

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

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

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

 NEW YORK CHAIN OF CUSTODY	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105	Page	Date Rec'd in Lab	ALPHA Job #					
		1 of 2	4/2/19	1912944					
Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3286	Project Information		Deliverables	Billing Information				
Project Name: IRM 'HotSpot Removal' Project Location: Mod-Pac Buffalo, NY Project # e1605 (Use Project name as Project #) <input type="checkbox"/>		Project Manager: Mark Hanna & Michele Wittman ALPHAQuote #:		<input type="checkbox"/> ASP-A <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Same as Client Info PO #				
Client Information		Regulatory Requirement		Disposal Site Information					
Client: Hazard Evaluations Inc. Address: 3636 N- Buffalo Rd Orchard Park NY 14127 Phone: 716-667-3130 Fax: 716-667-3156 Email: mhanna@hazardevaluations.com		<input type="checkbox"/> NY TOGS <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		<input type="checkbox"/> NY Part 375 <input type="checkbox"/> NY CP-51 <input type="checkbox"/> Other Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:					
Turn-Around Time: Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days: 5day Firm		These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: <p style="text-align: center; font-size: 1.2em;">Open new Sample delivery group on 4/1/19</p> Please specify Metals or TAL.							
		ANALYSIS		Sample Filtration					
		TAL METALS*		TAL METALS*					
				<input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)					
				Sample Specific Comments					
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	TAL METALS*	TAL METALS*	Sample Specific Comments	Total Bottles
12944-01	TP104 Ex. - SW1	4/1/19	11:20am	Soil	EB	X		* Only Total Arsenic	1
-02	TP104 Ex. - Bottom1	4/1/19	11:50am	Soil	EB	X		Lead, copper, cadmium	1
-03	TP104 Ex. - SW2	4/1/19	12:20pm	Soil	EB	X			1
-04	Rinsete Blank (040119)	4/1/19	1:00pm	Water	EB		X		1
-05	TP104 Ex. - WW1	4/1/19	1:30pm	Soil	EB	X			1
-06	TP104 Ex. - WW2	4/1/19	1:40pm	Soil	EB	X			1
-07	TP104 Ex. - WW2 Duplicate	4/1/19	1:40pm	Soil	EB	X			1
-06	TP104 Ex. - EW	4/1/19	1:55pm	Soil	EB	X			1
-09	TP104 Ex. - NW1	4/1/19	2:05pm	Soil	EB	X			1
-10	TP104 Ex. - NW2	4/1/19	2:10pm	Soil	EB	X			1
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type: A P Preservative: A C		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
		Relinquished By: <i>[Signature]</i> Date/Time: 4/1/19 16:00		Received By: <i>[Signature]</i> Date/Time: 4/2/19 01:45					

 NEW YORK CHAIN OF CUSTODY Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193 Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3286	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105	Page 3 of 3	Date Rec'd in Lab 4-9-19	ALPHA Job # L1912944			
	Project Information Project Name: IRM 'Hot Spot Removal' Project Location: ModPac Buffalo, NY Project # e1605 (Use Project name as Project #) <input type="checkbox"/>	Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other	Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #				
Client Information Client: Hazard Evaluations, Inc Address: 3636 N. Buffalo Rd Orchard Park NY 14127 Phone: 716-667-3130 Fax: 716-667-3156 Email: mhanna@hazardevaluations.com	Project Manager: Mark Hanna ALPHA Quote #: Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days: 5 day firm	Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge	Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:				
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: Link with sample delivery group starting on 4/3/19 close sample delivery group Please specify Metals or TAL.		ANALYSIS		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)			
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time	Sample Matrix	Sampler's Initials	TAL/ Metals *	Total Bottles	
12944-2930	TP10B Ex-SW2	4/5/19 235PM	Soil	EB	X		
3031	TP10B Ex-WW1	4/5/19 240PM	Soil	EB	X		
Sum 3132	TP10B Ex-WW2	4/5/19 2:50PM	Soil	EB	X		
4-8-19							
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type A Preservative A	Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)
Relinquished By: [Signature]		Date/Time: 4/5/19 15:35		Received By: [Signature]		Date/Time: 4/5/19 15:35	
Relinquished By: [Signature]		Date/Time: 4/25/19 16:15		Received By: [Signature]		Date/Time: 4/6/19 0:50	



ANALYTICAL REPORT

Lab Number:	L1913201
Client:	Hazard Evaluations, Inc. 3636 North Buffalo Road Orchard Park, NY 14127
ATTN:	Mark Hanna
Phone:	(716) 667-3130
Project Name:	IRM 'HOT SPOT REMOVAL'
Project Number:	E1605
Report Date:	04/03/19

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: IRM 'HOT SPOT REMOVAL'

Project Number: E1605

Lab Number: L1913201

Report Date: 04/03/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1913201-01	SB101 EX.-BOTTOM1	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:10	04/02/19
L1913201-02	SB101 EX.-WW1	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:15	04/02/19
L1913201-03	SB101 EX.-BOTTOM2	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:20	04/02/19
L1913201-04	SB101 EX.-BOTTOM2 DUPLICATE	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:20	04/02/19
L1913201-05	SB101 EX.-NW	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:25	04/02/19
L1913201-06	SB101 EX.-SW1	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:35	04/02/19
L1913201-07	SB101 EX.-SW2	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:40	04/02/19
L1913201-08	SB101 EX.-WW2	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:45	04/02/19
L1913201-09	SB101 EX.-EW	SOIL	MOD-PAC BUFFALO, NY	04/02/19 14:50	04/02/19
L1913201-10	RINSATE BLANK (040219)	WATER	MOD-PAC BUFFALO, NY	04/02/19 15:10	04/02/19

Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

Case Narrative

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

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

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

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

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

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

Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

Case Narrative (continued)

Report Submission

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

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

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 04/03/19

METALS

Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-01

Date Collected: 04/02/19 14:10

Client ID: SB101 EX.-BOTTOM1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.70		mg/kg	0.476	0.099	1	04/03/19 07:20	04/03/19 10:50	EPA 3050B	1,6010D	LC
Cadmium, Total	1.62		mg/kg	0.476	0.047	1	04/03/19 07:20	04/03/19 10:50	EPA 3050B	1,6010D	LC
Copper, Total	19.4		mg/kg	0.476	0.123	1	04/03/19 07:20	04/03/19 10:50	EPA 3050B	1,6010D	LC
Lead, Total	9.81		mg/kg	2.38	0.128	1	04/03/19 07:20	04/03/19 10:50	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-02

Date Collected: 04/02/19 14:15

Client ID: SB101 EX.-WW1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	20.0		mg/kg	0.442	0.092	1	04/03/19 07:20	04/03/19 10:55	EPA 3050B	1,6010D	LC
Cadmium, Total	6.50		mg/kg	0.442	0.043	1	04/03/19 07:20	04/03/19 10:55	EPA 3050B	1,6010D	LC
Copper, Total	52.4		mg/kg	0.442	0.114	1	04/03/19 07:20	04/03/19 10:55	EPA 3050B	1,6010D	LC
Lead, Total	210		mg/kg	2.21	0.118	1	04/03/19 07:20	04/03/19 10:55	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-03

Date Collected: 04/02/19 14:20

Client ID: SB101 EX.-BOTTOM2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.10		mg/kg	0.511	0.106	1	04/03/19 07:20	04/03/19 11:12	EPA 3050B	1,6010D	LC
Cadmium, Total	1.64		mg/kg	0.511	0.050	1	04/03/19 07:20	04/03/19 11:12	EPA 3050B	1,6010D	LC
Copper, Total	18.8		mg/kg	0.511	0.132	1	04/03/19 07:20	04/03/19 11:12	EPA 3050B	1,6010D	LC
Lead, Total	11.8		mg/kg	2.56	0.137	1	04/03/19 07:20	04/03/19 11:12	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-04

Date Collected: 04/02/19 14:20

Client ID: SB101 EX.-BOTTOM2 DUPLICATE

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 74%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.44		mg/kg	0.520	0.108	1	04/03/19 07:20	04/03/19 11:17	EPA 3050B	1,6010D	LC
Cadmium, Total	1.74		mg/kg	0.520	0.051	1	04/03/19 07:20	04/03/19 11:17	EPA 3050B	1,6010D	LC
Copper, Total	19.3		mg/kg	0.520	0.134	1	04/03/19 07:20	04/03/19 11:17	EPA 3050B	1,6010D	LC
Lead, Total	12.3		mg/kg	2.60	0.139	1	04/03/19 07:20	04/03/19 11:17	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-05

Date Collected: 04/02/19 14:25

Client ID: SB101 EX.-NW

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	8.96		mg/kg	0.430	0.090	1	04/03/19 07:20	04/03/19 11:22	EPA 3050B	1,6010D	LC
Cadmium, Total	2.06		mg/kg	0.430	0.042	1	04/03/19 07:20	04/03/19 11:22	EPA 3050B	1,6010D	LC
Copper, Total	46.5		mg/kg	0.430	0.111	1	04/03/19 07:20	04/03/19 11:22	EPA 3050B	1,6010D	LC
Lead, Total	584		mg/kg	2.15	0.115	1	04/03/19 07:20	04/03/19 11:22	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-06

Date Collected: 04/02/19 14:35

Client ID: SB101 EX.-SW1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.11		mg/kg	0.420	0.087	1	04/03/19 07:20	04/03/19 11:26	EPA 3050B	1,6010D	LC
Cadmium, Total	1.56		mg/kg	0.420	0.041	1	04/03/19 07:20	04/03/19 11:26	EPA 3050B	1,6010D	LC
Copper, Total	7.42		mg/kg	0.420	0.108	1	04/03/19 07:20	04/03/19 11:26	EPA 3050B	1,6010D	LC
Lead, Total	37.4		mg/kg	2.10	0.113	1	04/03/19 07:20	04/03/19 11:26	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-07

Date Collected: 04/02/19 14:40

Client ID: SB101 EX.-SW2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 78%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.23		mg/kg	0.487	0.101	1	04/03/19 07:20	04/03/19 10:14	EPA 3050B	1,6010D	LC
Cadmium, Total	0.526		mg/kg	0.487	0.048	1	04/03/19 07:20	04/03/19 10:14	EPA 3050B	1,6010D	LC
Copper, Total	3.84		mg/kg	0.487	0.126	1	04/03/19 07:20	04/03/19 10:14	EPA 3050B	1,6010D	LC
Lead, Total	86.4		mg/kg	2.43	0.130	1	04/03/19 07:20	04/03/19 10:14	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-08

Date Collected: 04/02/19 14:45

Client ID: SB101 EX.-WW2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.66		mg/kg	0.460	0.096	1	04/03/19 07:20	04/03/19 11:31	EPA 3050B	1,6010D	LC
Cadmium, Total	1.45		mg/kg	0.460	0.045	1	04/03/19 07:20	04/03/19 11:31	EPA 3050B	1,6010D	LC
Copper, Total	4.95		mg/kg	0.460	0.119	1	04/03/19 07:20	04/03/19 11:31	EPA 3050B	1,6010D	LC
Lead, Total	71.0		mg/kg	2.30	0.123	1	04/03/19 07:20	04/03/19 11:31	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-09

Date Collected: 04/02/19 14:50

Client ID: SB101 EX.-EW

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.07		mg/kg	0.453	0.094	1	04/03/19 07:20	04/03/19 11:35	EPA 3050B	1,6010D	LC
Cadmium, Total	0.707		mg/kg	0.453	0.044	1	04/03/19 07:20	04/03/19 11:35	EPA 3050B	1,6010D	LC
Copper, Total	7.01		mg/kg	0.453	0.117	1	04/03/19 07:20	04/03/19 11:35	EPA 3050B	1,6010D	LC
Lead, Total	29.2		mg/kg	2.26	0.121	1	04/03/19 07:20	04/03/19 11:35	EPA 3050B	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-10

Date Collected: 04/02/19 15:10

Client ID: RINSATE BLANK (040219)

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	ND		mg/l	0.005	0.002	1	04/03/19 06:17	04/03/19 11:37	EPA 3005A	1,6010D	LC
Cadmium, Total	ND		mg/l	0.005	0.001	1	04/03/19 06:17	04/03/19 11:37	EPA 3005A	1,6010D	LC
Copper, Total	0.003	J	mg/l	0.010	0.002	1	04/03/19 06:17	04/03/19 11:37	EPA 3005A	1,6010D	LC
Lead, Total	ND		mg/l	0.010	0.003	1	04/03/19 06:17	04/03/19 11:37	EPA 3005A	1,6010D	LC



Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 10 Batch: WG1222408-1										
Arsenic, Total	ND		mg/l	0.005	0.002	1	04/03/19 06:17	04/03/19 11:28	1,6010D	LC
Cadmium, Total	ND		mg/l	0.005	0.001	1	04/03/19 06:17	04/03/19 11:28	1,6010D	LC
Copper, Total	0.003	J	mg/l	0.010	0.002	1	04/03/19 06:17	04/03/19 11:28	1,6010D	LC
Lead, Total	ND		mg/l	0.010	0.003	1	04/03/19 06:17	04/03/19 11:28	1,6010D	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-09 Batch: WG1222424-1										
Arsenic, Total	ND		mg/kg	0.400	0.083	1	04/03/19 07:20	04/03/19 10:05	1,6010D	LC
Cadmium, Total	ND		mg/kg	0.400	0.039	1	04/03/19 07:20	04/03/19 10:05	1,6010D	LC
Copper, Total	ND		mg/kg	0.400	0.103	1	04/03/19 07:20	04/03/19 10:05	1,6010D	LC
Lead, Total	ND		mg/kg	2.00	0.107	1	04/03/19 07:20	04/03/19 10:05	1,6010D	LC

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL'

Project Number: E1605

Lab Number: L1913201

Report Date: 04/03/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 10 Batch: WG1222408-2								
Arsenic, Total	103		-		80-120	-		
Cadmium, Total	105		-		80-120	-		
Copper, Total	95		-		80-120	-		
Lead, Total	102		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 01-09 Batch: WG1222424-2 SRM Lot Number: D101-540								
Arsenic, Total	102		-		83-117	-		
Cadmium, Total	96		-		83-117	-		
Copper, Total	94		-		83-116	-		
Lead, Total	98		-		83-117	-		

Matrix Spike Analysis Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 10 QC Batch ID: WG1222408-3 QC Sample: L1913201-10 Client ID: RINSATE BLANK (040219)											
Arsenic, Total	ND	0.12	0.128	107	-	-	-	-	75-125	-	20
Cadmium, Total	ND	0.051	0.056	109	-	-	-	-	75-125	-	20
Copper, Total	0.003J	0.25	0.246	98	-	-	-	-	75-125	-	20
Lead, Total	ND	0.51	0.535	105	-	-	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-09 SW2 QC Batch ID: WG1222424-3 WG1222424-4 QC Sample: L1913201-07 Client ID: SB101 EX.-											
Arsenic, Total	2.23	12.2	16.2	115	14.4	102	75-125	12	20		
Cadmium, Total	0.526	5.17	5.49	96	5.22	92	75-125	5	20		
Copper, Total	3.84	25.3	27.7	94	27.9	96	75-125	1	20		
Lead, Total	86.4	51.7	132	88	138	101	75-125	4	20		

Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL'

Project Number: E1605

Lab Number: L1913201

Report Date: 04/03/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 10 QC Batch ID: WG1222408-4 QC Sample: L1913201-10 Client ID: RINSATE BLANK (040219)						
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.003J	0.002J	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20

INORGANICS & MISCELLANEOUS

Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

SAMPLE RESULTS

Lab ID: L1913201-01
Client ID: SB101 EX.-BOTTOM1
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 14:10
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.1		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'

Lab Number: L1913201

Project Number: E1605

Report Date: 04/03/19

SAMPLE RESULTS

Lab ID: L1913201-02

Date Collected: 04/02/19 14:15

Client ID: SB101 EX.-WW1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.5		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-03

Date Collected: 04/02/19 14:20

Client ID: SB101 EX.-BOTTOM2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	73.5		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-04

Date Collected: 04/02/19 14:20

Client ID: SB101 EX.-BOTTOM2 DUPLICATE

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	74.3		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

SAMPLE RESULTS

Lab ID: L1913201-05
Client ID: SB101 EX.-NW
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 14:25
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.6		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-06

Date Collected: 04/02/19 14:35

Client ID: SB101 EX.-SW1

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.4		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

SAMPLE RESULTS

Lab ID: L1913201-07
Client ID: SB101 EX.-SW2
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/02/19 14:40
Date Received: 04/02/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	77.6		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-08

Date Collected: 04/02/19 14:45

Client ID: SB101 EX.-WW2

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	82.9		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**SAMPLE RESULTS**

Lab ID: L1913201-09

Date Collected: 04/02/19 14:50

Client ID: SB101 EX.-EW

Date Received: 04/02/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.9		%	0.100	NA	1	-	04/03/19 03:10	121,2540G	YA



Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL'

Project Number: E1605

Lab Number: L1913201

Report Date: 04/03/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-09 QC Batch ID: WG1222360-1 QC Sample: L1912944-12 Client ID: DUP Sample						
Solids, Total	78.6	78.8	%	0		20

Project Name: IRM 'HOT SPOT REMOVAL'**Lab Number:** L1913201**Project Number:** E1605**Report Date:** 04/03/19**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1913201-01A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-01B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-02A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-02B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-03A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-03B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-04A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-04B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-05A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-05B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-06A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-06B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-07A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-07B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-08A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-08B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-09A	Glass 60ml unpreserved split	A	NA		2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913201-09B	Glass 60mL/2oz unpreserved	A	NA		2.9	Y	Absent		TS(7)
L1913201-10A	Plastic 250ml HNO3 preserved	A	<2	<2	2.9	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)

Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM 'HOT SPOT REMOVAL'
Project Number: E1605

Lab Number: L1913201
Report Date: 04/03/19

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water

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

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

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

 ALPHA <small>ANALYTICAL</small>	NEW YORK CHAIN OF CUSTODY	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page 1 of 2	Date Rec'd in Lab 4/3/19	ALPHA Job # U913201			
		Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288						
Client Information		Project Information		Deliverables		Billing Information			
Client: Hazard Evaluations Inc. Address: 3636 N. Buffalo Rd Orchard Park NY 14127 Phone: 716-667-3130 Fax: 716-667-3156 Email: mhanne@hazardevaluations.com		Project Name: IRM 'Hotspot Removal' Project Location: Mod-Pac Buffalo, NY Project # eibos (Use Project name as Project #) <input type="checkbox"/>		<input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQulS (1 File) <input type="checkbox"/> EQulS (4 File) <input type="checkbox"/> Other		<input checked="" type="checkbox"/> Same as Client Info PO #			
Regulatory Requirement		Disposal Site Information		Turn-Around Time					
<input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:		Standard <input type="checkbox"/> Due Date: Rush (only if pre approved) <input checked="" type="checkbox"/> # of Days: 1 Day (24hr)					
These samples have been previously analyzed by Alpha <input type="checkbox"/>		ANALYSIS		Sample Filtration					
Other project specific requirements/comments: open new sample delivery group		TAL Metals*		<input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)					
Please specify Metals or TAL.				Sample Specific Comments					
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials				
		Date	Time						
13201-01	SB101 Ex. - Bottom 1	4/2/19	2:10pm	Soil	EB	X			
-02	SB101 Ex. - WW1	4/2/19	2:15pm	Soil	EB	X			
03	SB101 Ex. - Bottom 2	4/2/19	2:20pm	Soil	EB	X			
-04	SB101 Ex. - Bottom 2 Duplicate	4/2/19	2:20pm	Soil	EB	X			
-05	SB101 Ex. - NW	4/2/19	2:25pm	Soil	EB	X			
-06	SB101 Ex. - SW1	4/2/19	2:35pm	Soil	EB	X			
-07	SB101 Ex. - SW2	4/2/19	2:40pm	Soil	EB	X			
-07	SB101 Ex. - SW2 MS/MSD	4/2/19	2:40pm	Soil	EB	X			
-08	SB101 Ex. - WW2	4/2/19	2:45pm	Soil	EB	X			
-09	SB101 Ex. - EW	4/2/19	2:50pm	Soil	EB	X			
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type A Preservative A			
		Relinquished By: [Signature]		Date/Time: 4/2/19 1600		Received By: [Signature]		Date/Time: 4/2/19 1600	
		Relinquished By: AAL		Date/Time: 4/2/19 1650		Received By: [Signature]		Date/Time: 4/3/19 0000	
Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)									

 NEW YORK CHAIN OF CUSTODY Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193 Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105	Page 2 of 2	Date Rec'd in Lab 4/2/19	ALPHA Job # 4913201				
	Project Information Project Name: <u>IRM 'Hot Spot Removal'</u> Project Location: <u>Mod-Pac Buffalo NY</u> Project # <u>e1605</u> (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input checked="" type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO #			
Client Information Client: <u>Hazard Evaluations Inc.</u> Address: <u>3636 N. Buffalo Rd</u> <u>Orchard Park NY 14127</u> Phone: <u>716-667-3130</u> Fax: <u>716-667-3156</u> Email: <u>mhanna@hazardevaluations.com</u>		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:				
Turn-Around Time Standard <input type="checkbox"/> Due Date: Rush (only if pre approved) <input checked="" type="checkbox"/> # of Days: <u>1 day (24hr)</u>		ANALYSIS						
These samples have been previously analyzed by Alpha <input type="checkbox"/>		Other project specific requirements/comments: <u>report with pg 1 (continue sample delivery group.)</u> <u>* Close sample delivery group.</u>		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below) Sample Specific Comments				
Please specify Metals or TAL.					TAL Metals			
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date Time	Sample Matrix	Sampler's Initials		ANALYSIS	Sample Filtration	Sample Specific Comments
13201-10	Rinsate Blank (040219)	4/2/19 3:10pm	Water	EB	X	* only total Arsenic, Lead, Copper, Cadmium		
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type: <u>P</u> Preservative: <u>E</u>		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)
Relinquished By: <u>[Signature]</u> Date/Time: <u>4/2/19 1600</u>		Received By: <u>[Signature]</u> Date/Time: <u>4/2/19 1630</u>		Relinquished By: <u>[Signature]</u> Date/Time: <u>4/2/19 1600</u>		Received By: <u>[Signature]</u> Date/Time: <u>4/2/19 1600</u>		



ANALYTICAL REPORT

Lab Number:	L1913892
Client:	Hazard Evaluations, Inc. 3636 North Buffalo Road Orchard Park, NY 14127
ATTN:	Mark Hanna
Phone:	(716) 667-3130
Project Name:	IRM ' HOTSPOT REMOVAL'
Project Number:	E1605
Report Date:	04/12/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1913892-01	TP108 EX.-UC001	SOIL	MOD-PAC BUFFALO, NY	04/03/19 12:40	04/05/19
L1913892-02	TP108 EX.-UC002	SOIL	MOD-PAC BUFFALO, NY	04/03/19 12:50	04/05/19
L1913892-03	TP108 EX.-UC003	SOIL	MOD-PAC BUFFALO, NY	04/03/19 13:00	04/05/19
L1913892-04	SS102 EX-NW	SOIL	MOD-PAC BUFFALO, NY	04/04/19 12:00	04/05/19
L1913892-05	SS102 EX-WW	SOIL	MOD-PAC BUFFALO, NY	04/04/19 12:10	04/05/19
L1913892-06	SS102 EX-WW DUPLICATE	SOIL	MOD-PAC BUFFALO, NY	04/04/19 12:10	04/05/19
L1913892-07	SS102 EX-SW	SOIL	MOD-PAC BUFFALO, NY	04/04/19 12:15	04/05/19
L1913892-08	SS102 EX-EW	SOIL	MOD-PAC BUFFALO, NY	04/04/19 12:20	04/05/19
L1913892-09	SS102 EX-BOTTOM	SOIL	MOD-PAC BUFFALO, NY	04/04/19 12:25	04/05/19
L1913892-10	TP108 EX.-BOTTOM1	SOIL	MOD-PAC BUFFALO, NY	04/04/19 12:35	04/05/19

Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

Case Narrative

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

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

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

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

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

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

Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

Case Narrative (continued)

Report Submission

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

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

Authorized Signature:

 Amita Naik

Title: Technical Director/Representative

Date: 04/12/19

METALS

Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-01

Date Collected: 04/03/19 12:40

Client ID: TP108 EX.-UC001

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.03		mg/kg	0.466	0.097	1	04/09/19 17:40	04/12/19 01:40	EPA 3050B	1,6010D	AB
Cadmium, Total	ND		mg/kg	0.466	0.046	1	04/09/19 17:40	04/12/19 01:40	EPA 3050B	1,6010D	AB
Copper, Total	14.8		mg/kg	0.466	0.120	1	04/09/19 17:40	04/12/19 01:40	EPA 3050B	1,6010D	AB
Lead, Total	9.41		mg/kg	2.33	0.125	1	04/09/19 17:40	04/12/19 01:40	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-02

Date Collected: 04/03/19 12:50

Client ID: TP108 EX.-UC002

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.51		mg/kg	0.504	0.105	1	04/09/19 17:40	04/12/19 01:44	EPA 3050B	1,6010D	AB
Cadmium, Total	ND		mg/kg	0.504	0.049	1	04/09/19 17:40	04/12/19 01:44	EPA 3050B	1,6010D	AB
Copper, Total	16.9		mg/kg	0.504	0.130	1	04/09/19 17:40	04/12/19 01:44	EPA 3050B	1,6010D	AB
Lead, Total	12.7		mg/kg	2.52	0.135	1	04/09/19 17:40	04/12/19 01:44	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-03

Date Collected: 04/03/19 13:00

Client ID: TP108 EX.-UC003

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 81%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.17		mg/kg	0.464	0.097	1	04/09/19 17:40	04/12/19 01:49	EPA 3050B	1,6010D	AB
Cadmium, Total	ND		mg/kg	0.464	0.046	1	04/09/19 17:40	04/12/19 01:49	EPA 3050B	1,6010D	AB
Copper, Total	16.9		mg/kg	0.464	0.120	1	04/09/19 17:40	04/12/19 01:49	EPA 3050B	1,6010D	AB
Lead, Total	13.5		mg/kg	2.32	0.124	1	04/09/19 17:40	04/12/19 01:49	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-04

Date Collected: 04/04/19 12:00

Client ID: SS102 EX-NW

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	18.2		mg/kg	0.447	0.093	1	04/09/19 17:40	04/12/19 01:53	EPA 3050B	1,6010D	AB
Cadmium, Total	1.15		mg/kg	0.447	0.044	1	04/09/19 17:40	04/12/19 01:53	EPA 3050B	1,6010D	AB
Copper, Total	1850		mg/kg	0.447	0.115	1	04/09/19 17:40	04/12/19 01:53	EPA 3050B	1,6010D	AB
Lead, Total	189		mg/kg	2.24	0.120	1	04/09/19 17:40	04/12/19 01:53	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-05

Date Collected: 04/04/19 12:10

Client ID: SS102 EX-WW

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	16.3		mg/kg	0.458	0.095	1	04/09/19 17:40	04/12/19 02:40	EPA 3050B	1,6010D	AB
Cadmium, Total	0.651		mg/kg	0.458	0.045	1	04/09/19 17:40	04/12/19 02:40	EPA 3050B	1,6010D	AB
Copper, Total	36.4		mg/kg	0.458	0.118	1	04/09/19 17:40	04/12/19 02:40	EPA 3050B	1,6010D	AB
Lead, Total	98.3		mg/kg	2.29	0.123	1	04/09/19 17:40	04/12/19 02:40	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-06

Date Collected: 04/04/19 12:10

Client ID: SS102 EX-WW DUPLICATE

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 85%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	15.6		mg/kg	0.458	0.095	1	04/09/19 17:40	04/12/19 02:44	EPA 3050B	1,6010D	AB
Cadmium, Total	0.494		mg/kg	0.458	0.045	1	04/09/19 17:40	04/12/19 02:44	EPA 3050B	1,6010D	AB
Copper, Total	30.9		mg/kg	0.458	0.118	1	04/09/19 17:40	04/12/19 02:44	EPA 3050B	1,6010D	AB
Lead, Total	201		mg/kg	2.29	0.123	1	04/09/19 17:40	04/12/19 02:44	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-07

Date Collected: 04/04/19 12:15

Client ID: SS102 EX-SW

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 88%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	20.6		mg/kg	0.433	0.090	1	04/10/19 17:40	04/12/19 00:31	EPA 3050B	1,6010D	AB
Cadmium, Total	3.65		mg/kg	0.433	0.042	1	04/10/19 17:40	04/12/19 00:31	EPA 3050B	1,6010D	AB
Copper, Total	50.2		mg/kg	0.433	0.112	1	04/10/19 17:40	04/12/19 00:31	EPA 3050B	1,6010D	AB
Lead, Total	342		mg/kg	2.16	0.116	1	04/10/19 17:40	04/12/19 00:31	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-08

Date Collected: 04/04/19 12:20

Client ID: SS102 EX-EW

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.95		mg/kg	0.428	0.089	1	04/10/19 17:40	04/12/19 00:36	EPA 3050B	1,6010D	AB
Cadmium, Total	0.822		mg/kg	0.428	0.042	1	04/10/19 17:40	04/12/19 00:36	EPA 3050B	1,6010D	AB
Copper, Total	15.4		mg/kg	0.428	0.110	1	04/10/19 17:40	04/12/19 00:36	EPA 3050B	1,6010D	AB
Lead, Total	37.9		mg/kg	2.14	0.115	1	04/10/19 17:40	04/12/19 00:36	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-09

Date Collected: 04/04/19 12:25

Client ID: SS102 EX-BOTTOM

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 91%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.86		mg/kg	0.425	0.088	1	04/10/19 17:40	04/12/19 00:40	EPA 3050B	1,6010D	AB
Cadmium, Total	0.544		mg/kg	0.425	0.042	1	04/10/19 17:40	04/12/19 00:40	EPA 3050B	1,6010D	AB
Copper, Total	14.1		mg/kg	0.425	0.110	1	04/10/19 17:40	04/12/19 00:40	EPA 3050B	1,6010D	AB
Lead, Total	113		mg/kg	2.13	0.114	1	04/10/19 17:40	04/12/19 00:40	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-10

Date Collected: 04/04/19 12:35

Client ID: TP108 EX.-BOTTOM1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.52		mg/kg	0.497	0.103	1	04/10/19 17:40	04/12/19 00:45	EPA 3050B	1,6010D	AB
Cadmium, Total	0.398	J	mg/kg	0.497	0.049	1	04/10/19 17:40	04/12/19 00:45	EPA 3050B	1,6010D	AB
Copper, Total	19.2		mg/kg	0.497	0.128	1	04/10/19 17:40	04/12/19 00:45	EPA 3050B	1,6010D	AB
Lead, Total	9.26		mg/kg	2.49	0.133	1	04/10/19 17:40	04/12/19 00:45	EPA 3050B	1,6010D	AB



Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-06 Batch: WG1224670-1									
Arsenic, Total	ND	mg/kg	0.400	0.083	1	04/09/19 17:40	04/11/19 22:26	1,6010D	AB
Cadmium, Total	ND	mg/kg	0.400	0.039	1	04/09/19 17:40	04/11/19 22:26	1,6010D	AB
Copper, Total	ND	mg/kg	0.400	0.103	1	04/09/19 17:40	04/11/19 22:26	1,6010D	AB
Lead, Total	ND	mg/kg	2.00	0.107	1	04/09/19 17:40	04/11/19 22:26	1,6010D	AB

Prep Information

Digestion Method: EPA 3050B

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 07-10 Batch: WG1224851-1									
Arsenic, Total	ND	mg/kg	0.400	0.083	1	04/10/19 17:40	04/11/19 22:37	1,6010D	AB
Cadmium, Total	ND	mg/kg	0.400	0.039	1	04/10/19 17:40	04/11/19 22:37	1,6010D	AB
Copper, Total	ND	mg/kg	0.400	0.103	1	04/10/19 17:40	04/11/19 22:37	1,6010D	AB
Lead, Total	ND	mg/kg	2.00	0.107	1	04/10/19 17:40	04/11/19 22:37	1,6010D	AB

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01-06 Batch: WG1224670-2 SRM Lot Number: D101-540								
Arsenic, Total	105		-		83-117	-		
Cadmium, Total	105		-		83-117	-		
Copper, Total	96		-		83-116	-		
Lead, Total	98		-		83-117	-		
Total Metals - Mansfield Lab Associated sample(s): 07-10 Batch: WG1224851-2 SRM Lot Number: D101-540								
Arsenic, Total	103		-		83-117	-		
Cadmium, Total	101		-		83-117	-		
Copper, Total	91		-		83-116	-		
Lead, Total	99		-		83-117	-		

Matrix Spike Analysis Batch Quality Control

Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1224670-3 QC Sample: L1913750-05 Client ID: MS Sample												
Arsenic, Total	9.48	12.4	28.2	151	Q	-	-		75-125	-		20
Cadmium, Total	ND	5.28	3.77	71	Q	-	-		75-125	-		20
Copper, Total	28.0	25.9	63.2	136	Q	-	-		75-125	-		20
Lead, Total	12.3	52.8	73.1	115		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 07-10 QC Batch ID: WG1224851-3 QC Sample: L1913353-02 Client ID: MS Sample												
Arsenic, Total	2.51	9.42	10.8	88		-	-		75-125	-		20
Cadmium, Total	0.162J	4	4.06	101		-	-		75-125	-		20
Copper, Total	19.6	19.6	43.3	121		-	-		75-125	-		20
Lead, Total	67.3	40	66.2	0	Q	-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM ' HOTSPOT REMOVAL'

Project Number: E1605

Lab Number: L1913892

Report Date: 04/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-06 QC Batch ID: WG1224670-4 QC Sample: L1913750-05 Client ID: DUP Sample						
Arsenic, Total	9.48	17.2	mg/kg	58	Q	20
Cadmium, Total	ND	ND	mg/kg	NC		20
Copper, Total	28.0	35.3	mg/kg	23	Q	20
Lead, Total	12.3	39.1	mg/kg	104	Q	20
Total Metals - Mansfield Lab Associated sample(s): 07-10 QC Batch ID: WG1224851-4 QC Sample: L1913353-02 Client ID: DUP Sample						
Arsenic, Total	2.51	1.51	mg/kg	50	Q	20
Cadmium, Total	0.162J	0.164J	mg/kg	NC		20
Copper, Total	19.6	21.4	mg/kg	9		20
Lead, Total	67.3	115	mg/kg	52	Q	20

INORGANICS & MISCELLANEOUS

Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-01

Date Collected: 04/03/19 12:40

Client ID: TP108 EX.-UC001

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	80.7		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-02

Date Collected: 04/03/19 12:50

Client ID: TP108 EX.-UC002

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.7		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-03

Date Collected: 04/03/19 13:00

Client ID: TP108 EX.-UC003

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	81.0		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-04

Date Collected: 04/04/19 12:00

Client ID: SS102 EX-NW

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.4		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1913892-05
Client ID: SS102 EX-WW
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/04/19 12:10
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.0		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-06
 Client ID: SS102 EX-WW DUPLICATE
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/04/19 12:10
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.4		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-07

Date Collected: 04/04/19 12:15

Client ID: SS102 EX-SW

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	87.8		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-08

Date Collected: 04/04/19 12:20

Client ID: SS102 EX-EW

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	88.5		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**SAMPLE RESULTS**

Lab ID: L1913892-09

Date Collected: 04/04/19 12:25

Client ID: SS102 EX-BOTTOM

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	91.0		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Project Name: IRM ' HOTSPOT REMOVAL'

Lab Number: L1913892

Project Number: E1605

Report Date: 04/12/19

SAMPLE RESULTS

Lab ID: L1913892-10

Date Collected: 04/04/19 12:35

Client ID: TP108 EX.-BOTTOM1

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.3		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA



Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM ' HOTSPOT REMOVAL'

Project Number: E1605

Lab Number: L1913892

Report Date: 04/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-10 QC Batch ID: WG1224413-1 QC Sample: L1913785-01 Client ID: DUP Sample						
Solids, Total	86.9	85.9	%	1		20

Project Name: IRM ' HOTSPOT REMOVAL'**Lab Number:** L1913892**Project Number:** E1605**Report Date:** 04/12/19**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1913892-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-01B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-02A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-02B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-03B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-04A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-04B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-05A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-05B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-06A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-06B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-07A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-07B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-08A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-08B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-09A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-09B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)
L1913892-10A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		4.1	Y	Absent		TS(7)
L1913892-10B	Glass 60ml unpreserved split	A	NA		4.1	Y	Absent		AS-TI(180),CU-TI(180),PB-TI(180),CD-TI(180)

Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM ' HOTSPOT REMOVAL'
Project Number: E1605

Lab Number: L1913892
Report Date: 04/12/19

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water

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

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

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



ANALYTICAL REPORT

Lab Number:	L1915737
Client:	Hazard Evaluations, Inc. 3636 North Buffalo Road Orchard Park, NY 14127
ATTN:	Mark Hanna
Phone:	(716) 667-3130
Project Name:	IRM HOTSPOT RE-EXCAVATION
Project Number:	E1605
Report Date:	04/19/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1915737-01	SS102EX-NW(041619)	SOIL	MOD-PAC 1801 ELMWOOD AVE., BUFFALO, NY	04/16/19 09:00	04/17/19
L1915737-02	TP104EX.-EW(041719)	SOIL	MOD-PAC 1801 ELMWOOD AVE., BUFFALO, NY	04/17/19 09:00	04/17/19

Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

Case Narrative

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

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

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

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

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

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

Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

Case Narrative (continued)

Report Submission

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

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

Authorized Signature:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 04/19/19

METALS

Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

SAMPLE RESULTS

Lab ID: L1915737-01
 Client ID: SS102EX-NW(041619)
 Sample Location: MOD-PAC 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/16/19 09:00
 Date Received: 04/17/19
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil
 Percent Solids: 89%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Copper, Total	40.4		mg/kg	0.422	0.109	1	04/18/19 17:58	04/19/19 00:58	EPA 3050B	1,6010D	AB



Project Name: IRM HOTSPOT RE-EXCAVATION**Lab Number:** L1915737**Project Number:** E1605**Report Date:** 04/19/19**SAMPLE RESULTS**

Lab ID: L1915737-02

Date Collected: 04/17/19 09:00

Client ID: TP104EX.-EW(041719)

Date Received: 04/17/19

Sample Location: MOD-PAC 1801 ELMWOOD AVE., BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Soil

Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.35		mg/kg	0.504	0.105	1	04/18/19 17:58	04/19/19 01:02	EPA 3050B	1,6010D	AB



Project Name: IRM HOTSPOT RE-EXCAVATION

Lab Number: L1915737

Project Number: E1605

Report Date: 04/19/19

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1227879-1										
Arsenic, Total	0.128	J	mg/kg	0.400	0.083	1	04/18/19 17:58	04/18/19 23:15	1,6010D	AB
Copper, Total	ND		mg/kg	0.400	0.103	1	04/18/19 17:58	04/18/19 23:15	1,6010D	AB

Prep Information

Digestion Method: EPA 3050B

Lab Control Sample Analysis

Batch Quality Control

Project Name: IRM HOTSPOT RE-EXCAVATION

Project Number: E1605

Lab Number: L1915737

Report Date: 04/19/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1227879-2 SRM Lot Number: D101-540								
Arsenic, Total	98		-		83-117	-		
Copper, Total	90		-		83-116	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: IRM HOTSPOT RE-EXCAVATION

Lab Number: L1915737

Project Number: E1605

Report Date: 04/19/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1227879-3 QC Sample: L1915704-01 Client ID: MS Sample												
Arsenic, Total	4.61	10.8	14.8	94		-	-		75-125	-		20
Copper, Total	16.1	22.6	38.7	100		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM HOTSPOT RE-EXCAVATION

Project Number: E1605

Lab Number: L1915737

Report Date: 04/19/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1227879-4 QC Sample: L1915704-01 Client ID: DUP Sample						
Arsenic, Total	4.61	4.19	mg/kg	10		20
Copper, Total	16.1	12.0	mg/kg	29	Q	20

INORGANICS & MISCELLANEOUS

Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

SAMPLE RESULTS

Lab ID: L1915737-01
Client ID: SS102EX-NW(041619)
Sample Location: MOD-PAC 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/16/19 09:00
Date Received: 04/17/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	89.3		%	0.100	NA	1	-	04/18/19 04:23	121,2540G	YA



Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

SAMPLE RESULTS

Lab ID: L1915737-02
Client ID: TP104EX.-EW(041719)
Sample Location: MOD-PAC 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/17/19 09:00
Date Received: 04/17/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.1		%	0.100	NA	1	-	04/18/19 04:23	121,2540G	YA



Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM HOTSPOT RE-EXCAVATION

Project Number: E1605

Lab Number: L1915737

Report Date: 04/19/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1227589-1 QC Sample: L1915737-01 Client ID: SS102EX-NW(041619)						
Solids, Total	89.3	88.5	%	1		20

Project Name: IRM HOTSPOT RE-EXCAVATION

Project Number: E1605

Serial_No:04191912:17

Lab Number: L1915737

Report Date: 04/19/19

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler **Custody Seal**

A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1915737-01A	Glass 60ml unpreserved split	A	NA		2.5	Y	Absent		CU-TI(180)
L1915737-01B	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		TS(7)
L1915737-02A	Glass 60ml unpreserved split	A	NA		2.5	Y	Absent		AS-TI(180)
L1915737-02B	Glass 60mL/2oz unpreserved	A	NA		2.5	Y	Absent		TS(7)

Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM HOTSPOT RE-EXCAVATION
Project Number: E1605

Lab Number: L1915737
Report Date: 04/19/19

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water

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

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

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

Appendix D

Soil Disposal Manifests



ANALYTICAL REPORT

Lab Number:	L1913895
Client:	Hazard Evaluations, Inc. 3636 North Buffalo Road Orchard Park, NY 14127
ATTN:	Mark Hanna
Phone:	(716) 667-3130
Project Name:	IRM 'HOT SPOT REMOVAL WASTECHA
Project Number:	E1605
Report Date:	04/15/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1913895-01	WC101	SOIL	MOD-PAC BUFFALO, NY	04/05/19 11:30	04/05/19
L1913895-02	WC102	SOIL	MOD-PAC BUFFALO, NY	04/05/19 11:40	04/05/19
L1913895-03	WC103	SOIL	MOD-PAC BUFFALO, NY	04/05/19 11:50	04/05/19
L1913895-04	WC104	SOIL	MOD-PAC BUFFALO, NY	04/05/19 12:00	04/05/19

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Case Narrative

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

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

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

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

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

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

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Case Narrative (continued)

Report Submission

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

Sample Receipt

L1913895-01 through -04: The sample was received in an inappropriate container for the TCLP Volatiles analysis.

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

Authorized Signature:

 Amita Naik

Title: Technical Director/Representative

Date: 04/15/19

ORGANICS

VOLATILES

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-01
 Client ID: WC101
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:30
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 04/11/19 18:51
 Analyst: MM
 Percent Solids: 87%
 TCLP/SPLP Ext. Date: 04/10/19 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	121		70-130
dibromofluoromethane	111		70-130

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-02
 Client ID: WC102
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:40
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 04/11/19 19:22
 Analyst: MM
 Percent Solids: 86%
 TCLP/SPLP Ext. Date: 04/10/19 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	118		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	125		70-130
dibromofluoromethane	114		70-130

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-03
 Client ID: WC103
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:50
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 04/11/19 19:52
 Analyst: MM
 Percent Solids: 86%
 TCLP/SPLP Ext. Date: 04/10/19 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	114		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	122		70-130
dibromofluoromethane	110		70-130

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-04
 Client ID: WC104
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 12:00
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8260C
 Analytical Date: 04/11/19 20:22
 Analyst: MM
 Percent Solids: 86%
 TCLP/SPLP Ext. Date: 04/10/19 11:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Volatiles by EPA 1311 - Westborough Lab						
Chloroform	ND		ug/l	7.5	2.2	10
Carbon tetrachloride	ND		ug/l	5.0	1.3	10
Tetrachloroethene	ND		ug/l	5.0	1.8	10
Chlorobenzene	ND		ug/l	5.0	1.8	10
1,2-Dichloroethane	ND		ug/l	5.0	1.3	10
Benzene	ND		ug/l	5.0	1.6	10
Vinyl chloride	ND		ug/l	10	0.71	10
1,1-Dichloroethene	ND		ug/l	5.0	1.7	10
Trichloroethene	ND		ug/l	5.0	1.8	10
1,4-Dichlorobenzene	ND		ug/l	25	1.9	10
2-Butanone	ND		ug/l	50	19.	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	119		70-130
dibromofluoromethane	110		70-130

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

**Method Blank Analysis
 Batch Quality Control**

Analytical Method: 1,8260C
 Analytical Date: 04/11/19 17:51
 Analyst: AD
 TCLP/SPLP Extraction Date: 04/10/19 11:50

Extraction Date: 04/10/19 11:50

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Volatiles by EPA 1311 - Westborough Lab for sample(s): 01-04 Batch: WG1225674-5					
Chloroform	ND		ug/l	7.5	2.2
Carbon tetrachloride	ND		ug/l	5.0	1.3
Tetrachloroethene	ND		ug/l	5.0	1.8
Chlorobenzene	ND		ug/l	5.0	1.8
1,2-Dichloroethane	ND		ug/l	5.0	1.3
Benzene	ND		ug/l	5.0	1.6
Vinyl chloride	ND		ug/l	10	0.71
1,1-Dichloroethene	ND		ug/l	5.0	1.7
Trichloroethene	ND		ug/l	5.0	1.8
1,4-Dichlorobenzene	ND		ug/l	25	1.9
2-Butanone	ND		ug/l	50	19.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	116		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	125		70-130
dibromofluoromethane	109		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	RPD	
	%Recovery	Qual	%Recovery	Qual			Qual	Limits
TCLP Volatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-04 Batch: WG1225674-3 WG1225674-4								
Chloroform	100		100		70-130	0		20
Carbon tetrachloride	97		95		63-132	2		20
Tetrachloroethene	94		92		70-130	2		20
Chlorobenzene	100		100		75-130	0		25
1,2-Dichloroethane	120		110		70-130	9		20
Benzene	96		93		70-130	3		25
Vinyl chloride	90		90		55-140	0		20
1,1-Dichloroethene	80		79		61-145	1		25
Trichloroethene	100		100		70-130	0		25
1,4-Dichlorobenzene	100		95		70-130	5		20
2-Butanone	130		130		63-138	0		20

Surrogate	LCS		LCSD		Acceptance Criteria
	%Recovery	Qual	%Recovery	Qual	
1,2-Dichloroethane-d4	110		117		70-130
Toluene-d8	103		106		70-130
4-Bromofluorobenzene	101		98		70-130
dibromofluoromethane	107		107		70-130



SEMIVOLATILES

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-01
 Client ID: WC101
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:30
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 04/12/19 19:36
 Analyst: JG
 Percent Solids: 87%
 TCLP/SPLP Ext. Date: 04/09/19 06:20

Extraction Method: EPA 3510C
 Extraction Date: 04/11/19 18:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		21-120
Phenol-d6	79		10-120
Nitrobenzene-d5	101		23-120
2-Fluorobiphenyl	93		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	83		33-120

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-02
 Client ID: WC102
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:40
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 04/12/19 20:00
 Analyst: JG
 Percent Solids: 86%
 TCLP/SPLP Ext. Date: 04/09/19 06:20

Extraction Method: EPA 3510C
 Extraction Date: 04/11/19 18:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		21-120
Phenol-d6	76		10-120
Nitrobenzene-d5	96		23-120
2-Fluorobiphenyl	87		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	81		33-120

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-03
 Client ID: WC103
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:50
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 04/12/19 17:11
 Analyst: JG
 Percent Solids: 86%
 TCLP/SPLP Ext. Date: 04/09/19 06:20

Extraction Method: EPA 3510C
 Extraction Date: 04/11/19 18:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	85		21-120
Phenol-d6	82		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	99		15-120
2,4,6-Tribromophenol	101		10-120
4-Terphenyl-d14	92		33-120

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-04
 Client ID: WC104
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 12:00
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8270D
 Analytical Date: 04/12/19 17:35
 Analyst: JG
 Percent Solids: 86%
 TCLP/SPLP Ext. Date: 04/09/19 06:20

Extraction Method: EPA 3510C
 Extraction Date: 04/11/19 18:48

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
TCLP Semivolatiles by EPA 1311 - Westborough Lab						
Hexachlorobenzene	ND		ug/l	10	2.9	1
2,4-Dinitrotoluene	ND		ug/l	25	4.2	1
Hexachlorobutadiene	ND		ug/l	10	3.6	1
Hexachloroethane	ND		ug/l	10	3.4	1
Nitrobenzene	ND		ug/l	10	3.8	1
2,4,6-Trichlorophenol	ND		ug/l	25	3.4	1
Pentachlorophenol	ND		ug/l	50	17.	1
2-Methylphenol	ND		ug/l	25	5.1	1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6	1
2,4,5-Trichlorophenol	ND		ug/l	25	3.6	1
Pyridine	ND		ug/l	18	9.4	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	86		21-120
Phenol-d6	82		10-120
Nitrobenzene-d5	104		23-120
2-Fluorobiphenyl	100		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	91		33-120

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

**Method Blank Analysis
 Batch Quality Control**

Analytical Method: 1,8270D
 Analytical Date: 04/12/19 13:07
 Analyst: JG
 TCLP/SPLP Extraction Date: 04/09/19 06:20

Extraction Method: EPA 3510C
 Extraction Date: 04/11/19 18:48

Parameter	Result	Qualifier	Units	RL	MDL
TCLP Semivolatiles by EPA 1311 - Westborough Lab for sample(s): 01-04 Batch: WG1225585-1					
Hexachlorobenzene	ND		ug/l	10	2.9
2,4-Dinitrotoluene	ND		ug/l	25	4.2
Hexachlorobutadiene	ND		ug/l	10	3.6
Hexachloroethane	ND		ug/l	10	3.4
Nitrobenzene	ND		ug/l	10	3.8
2,4,6-Trichlorophenol	ND		ug/l	25	3.4
Pentachlorophenol	ND		ug/l	50	17.
2-Methylphenol	ND		ug/l	25	5.1
3-Methylphenol/4-Methylphenol	ND		ug/l	25	5.6
2,4,5-Trichlorophenol	ND		ug/l	25	3.6
Pyridine	ND		ug/l	18	9.4

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	75		21-120
Phenol-d6	72		10-120
Nitrobenzene-d5	92		23-120
2-Fluorobiphenyl	94		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	93		33-120

Lab Control Sample Analysis Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
TCLP Semivolatiles by EPA 1311 - Westborough Lab Associated sample(s): 01-04 Batch: WG1225585-2 WG1225585-3								
Hexachlorobenzene	89		84		40-140	6		30
2,4-Dinitrotoluene	93		88		40-132	6		30
Hexachlorobutadiene	85		77		28-111	10		30
Hexachloroethane	77		69		21-105	11		30
Nitrobenzene	92		86		40-140	7		30
2,4,6-Trichlorophenol	96		90		30-130	6		30
Pentachlorophenol	86		80		9-103	7		30
2-Methylphenol	81		75		30-130	8		30
3-Methylphenol/4-Methylphenol	79		73		30-130	8		30
2,4,5-Trichlorophenol	105		100		30-130	5		30
Pyridine	25		17		10-66	38	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	82		75		21-120
Phenol-d6	78		73		10-120
Nitrobenzene-d5	95		87		23-120
2-Fluorobiphenyl	90		83		15-120
2,4,6-Tribromophenol	96		87		10-120
4-Terphenyl-d14	82		74		33-120



PCBS

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-01
Client ID: WC101
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:30
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 04/12/19 05:46
Analyst: WR
Percent Solids: 87%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 15:50
Cleanup Method: EPA 3665A
Cleanup Date: 04/11/19
Cleanup Method: EPA 3660B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.2	3.39	1	A
Aroclor 1221	ND		ug/kg	38.2	3.83	1	A
Aroclor 1232	ND		ug/kg	38.2	8.10	1	A
Aroclor 1242	ND		ug/kg	38.2	5.15	1	A
Aroclor 1248	ND		ug/kg	38.2	5.73	1	A
Aroclor 1254	ND		ug/kg	38.2	4.18	1	A
Aroclor 1260	14.2	JP	ug/kg	38.2	7.06	1	B
Aroclor 1262	ND		ug/kg	38.2	4.85	1	A
Aroclor 1268	ND		ug/kg	38.2	3.96	1	A
PCBs, Total	14.2	J	ug/kg	38.2	3.39	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	132		30-150	B

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-02
Client ID: WC102
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:40
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 04/12/19 05:59
Analyst: WR
Percent Solids: 86%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 15:50
Cleanup Method: EPA 3665A
Cleanup Date: 04/11/19
Cleanup Method: EPA 3660B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	38.3	3.40	1	A
Aroclor 1221	ND		ug/kg	38.3	3.84	1	A
Aroclor 1232	ND		ug/kg	38.3	8.12	1	A
Aroclor 1242	ND		ug/kg	38.3	5.17	1	A
Aroclor 1248	ND		ug/kg	38.3	5.75	1	A
Aroclor 1254	ND		ug/kg	38.3	4.19	1	A
Aroclor 1260	11.7	JP	ug/kg	38.3	7.08	1	B
Aroclor 1262	ND		ug/kg	38.3	4.87	1	A
Aroclor 1268	ND		ug/kg	38.3	3.97	1	A
PCBs, Total	11.7	J	ug/kg	38.3	3.40	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	49		30-150	B
Decachlorobiphenyl	82		30-150	B

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-03
Client ID: WC103
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:50
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 04/12/19 06:12
Analyst: WR
Percent Solids: 86%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 15:50
Cleanup Method: EPA 3665A
Cleanup Date: 04/11/19
Cleanup Method: EPA 3660B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.4	3.32	1	A
Aroclor 1221	ND		ug/kg	37.4	3.75	1	A
Aroclor 1232	ND		ug/kg	37.4	7.93	1	A
Aroclor 1242	ND		ug/kg	37.4	5.04	1	A
Aroclor 1248	ND		ug/kg	37.4	5.61	1	A
Aroclor 1254	ND		ug/kg	37.4	4.09	1	A
Aroclor 1260	15.6	JP	ug/kg	37.4	6.91	1	B
Aroclor 1262	ND		ug/kg	37.4	4.75	1	A
Aroclor 1268	ND		ug/kg	37.4	3.88	1	A
PCBs, Total	15.6	J	ug/kg	37.4	3.32	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	75		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	127		30-150	B

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-04
Client ID: WC104
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 12:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8082A
Analytical Date: 04/12/19 06:25
Analyst: WR
Percent Solids: 86%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 15:50
Cleanup Method: EPA 3665A
Cleanup Date: 04/11/19
Cleanup Method: EPA 3660B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/kg	37.4	3.32	1	A
Aroclor 1221	ND		ug/kg	37.4	3.75	1	A
Aroclor 1232	ND		ug/kg	37.4	7.94	1	A
Aroclor 1242	ND		ug/kg	37.4	5.05	1	A
Aroclor 1248	ND		ug/kg	37.4	5.62	1	A
Aroclor 1254	ND		ug/kg	37.4	4.10	1	A
Aroclor 1260	13.8	JP	ug/kg	37.4	6.92	1	B
Aroclor 1262	ND		ug/kg	37.4	4.76	1	A
Aroclor 1268	ND		ug/kg	37.4	3.88	1	A
PCBs, Total	13.8	J	ug/kg	37.4	3.32	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	110		30-150	B

Project Name: IRM HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8082A
Analytical Date: 04/12/19 03:50
Analyst: WR

Extraction Method: EPA 3546
Extraction Date: 04/11/19 15:50
Cleanup Method: EPA 3665A
Cleanup Date: 04/11/19
Cleanup Method: EPA 3660B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-04 Batch: WG1225531-1						
Aroclor 1016	ND		ug/kg	32.1	2.85	A
Aroclor 1221	ND		ug/kg	32.1	3.22	A
Aroclor 1232	ND		ug/kg	32.1	6.81	A
Aroclor 1242	ND		ug/kg	32.1	4.33	A
Aroclor 1248	ND		ug/kg	32.1	4.82	A
Aroclor 1254	ND		ug/kg	32.1	3.51	A
Aroclor 1260	ND		ug/kg	32.1	5.93	A
Aroclor 1262	ND		ug/kg	32.1	4.08	A
Aroclor 1268	ND		ug/kg	32.1	3.33	A
PCBs, Total	ND		ug/kg	32.1	2.85	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	89		30-150	B
Decachlorobiphenyl	128		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA

Lab Number: L1913895

Project Number: E1605

Report Date: 04/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1225531-2 WG1225531-3									
Aroclor 1016	74		79		40-140	7		50	A
Aroclor 1260	73		76		40-140	4		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		92		30-150	A
Decachlorobiphenyl	80		78		30-150	A
2,4,5,6-Tetrachloro-m-xylene	97		94		30-150	B
Decachlorobiphenyl	128		124		30-150	B

PESTICIDES

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-01
Client ID: WC101
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:30
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 04/12/19 11:07
Analyst: BM
Percent Solids: 87%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 17:44
Cleanup Method: EPA 3620B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.79	0.351	1	A
Lindane	ND		ug/kg	0.747	0.334	1	A
Alpha-BHC	ND		ug/kg	0.747	0.212	1	A
Beta-BHC	ND		ug/kg	1.79	0.680	1	A
Heptachlor	ND		ug/kg	0.897	0.402	1	A
Aldrin	ND		ug/kg	1.79	0.632	1	A
Heptachlor epoxide	ND	IP	ug/kg	3.36	1.01	1	B
Endrin	ND		ug/kg	0.747	0.306	1	A
Endrin aldehyde	ND		ug/kg	2.24	0.785	1	A
Endrin ketone	ND		ug/kg	1.79	0.462	1	A
Dieldrin	ND		ug/kg	1.12	0.560	1	A
4,4'-DDE	ND		ug/kg	1.79	0.415	1	A
4,4'-DDD	ND		ug/kg	1.79	0.640	1	A
4,4'-DDT	4.36	IP	ug/kg	3.36	1.44	1	B
Endosulfan I	ND		ug/kg	1.79	0.424	1	A
Endosulfan II	ND		ug/kg	1.79	0.599	1	A
Endosulfan sulfate	ND		ug/kg	0.747	0.356	1	A
Methoxychlor	ND		ug/kg	3.36	1.05	1	A
Toxaphene	ND		ug/kg	33.6	9.42	1	A
cis-Chlordane	ND		ug/kg	2.24	0.625	1	A
trans-Chlordane	ND		ug/kg	2.24	0.592	1	A
Chlordane	ND		ug/kg	14.6	5.94	1	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-01
Client ID: WC101
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:30
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	97		30-150	B
2,4,5,6-Tetrachloro-m-xylene	89		30-150	A
Decachlorobiphenyl	140		30-150	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-01
 Client ID: WC101
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:30
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8151A
 Analytical Date: 04/13/19 00:17
 Analyst: DGM
 Percent Solids: 87%
 Methylation Date: 04/11/19 18:32

Extraction Method: EPA 8151A
 Extraction Date: 04/11/19 01:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/kg	192	12.1	1	A
2,4,5-T	ND		ug/kg	192	5.94	1	A
2,4,5-TP (Silvex)	ND		ug/kg	192	5.10	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	102		30-150	A
DCAA	91		30-150	B

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-02
Client ID: WC102
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:40
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 04/12/19 11:19
Analyst: BM
Percent Solids: 86%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 17:44
Cleanup Method: EPA 3620B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.83	0.358	1	A
Lindane	ND		ug/kg	0.762	0.341	1	A
Alpha-BHC	ND		ug/kg	0.762	0.216	1	A
Beta-BHC	ND		ug/kg	1.83	0.693	1	A
Heptachlor	ND		ug/kg	0.914	0.410	1	A
Aldrin	ND		ug/kg	1.83	0.644	1	A
Heptachlor epoxide	ND	IP	ug/kg	3.43	1.03	1	B
Endrin	ND		ug/kg	0.762	0.312	1	A
Endrin aldehyde	ND		ug/kg	2.29	0.800	1	A
Endrin ketone	ND		ug/kg	1.83	0.471	1	A
Dieldrin	ND		ug/kg	1.14	0.572	1	A
4,4'-DDE	ND		ug/kg	1.83	0.423	1	A
4,4'-DDD	ND		ug/kg	1.83	0.652	1	A
4,4'-DDT	ND		ug/kg	3.43	1.47	1	A
Endosulfan I	ND		ug/kg	1.83	0.432	1	A
Endosulfan II	ND		ug/kg	1.83	0.611	1	A
Endosulfan sulfate	ND		ug/kg	0.762	0.363	1	A
Methoxychlor	ND		ug/kg	3.43	1.07	1	A
Toxaphene	ND		ug/kg	34.3	9.60	1	A
cis-Chlordane	ND		ug/kg	2.29	0.637	1	A
trans-Chlordane	ND		ug/kg	2.29	0.604	1	A
Chlordane	ND		ug/kg	14.8	6.06	1	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-02
Client ID: WC102
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:40
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	80		30-150	B
2,4,5,6-Tetrachloro-m-xylene	86		30-150	A
Decachlorobiphenyl	110		30-150	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-02
 Client ID: WC102
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:40
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8151A
 Analytical Date: 04/13/19 00:35
 Analyst: DGM
 Percent Solids: 86%
 Methylation Date: 04/11/19 18:32

Extraction Method: EPA 8151A
 Extraction Date: 04/11/19 01:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/kg	194	12.2	1	A
2,4,5-T	ND		ug/kg	194	6.01	1	A
2,4,5-TP (Silvex)	ND		ug/kg	194	5.16	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	102		30-150	A
DCAA	91		30-150	B

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-03
Client ID: WC103
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:50
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 04/12/19 11:32
Analyst: BM
Percent Solids: 86%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 17:44
Cleanup Method: EPA 3620B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.85	0.362	1	A
Lindane	ND		ug/kg	0.769	0.344	1	A
Alpha-BHC	ND		ug/kg	0.769	0.218	1	A
Beta-BHC	ND		ug/kg	1.85	0.700	1	A
Heptachlor	ND		ug/kg	0.923	0.414	1	A
Aldrin	ND		ug/kg	1.85	0.650	1	A
Heptachlor epoxide	1.38	JIP	ug/kg	3.46	1.04	1	B
Endrin	ND		ug/kg	0.769	0.315	1	A
Endrin aldehyde	ND		ug/kg	2.31	0.808	1	A
Endrin ketone	ND		ug/kg	1.85	0.476	1	A
Dieldrin	ND		ug/kg	1.15	0.577	1	A
4,4'-DDE	ND		ug/kg	1.85	0.427	1	A
4,4'-DDD	ND		ug/kg	1.85	0.659	1	A
4,4'-DDT	ND		ug/kg	3.46	1.48	1	A
Endosulfan I	ND		ug/kg	1.85	0.436	1	A
Endosulfan II	ND		ug/kg	1.85	0.617	1	A
Endosulfan sulfate	ND		ug/kg	0.769	0.366	1	A
Methoxychlor	ND		ug/kg	3.46	1.08	1	A
Toxaphene	ND		ug/kg	34.6	9.70	1	A
cis-Chlordane	ND		ug/kg	2.31	0.643	1	A
trans-Chlordane	ND		ug/kg	2.31	0.609	1	A
Chlordane	ND		ug/kg	15.0	6.12	1	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-03
 Client ID: WC103
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:50
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	59		30-150	B
Decachlorobiphenyl	90		30-150	B
2,4,5,6-Tetrachloro-m-xylene	94		30-150	A
Decachlorobiphenyl	127		30-150	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-03
 Client ID: WC103
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:50
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8151A
 Analytical Date: 04/13/19 00:53
 Analyst: DGM
 Percent Solids: 86%
 Methylation Date: 04/11/19 18:32

Extraction Method: EPA 8151A
 Extraction Date: 04/11/19 01:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/kg	195	12.3	1	A
2,4,5-T	ND		ug/kg	195	6.04	1	A
2,4,5-TP (Silvex)	ND		ug/kg	195	5.18	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	102		30-150	A
DCAA	90		30-150	B

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-04
Client ID: WC104
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 12:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:

Matrix: Soil
Analytical Method: 1,8081B
Analytical Date: 04/12/19 11:45
Analyst: BM
Percent Solids: 86%

Extraction Method: EPA 3546
Extraction Date: 04/11/19 17:44
Cleanup Method: EPA 3620B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/kg	1.77	0.348	1	A
Lindane	ND		ug/kg	0.739	0.330	1	A
Alpha-BHC	ND		ug/kg	0.739	0.210	1	A
Beta-BHC	ND		ug/kg	1.77	0.673	1	A
Heptachlor	ND		ug/kg	0.887	0.398	1	A
Aldrin	ND		ug/kg	1.77	0.625	1	A
Heptachlor epoxide	1.50	JIP	ug/kg	3.33	0.998	1	B
Endrin	ND		ug/kg	0.739	0.303	1	A
Endrin aldehyde	ND		ug/kg	2.22	0.776	1	A
Endrin ketone	ND		ug/kg	1.77	0.457	1	A
Dieldrin	ND		ug/kg	1.11	0.554	1	A
4,4'-DDE	ND		ug/kg	1.77	0.410	1	A
4,4'-DDD	ND		ug/kg	1.77	0.633	1	A
4,4'-DDT	ND		ug/kg	3.33	1.43	1	A
Endosulfan I	ND		ug/kg	1.77	0.419	1	A
Endosulfan II	ND		ug/kg	1.77	0.593	1	A
Endosulfan sulfate	ND		ug/kg	0.739	0.352	1	A
Methoxychlor	ND		ug/kg	3.33	1.04	1	A
Toxaphene	ND		ug/kg	33.3	9.32	1	A
cis-Chlordane	ND		ug/kg	2.22	0.618	1	A
trans-Chlordane	ND		ug/kg	2.22	0.586	1	A
Chlordane	ND		ug/kg	14.4	5.88	1	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-04
 Client ID: WC104
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 12:00
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	63		30-150	B
Decachlorobiphenyl	88		30-150	B
2,4,5,6-Tetrachloro-m-xylene	98		30-150	A
Decachlorobiphenyl	133		30-150	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-04
 Client ID: WC104
 Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 12:00
 Date Received: 04/05/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil
 Analytical Method: 1,8151A
 Analytical Date: 04/13/19 01:10
 Analyst: DGM
 Percent Solids: 86%
 Methylation Date: 04/11/19 18:32

Extraction Method: EPA 8151A
 Extraction Date: 04/11/19 01:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/kg	191	12.0	1	A
2,4,5-T	ND		ug/kg	191	5.91	1	A
2,4,5-TP (Silvex)	ND		ug/kg	191	5.07	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	95		30-150	A
DCAA	86		30-150	B

Project Name: IRM HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8151A
Analytical Date: 04/12/19 13:48
Analyst: KEG

Extraction Method: EPA 8151A
Extraction Date: 04/11/19 01:21

Methylation Date: 04/11/19 18:32

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1225232-1						
2,4-D	ND		ug/kg	162	10.2	A
2,4,5-T	ND		ug/kg	162	5.01	A
2,4,5-TP (Silvex)	ND		ug/kg	162	4.30	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	89		30-150	A
DCAA	80		30-150	B

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 04/12/19 10:16
Analyst: BM

Extraction Method: EPA 3546
Extraction Date: 04/11/19 17:44
Cleanup Method: EPA 3620B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1225577-1						
Delta-BHC	ND		ug/kg	1.52	0.298	A
Lindane	ND		ug/kg	0.634	0.283	A
Alpha-BHC	ND		ug/kg	0.634	0.180	A
Beta-BHC	ND		ug/kg	1.52	0.577	A
Heptachlor	ND		ug/kg	0.760	0.341	A
Aldrin	ND		ug/kg	1.52	0.535	A
Heptachlor epoxide	ND		ug/kg	2.85	0.856	A
Endrin	ND		ug/kg	0.634	0.260	A
Endrin aldehyde	ND		ug/kg	1.90	0.665	A
Endrin ketone	ND		ug/kg	1.52	0.392	A
Dieldrin	ND		ug/kg	0.950	0.475	A
4,4'-DDE	ND		ug/kg	1.52	0.352	A
4,4'-DDD	ND		ug/kg	1.52	0.542	A
4,4'-DDT	ND		ug/kg	2.85	1.22	A
Endosulfan I	ND		ug/kg	1.52	0.359	A
Endosulfan II	ND		ug/kg	1.52	0.508	A
Endosulfan sulfate	ND		ug/kg	0.634	0.302	A
Methoxychlor	ND		ug/kg	2.85	0.887	A
Toxaphene	ND		ug/kg	28.5	7.98	A
cis-Chlordane	ND		ug/kg	1.90	0.530	A
trans-Chlordane	ND		ug/kg	1.90	0.502	A
Chlordane	ND		ug/kg	12.4	5.04	A

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 1,8081B
Analytical Date: 04/12/19 10:16
Analyst: BM

Extraction Method: EPA 3546
Extraction Date: 04/11/19 17:44
Cleanup Method: EPA 3620B
Cleanup Date: 04/12/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1225577-1						

Surrogate	%Recovery	Qualifier	Acceptance	
			Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		30-150	B
Decachlorobiphenyl	124		30-150	B
2,4,5,6-Tetrachloro-m-xylene	106		30-150	A
Decachlorobiphenyl	127		30-150	A

Lab Control Sample Analysis Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1225232-2 WG1225232-3									
2,4-D	84		91		30-150	8		30	A
2,4,5-T	79		83		30-150	5		30	A
2,4,5-TP (Silvex)	81		85		30-150	5		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	78		84		30-150	A
DCAA	77		83		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA

Lab Number: L1913895

Project Number: E1605

Report Date: 04/15/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits	Column
	%Recovery	Qual	%Recovery	Qual					
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1225577-2 WG1225577-3									
Delta-BHC	94		95		30-150	1		30	A
Lindane	94		92		30-150	2		30	A
Alpha-BHC	96		95		30-150	1		30	A
Beta-BHC	107		100		30-150	7		30	A
Heptachlor	96		96		30-150	0		30	A
Aldrin	86		87		30-150	1		30	A
Heptachlor epoxide	98		96		30-150	2		30	A
Endrin	94		91		30-150	3		30	A
Endrin aldehyde	70		72		30-150	3		30	A
Endrin ketone	97		92		30-150	5		30	A
Dieldrin	92		90		30-150	2		30	A
4,4'-DDE	78		78		30-150	0		30	A
4,4'-DDD	85		84		30-150	1		30	A
4,4'-DDT	88		86		30-150	2		30	A
Endosulfan I	82		82		30-150	0		30	A
Endosulfan II	89		88		30-150	1		30	A
Endosulfan sulfate	88		80		30-150	10		30	A
Methoxychlor	87		82		30-150	6		30	A
cis-Chlordane	75		75		30-150	0		30	A
trans-Chlordane	91		84		30-150	8		30	A

Lab Control Sample Analysis Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1225577-2 WG1225577-3

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria	<i>Column</i>
2,4,5,6-Tetrachloro-m-xylene	81		85		30-150	B
Decachlorobiphenyl	91		96		30-150	B
2,4,5,6-Tetrachloro-m-xylene	89		85		30-150	A
Decachlorobiphenyl	96		95		30-150	A

METALS

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA**Lab Number:** L1913895**Project Number:** E1605**Report Date:** 04/15/19**SAMPLE RESULTS**

Lab ID: L1913895-01

Date Collected: 04/05/19 11:30

Client ID: WC101

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 04/09/19 06:20

Matrix: Soil

Percent Solids: 87%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.039	J	mg/l	1.00	0.019	1	04/10/19 11:18	04/11/19 23:44	EPA 3015	1,6010D	MC
Barium, TCLP	0.461	J	mg/l	0.500	0.021	1	04/10/19 11:18	04/11/19 23:44	EPA 3015	1,6010D	MC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/10/19 11:18	04/11/19 23:44	EPA 3015	1,6010D	MC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/10/19 11:18	04/11/19 23:44	EPA 3015	1,6010D	MC
Lead, TCLP	0.078	J	mg/l	0.500	0.027	1	04/10/19 11:18	04/11/19 23:44	EPA 3015	1,6010D	MC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/10/19 15:19	04/10/19 22:53	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/10/19 11:18	04/11/19 23:44	EPA 3015	1,6010D	MC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/10/19 11:18	04/11/19 23:44	EPA 3015	1,6010D	MC



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA**Lab Number:** L1913895**Project Number:** E1605**Report Date:** 04/15/19**SAMPLE RESULTS**

Lab ID: L1913895-02

Date Collected: 04/05/19 11:40

Client ID: WC102

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 04/09/19 06:20

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.037	J	mg/l	1.00	0.019	1	04/10/19 11:18	04/11/19 23:49	EPA 3015	1,6010D	MC
Barium, TCLP	0.555		mg/l	0.500	0.021	1	04/10/19 11:18	04/11/19 23:49	EPA 3015	1,6010D	MC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/10/19 11:18	04/11/19 23:49	EPA 3015	1,6010D	MC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/10/19 11:18	04/11/19 23:49	EPA 3015	1,6010D	MC
Lead, TCLP	0.029	J	mg/l	0.500	0.027	1	04/10/19 11:18	04/11/19 23:49	EPA 3015	1,6010D	MC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/10/19 15:19	04/10/19 22:55	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/10/19 11:18	04/11/19 23:49	EPA 3015	1,6010D	MC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/10/19 11:18	04/11/19 23:49	EPA 3015	1,6010D	MC



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA**Lab Number:** L1913895**Project Number:** E1605**Report Date:** 04/15/19**SAMPLE RESULTS**

Lab ID: L1913895-03

Date Collected: 04/05/19 11:50

Client ID: WC103

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 04/09/19 06:20

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.048	J	mg/l	1.00	0.019	1	04/10/19 11:18	04/11/19 23:54	EPA 3015	1,6010D	MC
Barium, TCLP	0.569		mg/l	0.500	0.021	1	04/10/19 11:18	04/11/19 23:54	EPA 3015	1,6010D	MC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/10/19 11:18	04/11/19 23:54	EPA 3015	1,6010D	MC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/10/19 11:18	04/11/19 23:54	EPA 3015	1,6010D	MC
Lead, TCLP	ND		mg/l	0.500	0.027	1	04/10/19 11:18	04/11/19 23:54	EPA 3015	1,6010D	MC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/10/19 15:19	04/10/19 22:56	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/10/19 11:18	04/11/19 23:54	EPA 3015	1,6010D	MC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/10/19 11:18	04/11/19 23:54	EPA 3015	1,6010D	MC



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA**Lab Number:** L1913895**Project Number:** E1605**Report Date:** 04/15/19**SAMPLE RESULTS**

Lab ID: L1913895-04

Date Collected: 04/05/19 12:00

Client ID: WC104

Date Received: 04/05/19

Sample Location: MOD-PAC BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

TCLP/SPLP Ext. Date: 04/09/19 06:20

Matrix: Soil

Percent Solids: 86%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab											
Arsenic, TCLP	0.029	J	mg/l	1.00	0.019	1	04/10/19 11:18	04/11/19 23:58	EPA 3015	1,6010D	MC
Barium, TCLP	0.521		mg/l	0.500	0.021	1	04/10/19 11:18	04/11/19 23:58	EPA 3015	1,6010D	MC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/10/19 11:18	04/11/19 23:58	EPA 3015	1,6010D	MC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/10/19 11:18	04/11/19 23:58	EPA 3015	1,6010D	MC
Lead, TCLP	ND		mg/l	0.500	0.027	1	04/10/19 11:18	04/11/19 23:58	EPA 3015	1,6010D	MC
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/10/19 15:19	04/10/19 22:58	EPA 7470A	1,7470A	EA
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/10/19 11:18	04/11/19 23:58	EPA 3015	1,6010D	MC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/10/19 11:18	04/11/19 23:58	EPA 3015	1,6010D	MC



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-04 Batch: WG1224974-1										
Arsenic, TCLP	0.029	J	mg/l	1.00	0.019	1	04/10/19 11:18	04/11/19 21:52	1,6010D	MC
Barium, TCLP	ND		mg/l	0.500	0.021	1	04/10/19 11:18	04/11/19 21:52	1,6010D	MC
Cadmium, TCLP	ND		mg/l	0.100	0.010	1	04/10/19 11:18	04/11/19 21:52	1,6010D	MC
Chromium, TCLP	ND		mg/l	0.200	0.021	1	04/10/19 11:18	04/11/19 21:52	1,6010D	MC
Lead, TCLP	ND		mg/l	0.500	0.027	1	04/10/19 11:18	04/11/19 21:52	1,6010D	MC
Selenium, TCLP	ND		mg/l	0.500	0.035	1	04/10/19 11:18	04/11/19 21:52	1,6010D	MC
Silver, TCLP	ND		mg/l	0.100	0.028	1	04/10/19 11:18	04/11/19 21:52	1,6010D	MC

Prep Information

Digestion Method: EPA 3015
TCLP/SPLP Extraction Date: 04/09/19 06:20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
TCLP Metals by EPA 1311 - Mansfield Lab for sample(s): 01-04 Batch: WG1225071-1										
Mercury, TCLP	ND		mg/l	0.0010	0.0005	1	04/10/19 15:19	04/10/19 22:33	1,7470A	EA

Prep Information

Digestion Method: EPA 7470A
TCLP/SPLP Extraction Date: 04/09/19 06:20

Lab Control Sample Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA

Lab Number: L1913895

Project Number: E1605

Report Date: 04/15/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 Batch: WG1224974-2								
Arsenic, TCLP	108		-		75-125	-		20
Barium, TCLP	100		-		75-125	-		20
Cadmium, TCLP	102		-		75-125	-		20
Chromium, TCLP	92		-		75-125	-		20
Lead, TCLP	101		-		75-125	-		20
Selenium, TCLP	107		-		75-125	-		20
Silver, TCLP	94		-		75-125	-		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 Batch: WG1225071-2								
Mercury, TCLP	101		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1224974-3 QC Sample: L1913804-01 Client ID: MS Sample												
Arsenic, TCLP	0.035J	1.2	1.35	112	-	-	-	-	75-125	-	-	20
Barium, TCLP	0.956	20	21.4	102	-	-	-	-	75-125	-	-	20
Cadmium, TCLP	0.035J	0.51	0.564	110	-	-	-	-	75-125	-	-	20
Chromium, TCLP	ND	2	1.88	94	-	-	-	-	75-125	-	-	20
Lead, TCLP	0.621	5.1	5.87	103	-	-	-	-	75-125	-	-	20
Selenium, TCLP	ND	1.2	1.30	108	-	-	-	-	75-125	-	-	20
Silver, TCLP	ND	0.5	0.479	96	-	-	-	-	75-125	-	-	20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1225071-3 QC Sample: L1913804-01 Client ID: MS Sample												
Mercury, TCLP	ND	0.025	0.0259	103	-	-	-	-	80-120	-	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA

Project Number: E1605

Lab Number: L1913895

Report Date: 04/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1224974-4 QC Sample: L1913804-01 Client ID: DUP Sample						
Arsenic, TCLP	0.035J	0.031J	mg/l	NC		20
Barium, TCLP	0.956	0.935	mg/l	2		20
Cadmium, TCLP	0.035J	0.034J	mg/l	NC		20
Chromium, TCLP	ND	ND	mg/l	NC		20
Lead, TCLP	0.621	0.612	mg/l	1		20
Selenium, TCLP	ND	ND	mg/l	NC		20
Silver, TCLP	ND	ND	mg/l	NC		20
TCLP Metals by EPA 1311 - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1225071-4 QC Sample: L1913804-01 Client ID: DUP Sample						
Mercury, TCLP	ND	ND	mg/l	NC		20

INORGANICS & MISCELLANEOUS

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-01
Client ID: WC101
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:30
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.6		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA
pH (H)	7.7		SU	-	NA	1	-	04/08/19 17:43	1,9045D	AS
Flash Point	>150		deg F	70	NA	1	-	04/09/19 11:30	1,1010A	GM
Cyanide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:50	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:36	125,7.3	KF



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-02
Client ID: WC102
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:40
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.6		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA
pH (H)	7.8		SU	-	NA	1	-	04/08/19 17:43	1,9045D	AS
Flash Point	>150		deg F	70	NA	1	-	04/09/19 11:30	1,1010A	GM
Cyanide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:50	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:36	125,7.3	KF



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-03
Client ID: WC103
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 11:50
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	85.5		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA
pH (H)	7.9		SU	-	NA	1	-	04/08/19 17:43	1,9045D	AS
Flash Point	>150		deg F	70	NA	1	-	04/09/19 11:30	1,1010A	GM
Cyanide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:50	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:36	125,7.3	KF



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

SAMPLE RESULTS

Lab ID: L1913895-04
Client ID: WC104
Sample Location: MOD-PAC BUFFALO, NY

Date Collected: 04/05/19 12:00
Date Received: 04/05/19
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	86.2		%	0.100	NA	1	-	04/09/19 01:56	121,2540G	YA
pH (H)	7.8		SU	-	NA	1	-	04/08/19 17:43	1,9045D	AS
Flash Point	>150		deg F	70	NA	1	-	04/09/19 11:30	1,1010A	GM
Cyanide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:51	125,7.3	KF
Sulfide, Reactive	ND		mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:36	125,7.3	KF



Project Name: IRM 'HOT SPOT REMOVAL WASTECH

Lab Number: L1913895

Project Number: E1605

Report Date: 04/15/19

Method Blank Analysis
Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1224423-1									
Sulfide, Reactive	ND	mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:34	125,7.3	KF
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1224425-1									
Cyanide, Reactive	ND	mg/kg	10	10.	1	04/09/19 01:06	04/09/19 02:48	125,7.3	KF

Lab Control Sample Analysis**Batch Quality Control****Project Name:** IRM 'HOT SPOT REMOVAL WASTECHA**Lab Number:** L1913895**Project Number:** E1605**Report Date:** 04/15/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1224343-1								
pH	100		-		99-101	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1224423-2								
Sulfide, Reactive	72		-		60-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1224425-2								
Cyanide, Reactive	67		-		30-125	-		40
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1224572-1								
Flash Point	100		-		96-104	-		

Lab Duplicate Analysis

Batch Quality Control

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA

Project Number: E1605

Lab Number: L1913895

Report Date: 04/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1224343-2 QC Sample: L1913650-02 Client ID: DUP Sample						
pH	7.5	7.3	SU	3		5
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1224413-1 QC Sample: L1913785-01 Client ID: DUP Sample						
Solids, Total	86.9	85.9	%	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1224423-3 QC Sample: L1914082-01 Client ID: DUP Sample						
Sulfide, Reactive	ND	ND	mg/kg	NC		40
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1224425-3 QC Sample: L1914082-01 Client ID: DUP Sample						
Cyanide, Reactive	ND	ND	mg/kg	NC		40

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Serial_No:04151916:16
Lab Number: L1913895
Report Date: 04/15/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler **Custody Seal**
A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1913895-01A	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		TCLP-EXT-ZHE(14)
L1913895-01B	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-01C	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-01D	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-01E	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-01F	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-01G	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-01H	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-01W	Amber 1000ml unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-8270(14)
L1913895-01X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.0	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1913895-01X9	Tumble Vessel	A	NA		3.0	Y	Absent		-
L1913895-01Y	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)
L1913895-01Z	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)
L1913895-02A	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		TCLP-EXT-ZHE(14)
L1913895-02B	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)

*Values in parentheses indicate holding time in days



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Serial_No:04151916:16
Lab Number: L1913895
Report Date: 04/15/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1913895-02C	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-02D	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-02E	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-02F	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-02G	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-02H	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-02W	Amber 1000ml unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-8270(14)
L1913895-02X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.0	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1913895-02X9	Tumble Vessel	A	NA		3.0	Y	Absent		-
L1913895-02Y	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)
L1913895-02Z	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)
L1913895-03A	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		TCLP-EXT-ZHE(14)
L1913895-03B	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-03C	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-03D	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-03E	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-03F	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA**Lab Number:** L1913895**Project Number:** E1605**Report Date:** 04/15/19**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1913895-03G	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-03H	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-03W	Amber 1000ml unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-8270(14)
L1913895-03X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.0	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1913895-03X9	Tumble Vessel	A	NA		3.0	Y	Absent		-
L1913895-03Y	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)
L1913895-03Z	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)
L1913895-04A	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		TCLP-EXT-ZHE(14)
L1913895-04B	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-04C	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-04D	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-04E	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-04F	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-04G	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-04H	Glass 120ml/4oz unpreserved	A	NA		3.0	Y	Absent		REACTS(14),HERB-APA(14),FLASH(),TS(7),PH-9045(1),NYTCL-8081(14),NYTCL-8082(14),REACTCN(14)
L1913895-04W	Amber 1000ml unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-8270(14)
L1913895-04X	Plastic 120ml HNO3 preserved Extracts	A	NA		3.0	Y	Absent		CD-CI(180),AS-CI(180),BA-CI(180),HG-C(28),PB-CI(180),CR-CI(180),SE-CI(180),AG-CI(180)
L1913895-04X9	Tumble Vessel	A	NA		3.0	Y	Absent		-
L1913895-04Y	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA

Project Number: E1605

Serial_No:04151916:16

Lab Number: L1913895

Report Date: 04/15/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1913895-04Z	Vial unpreserved Extracts	A	NA		3.0	Y	Absent		TCLP-VOA(14)

Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: IRM 'HOT SPOT REMOVAL WASTECHA
Project Number: E1605

Lab Number: L1913895
Report Date: 04/15/19

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 125 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates IIIA, April 1998.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water

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

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

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

L 372326

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB#

10003

CUSTOMER: HARRIS EVALUATION DATE: 4/19/19
LOAD LOCATION: 1899 Simwood DUMP LOCATION: Chattanooga

HIRED TRUCK COMPANY: 21 W/L

TRUCK # & DRIVER: 21 W/L
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER

JOB START: _____
JOB FINISH: _____
TRAVEL TIME: _____
 LUNCH NO LUNCH
TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	5916519	23.53	-	-	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 372543

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB#

10801

CUSTOMER: HARRIS EVALUATION DATE: 4/19/19
LOAD LOCATION: 1801 ECHIBROO DUMP LOCATION: Chattanooga

HIRED TRUCK COMPANY: _____

TRUCK # & DRIVER: 20 LARRY
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER

JOB START: _____
JOB FINISH: _____
TRAVEL TIME: _____
 LUNCH NO LUNCH
TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591486	23.56	8 ⁰⁰	8 ¹⁵	
2	591554	18.99	10 ⁰⁰	10 ⁰⁰	
3	591621	24.26	1 ⁰⁰	1 ¹⁰	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

372786

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150
JOB# 10801
FAX: 875-4121

373696

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150
JOB# 10801
FAX: 875-4121

OFFICE: 875-6168

Customer: Harvard Environmental DATE: 4/29/19

LOAD LOCATION: 1801 Elmwood DUMP LOCATION: Wm Chatter

HIRED TRUCK COMPANY: _____

TRUCK # & DRIVER: P-37 Tom Murray

DUMP TRUCK SERVICE: SLINGER SERVICE

DUMP TRAILER SERVICE: OTHER _____

MATERIAL HAULED: Capstan Srv

JOB START: _____

JOB FINISH: _____

TRAVEL TIME: _____

LUNCH: LUNCH NO LUNCH

TOTAL: _____

OFFICE: 875-6168

Customer: Harvard Environmental DATE: 4/29/19

LOAD LOCATION: 1801 Elmwood DUMP LOCATION: Wm Chatter

HIRED TRUCK COMPANY: PL

TRUCK # & DRIVER: 17/AL

DUMP TRUCK SERVICE: SLINGER SERVICE

DUMP TRAILER SERVICE: OTHER _____

MATERIAL HAULED: Dirt/Silt

JOB START: _____

JOB FINISH: _____

TRAVEL TIME: _____

LUNCH: LUNCH NO LUNCH

TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591474	24.10 ²⁰	-	7:30 rd Time
2	591528	22.21 ²⁰	-	9:40
3	591586	19.27 ²⁰	-	11:55
4	591659	26.69 ²⁰	2:00 2:15	2:15
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	594999	23.24	-	
2	591560	22.84	-	
3	591627	22.41	-	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

HIRED TRUCK COPY

L 375576

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB# 10801

Customer: Harold Spivey DATE: 9/20/05
LOAD LOCATION: 1801 Elmwood Road DUMP LOCATION: Harold Spivey

HIRED TRUCK COMPANY: SNAP

TRUCK # & DRIVER: SNAP 16

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER

MATERIAL HAULED: CS

JOB START: _____

JOB FINISH: _____

TRAVEL TIME: _____

LUNCH NO LUNCH

TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591510	24500	-	-	
2			-	-	
3			-	-	
4			-	-	
5			-	-	
6			-	-	
7			-	-	
8			-	-	
9			-	-	
10			-	-	
11			-	-	
12			-	-	
13			-	-	
14			-	-	
15			-	-	

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 378980

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB# 10801

Customer: Harold Spivey DATE: 9/19/05
LOAD LOCATION: 1801 Elmwood Road DUMP LOCATION: Wm Spivey

HIRED TRUCK COMPANY: _____

TRUCK # & DRIVER: 38 B. Miller

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER

MATERIAL HAULED: Coal dirt

JOB START: _____

JOB FINISH: _____

TRAVEL TIME: _____

LUNCH NO LUNCH

TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591477	2102	7:35	-	
2	591529	2136	9:40	-	
3	591592	2054	11:55	-	
4	591660	2746	2:00	2:20	
5			-	-	
6			-	-	
7			-	-	
8			-	-	
9			-	-	
10			-	-	
11			-	-	
12			-	-	
13			-	-	
14			-	-	
15			-	-	

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB#

10801

379083

CUSTOMER: Hessold Evaluation DATE: 4/19/19
 LOAD LOCATION: 1801 Elmwood Ave W. M. Chappo DUMP LOCATION: Chappo

HIRED TRUCK COMPANY: _____

TRUCK # & DRIVER: 26/Henry

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER _____

MATERIAL HAULED: contaminated soil

JOB START _____

JOB FINISH _____

TRAVEL TIME _____

LUNCH

NO LUNCH

TOTAL _____

REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591606	2148	1220-1230	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB#

10801

379286

CUSTOMER: H028888 DATE: 4/19/19
 LOAD LOCATION: 1801 Elmwood DUMP LOCATION: Chappo

HIRED TRUCK COMPANY: _____

TRUCK # & DRIVER: 33 Bony

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER _____

MATERIAL HAULED: contaminated

JOB START _____

JOB FINISH _____

TRAVEL TIME _____

LUNCH

NO LUNCH

TOTAL _____

REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591466	2320	700-715	
2	591518	2189	910-920	
3	591573	2273	1125-1130	
4	591640	2680	145-155	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

OFFICE: 875-6168

Tonawanda, NY 14150

FAX: 875-4121

JOB#

10801

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

OFFICE: 875-4121

JOB#

10801

10801
L 380421

10801
L 380519

CUSTOMER: Harvard Environmental DATE: 4/19/19
LOAD LOCATION: 180 Elmwood DUMP LOCATION: Harvard

CUSTOMER: Harvard Environmental DATE: 4/19/19
LOAD LOCATION: 180 Elmwood DUMP LOCATION: Harvard

HIRED TRUCK COMPANY: PLT JOB START: 6:30

HIRED TRUCK COMPANY: 51 Wolf JOB START: _____

TRUCK # & DRIVER: 32 1021 H JOB FINISH: _____

TRUCK # & DRIVER: 51 Wolf JOB FINISH: _____

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER _____

DUMP TRAILER SERVICE OTHER _____

MATERIAL HAULED: LOAM/TERRAZO TRAVEL TIME: _____

MATERIAL HAULED: LOAM/TERRAZO TRAVEL TIME: _____

LUNCH NO LUNCH

LUNCH NO LUNCH

TOTAL: _____

TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591468	2387	700-710	
2	591524	21.03	915-925	
3	591584	20.22	1130-1145	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591480	2210		
2	591536	2366		
3	591596	2174		
4	591666	2633		
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

HIRED TRUCK COPY

L 320693

PARISO LOGISTICS, INC.

JOB#

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

Customer: FR 2/27/19
LOAD LOCATION: ROSELINA DUMP LOCATION: 4, 1, 11, 19

HIRED TRUCK COMPANY DEC

TRUCK # & DRIVER 229 Tomp

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER box

MATERIAL HAULED oil

JOB START

JOB FINISH

TRAVEL TIME

LUNCH

NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	8041122	25,93	-	
2	8041174	20.33	-	
3	8041183	25.04	-	
4			-	
5			-	
6			-	
7			-	
8			-	
9			-	
10			-	
11			-	
12			-	
13			-	
14			-	
15			-	

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 340932

PARISO LOGISTICS, INC.

JOB#

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

Customer: Hazard 2/27/19
LOAD LOCATION: 1801 Elmwood DUMP LOCATION: W.M. 2/27/19

HIRED TRUCK COMPANY Design

TRUCK # & DRIVER 223 1/2/116

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER

MATERIAL HAULED 94

JOB START

JOB FINISH

TRAVEL TIME

LUNCH

NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591508	24.89	-	
2	591574	20.91	-	
3	591644	27.21	-	
4			-	
5			-	
6			-	
7			-	
8			-	
9			-	
10			-	
11			-	
12			-	
13			-	
14			-	
15			-	

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB# 10003

DATE 4/11/91

CUSTOMER: Harzard Environmental
DUMP LOCATION: Charles Road #11

HIRED TRUCK COMPANY: Loraba
TRUCK # & DRIVER: 197-Cus
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER
 MATERIAL HAULED: 9A

JOB START: 830
JOB FINISH: 400
TRAVEL TIME: Tourage
 LUNCH NO LUNCH
 TOTAL

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591515	22.47	830 - 755	1000 - 1030
2	591535	20.46	1150 - 1140	1240 - 110
3	591665	19.05	200 - 235	325 - 350
4				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: [Signature]

JOB COPY

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB# 10003

CUSTOMER: NEXT
DUMP LOCATION: Charles Road #11

HIRED TRUCK COMPANY: DBL
TRUCK # & DRIVER: 108-L-1001-M
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER
 MATERIAL HAULED: 2200 DAT

JOB START: 9
JOB FINISH: 1
TRAVEL TIME: 101
 LUNCH NO LUNCH
 TOTAL

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591580	20.70	-	
2	591653	24.54	-	
3				
4				
5				
6				
7				
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13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 374418

PARISO LOGISTICS, INC.

OFFICE: 875-6168

3649 River Road
Tonawanda, NY 14150

FAX: 875-4121

CUSTOMER: EMMERTON

DATE: 4/19/19

LOAD LOCATION: 1801 Elmwood DUMP LOCATION: Chapel Road

HIRED TRUCK COMPANY: Frankel

TRUCK # & DRIVER: 198 m/ls

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER

JOB START: 1530A

JOB FINISH: 300P

TRAVEL TIME: long

LUNCH NO LUNCH

MATERIAL HAULED: 2000 lbs

TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591997	2049	8:10A-8:55A	9:15A - 9:50A
2	591563	1819	10:40A-10:50A	11:55A - 12:25P
3	591638	2067	1:30P-1:55P	2:30P - 3:00P
4				21 TON KIND
5				
6				
7				
8				
9				
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12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 375920

PARISO LOGISTICS, INC.

OFFICE: 875-6168

3649 River Road
Tonawanda, NY 14150

FAX: 875-4121

CUSTOMER: EMMERTON

DATE: 4/19/19

LOAD LOCATION: 1801 Elmwood DUMP LOCATION: Chapel Road

HIRED TRUCK COMPANY: D. PARISO

TRUCK # & DRIVER: 105 BULL

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER

JOB START: 1230

JOB FINISH: 330

TRAVEL TIME: 7

LUNCH NO LUNCH

MATERIAL HAULED: 1200 lbs

TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591583	2131	1:30 - 1:45	
2	591084	2663	1:50 - 2:05	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 376370

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

CUSTOMER: Excelsior

LOAD LOCATION: 1801 Kenawanda DUMP LOCATION: Chastota DATE: 4/19/19

HIRED TRUCK COMPANY: RTS JOB START: _____
 TRUCK # & DRIVER: 500/mafe JOB FINISH: _____
 DUMP TRUCK SERVICE SLINGER SERVICE TRAVEL TIME: _____
 DUMP TRAILER SERVICE OTHER: _____ NO LUNCH
 MATERIAL HAULED: Dump TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591570	19.93	-	
2	591632	29.29	-	
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 377190

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

CUSTOMER: Excelsior DATE: 4/19/19
LOAD LOCATION: 1801 Kenawanda DUMP LOCATION: Chastota

HIRED TRUCK COMPANY: RTS JOB START: 8:30
 TRUCK # & DRIVER: 304/Deon JOB FINISH: 3:15
 DUMP TRUCK SERVICE SLINGER SERVICE TRAVEL TIME: 1:10
 DUMP TRAILER SERVICE OTHER: _____ NO LUNCH
 MATERIAL HAULED: DD TOTAL: Excelsior

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591501	26.62	-	
2	591565	19.93	-	
3	591630	26.41	-	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

372546

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

10801
FAX: 875-4121

3649 River Road
Tonawanda, NY 14150

10801
FAX: 875-4121

JOB#

JOB#

Customer: Harold Excavations
 LOAD LOCATION: 1801 Elmwood DUMP LOCATION: CHARLE DATE: 4/19/19
 HIRED TRUCK COMPANY: _____
 TRUCK # & DRIVER: 242 Mack
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: Carb
 JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591739	22.52	7:35	7:44	
2	591799	16.94	9:50	9:55	
3	591856	19.07	12:15	12:20	
4	591918	19.65	2:35	2:40	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

373734

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

10801
FAX: 875-4121

JOB#

Customer: Harold Excavations
 LOAD LOCATION: 1801 Elmwood DUMP LOCATION: CHARLE DATE: 4/19/19
 HIRED TRUCK COMPANY: _____
 TRUCK # & DRIVER: 13/05ma
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: cont. soils
 JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591736	23.27			
2	591791	19.73	9:40	9:50	
3	591850	20.80			
4	591909	20.12	2:00	2:30	
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 373778

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

CUSTOMER

DATE

H23490
LOAD LOCATION
1 B01 ECAWOOD

DUMP LOCATION
CHARTER LAPOSTOLLE - SPAINBOROUGH

HIRED TRUCK COMPANY

TRUCK # & DRIVER *DAVE & PIR*

DUMP TRUCK SERVICE
 SLINGER SERVICE

DUMP TRAILER SERVICE
 OTHER

MATERIAL HAULED *CONCRETE 20 501C*

JOB START

JOB FINISH

TRAVEL TIME

LUNCH
 NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591738	22.65			
2	591802	18.74			<i>POST-OFFICE</i>
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 379049

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

CUSTOMER

DATE

Legend
LOAD LOCATION
1801 ECAWOOD

DUMP LOCATION
925 1m

HIRED TRUCK COMPANY

TRUCK # & DRIVER *John 7644*

DUMP TRUCK SERVICE
 SLINGER SERVICE

DUMP TRAILER SERVICE
 OTHER

MATERIAL HAULED *cont. sand*

JOB START

JOB FINISH

TRAVEL TIME

LUNCH
 NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591727	23.82			6:45 - 7:00
2	591777	20.26			
3	591833	19.66			
4					
5					
6					
7					
8					
9					
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11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB# L 379287

10801

CUSTOMER: MOZORB EVOLUTION DATE: 4/22/19
 LOAD LOCATION: 1861 Elmwood DUMP LOCATION: CHAPPEL ROAD PILL
 HIRED TRUCK COMPANY: _____
 TRUCK # & DRIVER: 83 GARY
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: CONCRETE/NOISE
 JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591728	22.64	700	710	
2	591779	21.13	915	925	
3	591836	24.96	1140	1155	
4					
5					
6					
7					
8					
9					
10					
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13					
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB# L 379304

10801

CUSTOMER: Hardard EVOLUTION DATE: 4/22/19
 LOAD LOCATION: Elmwood DUMP LOCATION: CHAPPEL ROAD
 HIRED TRUCK COMPANY: PLI
 TRUCK # & DRIVER: 17 Tom S
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: Dirt
 JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591732	21.67	810	820	
2	591786	20.97	930	940	
3	591840	18.68	1200	1215	
4	591902	22.72	215	230	
5					
6					
7					
8					
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14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 379818

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

CUSTOMER: *Harold*

LOAD LOCATION: *Madison Elmwood*

DUMP LOCATION: *Chaffee*

DATE: *4/22/19*

HIRED TRUCK COMPANY: _____

TRUCK # & DRIVER: *40 Boss*

DUMP TRUCK SERVICE: SLINGER SERVICE

DUMP TRAILER SERVICE: OTHER _____

MATERIAL HAULED: *contam. soil*

JOB START: _____

JOB FINISH: _____

TRAVEL TIME: _____

LUNCH NO LUNCH

TOTAL: _____

D #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591726	22.16	-	
2	591775	20.08	-	
3	591831	19.71	-	
4				
5				
6				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 380423

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

CUSTOMER: *Harold*

LOAD LOCATION: *1801*

DUMP LOCATION: *Chaffee*

DATE: *4/22/19*

HIRED TRUCK COMPANY: *P2T*

TRUCK # & DRIVER: *30 JOKI H*

DUMP TRUCK SERVICE: SLINGER SERVICE

DUMP TRAILER SERVICE: OTHER _____

MATERIAL HAULED: *CONTAMINATED*

JOB START: _____

JOB FINISH: _____

TRAVEL TIME: _____

LUNCH NO LUNCH

TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591729	28.78	7:00 - 7:10	
2	591782	21.15	9:15 - 9:25	
3	591847	22.61	-	
4	591895	24.82	-	
5				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 320694

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB#

10063

1122 and 1123 Road
MOB
LOAD LOCATION: 1122 and 1123 Road
CUSTOMER: Winn-Dixie
DUMP LOCATION: 9, 22, 19
DATE: 9/20

HIRED TRUCK COMPANY: 229
TRUCK # & DRIVER: 229
JOB START: 9:00
JOB FINISH: _____
TRAVEL TIME: _____

DUMP TRUCK SERVICE
 SLINGER SERVICE
 DUMP TRAILER SERVICE
 OTHER _____

LUNCH
 NO LUNCH

MATERIAL HAULED _____
TOTAL _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	80477	19450			Ticket 591761
2	8041865	1925			591823
3	801901	2125			591823
4					
5					
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13					
14					
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 340860

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB#

10003

1122 and 1123 Road
MOB
LOAD LOCATION: 1122 and 1123 Road
CUSTOMER: Winn-Dixie
DUMP LOCATION: 4, 22, 19
DATE: 9/20

HIRED TRUCK COMPANY: 229
TRUCK # & DRIVER: 229
JOB START: _____
JOB FINISH: _____
TRAVEL TIME: _____

DUMP TRUCK SERVICE
 SLINGER SERVICE
 DUMP TRAILER SERVICE
 OTHER _____

LUNCH
 NO LUNCH

MATERIAL HAULED _____
TOTAL _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591773	1978			morning # 8049785
2	591828	1950			# 8044809
3	591882	2989			# 8044823
4					
5					
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13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 340933

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB#

10003

Customer: Engron metals DATE: 4/23/19
LOAD LOCATION: 1801 Elmwood PUMP LOCATION: Wm. Christie

HIRED TRUCK COMPANY: Design

TRUCK # & DRIVER: 223 WJ

DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER

MATERIAL HAULED: 9A

JOB START: X JOB FINISH: X
TRAVEL TIME: X LUNCH: NO LUNCH:

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591765	23.43	-	-	
2	591823	20	-	-	
3	591872	26.11	-	-	
4					
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15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 361545

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB#

10801

Customer: Engron metals DATE: 4/22/19
LOAD LOCATION: 1801 Elmwood Ave PUMP LOCATION: Wm. Christie

HIRED TRUCK COMPANY: CP Links

TRUCK # & DRIVER: 699-Cars

DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER

MATERIAL HAULED: 9A

JOB START: 900 JOB FINISH: 235
TRAVEL TIME: Tonawanda LUNCH: NO LUNCH:

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591716	19.22	900	910	1010 - 1030
2	591846	21.28	1140	1155	1255 - 130
3			235	-	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: X

JOB COPY

checked
CONTINENTAL
PARISO LOGISTICS, INC.

L 370380

OFFICE: 975-6168
 3649 River Road
 Tonawanda, NY 14150
 FAX: 875-4121

JOB# 10961

CUSTOMER: Harwood Evaluations
 LOAD LOCATION: Elmwood
 DUMP LOCATION: W/m Chertice
 DATE: 4/22/19

HIRED TRUCK COMPANY: B. Pariso
 TRUCK # & DRIVER: D. Maglio 104
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: Coat Soil
 JOB START: 8:30
 JOB FINISH: 2:30
 TRAVEL TIME: 0:30
 LUNCH NO LUNCH
 TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY ON "HOLD" & PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591774	24.10	8:40	8:50	
2	591839	24.04	10:40	10:50	
3	591901	22.44	2:10	2:20	
4					
5					
6					
7					
8					
9					
10					
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12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: [Signature]
 RETURN TO PARISO

5549
PARISO LOGISTICS, INC.

L 373315

OFFICE: 975-6168
 3649 River Road
 Tonawanda, NY 14150
 FAX: 875-4121

CUSTOMER: Harwood Evaluations
 LOAD LOCATION: Elmwood
 DUMP LOCATION: W/m Chertice
 DATE: 4/22/19

HIRED TRUCK COMPANY: B. Pariso
 TRUCK # & DRIVER: 111 [Name]
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: Coat Soil
 JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY ON "HOLD" & PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591754	20.72	8:05	8:15	
2	591804	20.20	10:05	10:15	
3	591856	19.51	12:20	12:30	
4	591011	22.49	2:30	2:40	
5					
6					
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15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____
 JOB COPY

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB #

6480 L 374419

10871

Customer: Magdol E. ... DATE: 11/22/19

LOAD LOCATION: 1801 Elmwood Drive DUMP LOCATION: Shallow Pond

HIRED TRUCK COMPANY: Truckers JOB START: 8:25 AM

TRUCK # & DRIVER: K 99 ... JOB FINISH: 2:30 PM

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER

MATERIAL HAULED: cont. dirt TRAVEL TIME: Tonawanda

LUNCH NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591761	1846	8:30 AM - 9:25 AM	91457A
2	591820	1755	10:35 AM - 11:40 AM	120588
3	591876	2280	10:55 AM - 1:15 PM	2:10 PM - 2:30 PM
4				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

FAX: 875-4121

JOB #

1110 L 375921

10801

Customer: Magdol E. ... DATE: 11/22/19

LOAD LOCATION: 1801 Elmwood Drive DUMP LOCATION: WOM CHARITY

HIRED TRUCK COMPANY: Pariso JOB START: 8:00

TRUCK # & DRIVER: 105 ... JOB FINISH: 1:00

DUMP TRUCK SERVICE SLINGER SERVICE

DUMP TRAILER SERVICE OTHER

MATERIAL HAULED: Dirt/DIRT TRAVEL TIME: 1 hr

LUNCH NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591743	2361		
2	591803	1789		
3	591855	2025		
4	591915	2339		
5				
6				
7				
8				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

WM Profile #

L 376372

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

JOB# 10003

FAX: 875-4121

Customer: Harvard Environmental DATE: 4/22/19
LOAD LOCATION: 1801 Fenwood DUMP LOCATION: Landfill

HIRED TRUCK COMPANY: BTS JOB START: _____
TRUCK # & DRIVER: 201 / JAMES JOB FINISH: _____
 DUMP TRUCK SERVICE SLINGER SERVICE TRAVEL TIME: _____
 DUMP TRAILER SERVICE OTHER: _____ LUNCH NO LUNCH
MATERIAL HAULED: Dirty Dirt TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591756	20.73	-	
2	591805	16.15	-	
3	591863	22.97	-	
4				
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15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: RM

JOB COPY

L 376503

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

JOB# 10003

FAX: 875-4121

Customer: Harvard Environmental DATE: 4/22/19
LOAD LOCATION: 1801 Fenwood DUMP LOCATION: Landfill

HIRED TRUCK COMPANY: BTS JOB START: _____
TRUCK # & DRIVER: 600 / JAMES JOB FINISH: _____
 DUMP TRUCK SERVICE SLINGER SERVICE TRAVEL TIME: _____
 DUMP TRAILER SERVICE OTHER: _____ LUNCH NO LUNCH
MATERIAL HAULED: Dirty Dirt TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591751	22.62	-	
2	591806	18.91	-	
3	591865	20.61	-	
4				
5				
6				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 377181

JOB# 10003

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168 FAX: 875-4121

OFFICE: 875-6168

Tonawanda, NY 14150

FAX: 875-4121

CUSTOMER: Harold Evaluations DATE: 4/22/19
 LOAD LOCATION: 1801 Elmwood DUMP LOCATION: WM-Charter

HIRED TRUCK COMPANY: BTS JOB START: _____
 TRUCK # & DRIVER: 3001/Drew JOB FINISH: _____

DUMP TRUCK SERVICE SLINGER SERVICE TRAVEL TIME: _____
 DUMP TRAILER SERVICE OTHER: _____ LUNCH NO LUNCH

MATERIAL HAULED: Dirty Dirt TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591742	21.93	-	
2	591798	19.25	-	
3	591852	19.73	-	
4	591908	21.42	-	
5				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

8623

L 380560

JOB#

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168 FAX: 875-4121

OFFICE: 875-6168

Tonawanda, NY 14150

FAX: 875-4121

CUSTOMER: Harold Evaluations DATE: 4/22/19
 LOAD LOCATION: 1801 Elmwood DUMP LOCATION: WM-Charter

HIRED TRUCK COMPANY: B. Pariso JOB START: _____
 TRUCK # & DRIVER: 113-S. Maguire JOB FINISH: _____

DUMP TRUCK SERVICE SLINGER SERVICE TRAVEL TIME: _____
 DUMP TRAILER SERVICE OTHER: _____ LUNCH NO LUNCH

MATERIAL HAULED: Conform. TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591747	22.03	7:55-8:05	
2	591809	15.20	10:10-10:25	
3	591862	20.88	11:25-12:44	
4	591919	22.70	2:50-2:55	
5				
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13				
14				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

L 373735

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

JOB#

10881

1801 Elmwood Road
Hazard Evaluation
Customer: Hazard Evaluation
Dump Location: Chaffee
Date: 4/23/19

HIRED TRUCK COMPANY

TRUCK # & DRIVER 13/05mo

DUMP TRUCK SERVICE
 SLINGER SERVICE
 DUMP TRAILER SERVICE
 OTHER

MATERIAL HAULED cont soils

JOB START 7:15

JOB FINISH

TRAVEL TIME

LUNCH
 NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	59188	2098	-	-	
2	59204	2193	9:30	9:50	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

L 375579

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

OFFICE: 875-6168

JOB#

10881

Elmwood Road
Hazard Evaluation
Customer: Hazard Evaluation
Dump Location: Chaffee
Date: 4/23/19

HIRED TRUCK COMPANY

TRUCK # & DRIVER 16 Tom's

DUMP TRUCK SERVICE
 SLINGER SERVICE
 DUMP TRAILER SERVICE
 OTHER

MATERIAL HAULED Dirty dirt

JOB START 6:30

JOB FINISH

TRAVEL TIME 1 hr

LUNCH
 NO LUNCH

TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIF: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591947	2258	8:06	9:15	
2	592003	2014	9:00	9:15	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

HIRED TRUCK COPY

379288

PARISO LOGISTICS, INC.

OFFICE: 875-6168
 3649 River Road
 Tonawanda, NY 14150
 FAX: 875-4121

JOB# 10801

CUSTOMER: HAZARD EVALUATIONS
 LOAD LOCATION: 1801 E. Mainwood
 DUMP LOCATION: CHAFFET
 DATE: 4/23/19

HIRED TRUCK COMPANY: _____
 TRUCK # & DRIVER: DFE & P33
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: COMBUSTIBLE SOLID
 JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591956	21.83	-	
2	592029	20.61	31	
3				
4				
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6				
7				
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9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____
 HIRED TRUCK COPY

379720

PARISO LOGISTICS, INC.

OFFICE: 875-6168
 3649 River Road
 Tonawanda, NY 14150
 FAX: 875-4121

JOB# 10801

CUSTOMER: HAZARD EVALUATION
 LOAD LOCATION: 1801 E. Mainwood
 DUMP LOCATION: CHAFFET
 DATE: 4/23/19

HIRED TRUCK COMPANY: _____
 TRUCK # & DRIVER: 36/MARY
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: DUMP DIRT
 JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591970	21.94	-	
2				
3				
4				
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8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____
 HIRED TRUCK COPY

21.0 *Chaffel*
 COUNTY L 320695

PARISO LOGISTICS, INC. JOB#
 3649 River Road
 Tonawanda, NY 14150

OFFICE: 875-6168 FAX: 875-4121

1801 *Howard* *Emmerson* *W.M.* *Chaffel*
 Hired Truck Company *Design* *2289*
 TRUCK # & DRIVER

TRUCK # & DRIVER *Design*
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER
 MATERIAL HAULED *94*
 JOB START *5:00*
 JOB FINISH
 TRAVEL TIME
 LUNCH NO LUNCH
 TOTAL *Damage*

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	<i>591983</i>	<i>2560</i>		
2				
3				
4	<i>8044843</i>	<i>2560</i>		
5				
6	<i>(2)</i>			
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

RETURN TO PARISO

21.79 *Chaffel*
 COUNTY L 340861

PARISO LOGISTICS, INC. JOB#
 3649 River Road
 Tonawanda, NY 14150

OFFICE: 875-6168 FAX: 875-4121

1801 *Howard* *Emmerson* *W.M.* *Chaffel*
 Hired Truck Company *Design*
 TRUCK # & DRIVER

TRUCK # & DRIVER *Design*
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER
 MATERIAL HAULED
 JOB START
 JOB FINISH
 TRAVEL TIME
 LUNCH NO LUNCH
 TOTAL

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	<i>591988</i>	<i>21.79</i>		<i>marked @ 8044845</i>
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

RETURN TO PARISO

21.0 *Chatter*
CONTNH L 340934

PARISO LOGISTICS, INC. *10801* JOB#

3649 River Road

Tonawanda, NY 14150

FAX: 875-4121

OFFICE: 875-6168

LOAD LOCATION: *Harzard Elmwood* CUSTOMER: *Environment al* DUMP LOCATION: *Chatter Fee* DATE: *9/23/19*

HIRED TRUCK COMPANY: *Design* JOB START: _____
 TRUCK # & DRIVER: *223 WJ* JOB FINISH: _____
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____ TRAVEL TIME: _____
 MATERIAL HAULED: *94* LUNCH NO LUNCH
 TOTAL: *Tonnage*

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	<i>592004</i>	<i>2036</i>	<i>21</i>		
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

RETURN TO PARISO

FDN 21.0 CONTNH L 341473

PARISO LOGISTICS, INC. *10801* JOB#

3649 River Road

Tonawanda, NY 14150

FAX: 875-4121

OFFICE: 875-6168

LOAD LOCATION: *Harzard Elmwood* CUSTOMER: *Environment al* DUMP LOCATION: *Chatter Fee* DATE: *9/23/19*

HIRED TRUCK COMPANY: *B.T.S.* JOB START: *8:00*
 TRUCK # & DRIVER: *#102* JOB FINISH: *10:00*
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____ TRAVEL TIME: _____
 MATERIAL HAULED: *Dirty Dirt* LUNCH NO LUNCH
 TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	<i>8041841</i>	<i>20.86</i>			
2					
3					
4					
5					
6					
7					
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11					
12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

RETURN TO PARISO

21,02 L 361546

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

10003

JOB#

Customer: Harold E. ... DATE: 4/23/19
 LOAD LOCATION: 1801 Elmwood Ave DUMP LOCATION: Wm ... Co. #111
 HIRED TRUCK COMPANY: Lonab JOB START: 800
 TRUCK # & DRIVER: 192-Cars JOB FINISH: 945
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: 9A TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	59183	1855	800 - 815	915 - 935 ZITOND MIN
2				
3				
4				
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12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

21.57 L 372902

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB#

Customer: HAZARD ... DATE: 4/23/19
 LOAD LOCATION: 1801 Elmwood Ave DUMP LOCATION: Wm ... Co. #111
 HIRED TRUCK COMPANY: _____ JOB START: _____
 TRUCK # & DRIVER: 109-CARROLL JOB FINISH: _____
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: DUMP TRUCK TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

ID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591971	21.57	-	
2				
3				
4				
5				
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11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

42.53 L 373915

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB#

CUSTOMER: HAZARD EVALUATION DATE: 4/23/19
 LOAD LOCATION: 1801 Elmwood DUMP LOCATION: Wm. Dwyer
 HIRED TRUCK COMPANY: Beis
 TRUCK # & DRIVER: 111 4712 Grant
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: cont. soil

JOB START: _____
 JOB FINISH: _____
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591972	4183	7:35	7:44	
2	592021	1977	9:50	10:00	
3					
4					
5					
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12					
13					
14					
15					

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

11-21-02 L 374420

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150

OFFICE: 875-6168
FAX: 875-4121

JOB#

CUSTOMER: HAZARD EVALUATION DATE: 4/23/19
 LOAD LOCATION: 1801 Elmwood one DUMP LOCATION: Wm. Dwyer
 HIRED TRUCK COMPANY: Knicker
 TRUCK # & DRIVER: 199 Maple
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
 MATERIAL HAULED: cont. soil

JOB START: 8:55A
 JOB FINISH: 10:05A
 TRAVEL TIME: _____
 LUNCH NO LUNCH
 TOTAL: _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB		REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
			IN	OUT	
1	591996	1612	8:25A	8:30A	9.35A-10:05A
2					
3					
4					
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14					
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

45.90 L 375022

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150
JOB# 10801
FAX: 875-4121

OFFICE: 875-6168

HAZZARD ^{CUSTOMER} EVERETT TOWNS ^{DATE} 2/25/19
1801 ^{LOAD LOCATION} FALHOOD ^{DUMP LOCATION} WASH BUREL WMY CHARTER

HIRED TRUCK COMPANY BPARSO
TRUCK # & DRIVER JD5 BULL
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
MATERIAL HAULED Dump Dirt
JOB START 7:30A
JOB FINISH 11:5A
TRAVEL TIME 1hr
 LUNCH NO LUNCH
TOTAL _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	05919849	39	-	
2	092018	2451	-	
3				
4				
5				
6				
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OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: _____

JOB COPY

21.0 TON L 376373

PARISO LOGISTICS, INC.

3649 River Road
Tonawanda, NY 14150
JOB# 10801
FAX: 875-4121

OFFICE: 875-6168

HAZZARD ^{CUSTOMER} ENVIRONMENTAL ^{DATE} 2/23/19
1801 ^{LOAD LOCATION} FALHOOD ^{DUMP LOCATION} CHARTER WASH BUREL

HIRED TRUCK COMPANY BTS
TRUCK # & DRIVER 911/MIKE
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER _____
MATERIAL HAULED Dump Dirt
JOB START _____
JOB FINISH _____
TRAVEL TIME _____
 LUNCH NO LUNCH
TOTAL _____

LD #	TICKET #	WEIGHT	WAIT TIME ON JOB IN - OUT	REMARKS SPECIFY: ON "HOLD" @ PLANT, TOLLS, DUMP LOCATIONS, ETC.
1	591980	20.34	-	
2				
3				
4				
5				
6				
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10				
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12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE: 911

JOB COPY

L 377182

JOB#

PARISO LOGISTICS, INC.

3649 River Road

Tonawanda, NY 14150

10603

FAX: 875-4121

OFFICE: 875-6168

CUSTOMER: Harvard Savings JDATE: 4/23/97
 JOB # LOCATION: 101 West 1st St PUMP LOCATION: LLK

JOB START: _____

JOB FINISH: _____

TRAVEL TIME: _____

NO LUNCH

LUNCH

TOTAL _____

HIRED TRUCK COMPANY: BTS
 TRUCK # & DRIVER: 300/Dwan
 DUMP TRUCK SERVICE SLINGER SERVICE
 DUMP TRAILER SERVICE OTHER

MATERIAL HAULED: DD

REMARKS SPECIFY ON TONS @ PLANT
 TONS DUMP LOCATIONS, ETC

JID #	TICKET #	WEIGHT	WAIT TIME ON JOB IN OUT	REMARKS
1	57948	24,000		
2	579002	22,560		
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

OUR RESPONSIBILITY ENDS AT THE CURB

CUSTOMER'S SIGNATURE _____

JOB COPY

Appendix E

BSA Documentation

April 30, 2019

Leslie Sedita, Industrial Waste Administrator
Buffalo Sewer Authority
Industrial Waste Section
90 West Ferry Street
Buffalo, New York 14213-1799

Re: **Temporary Wastewater Discharge Permit Application
MOD-PAC CORP., 1801 Elmwood Ave., Buffalo, NY**

Dear Ms. Sedita:

Please find enclosed a Temporary Discharge Permit Application (Attachment 1) prepared by Hazard Evaluations, Inc. (HEI) on behalf of MOD-PAC CORP. This application is being submitted for the proposed discharge of a single batch of wastewater generated from perched groundwater inflow and accumulated paved surface runoff to a remedial excavation at the above-referenced on-site location (see Site Map, Attachment 2). This site is an active NYSDEC Brownfield Cleanup Program site, identified as BCP # C915314. It should be noted that the accumulated water was pumped to the storage tank (currently estimated at approximately 20,000 gallons total). No additional water will be generated as the excavation has been closed. The water from within the tank was sampled by HEI on April 12, 2019 with the use of a dedicated bailer. Upon collection, the water sample was containerized, preserved and submitted to a NYSDOH-certified laboratory where it was analyzed for the standard Buffalo Sewer Authority (BSA) required parameters, except BOD5 as allowed. The analytical laboratory report and chain-of-custody records for this sampling are presented as Attachment 3.

Based on the analytical results and other information presented, HEI requests on behalf of MOD-PAC CORP. approval for the discharge of the wastewater under the following proposed conditions:

- 1) Discharge of the water will take place via a combined sewer drop inlet located within the paved area near to the storage tank and backfilled excavation. The water will be discharged at an approximate rate of 30 gpm on a continuous basis during normal business hours until the tank is empty. HEI understands that pumping/gravity discharge cannot take place during precipitation events. Based on the volume of water to be discharged, HEI estimates that it will take roughly 11 hours to complete the discharge.

If you have any questions concerning the information presented in the enclosed application or its attachments, please contact me directly. Your prompt attention to this request would be greatly appreciated. HEI's current insurance certificate is attached to the application. A check for \$500 is enclosed to cover the permit fee. Thank you for your assistance in this manner.

Very truly yours
HAZARD EVALUATIONS, INC.

A handwritten signature in blue ink, appearing to read "C. Mark Hanna".

C. Mark Hanna, CHMM
President

Attachments

cc: D. Keane (MPC)
D. Lupp (MPC)

e1605\MPC\MPC BSA Temp Discharge Permit App 043019

Attachment 1

Temporary Discharge Permit Application

FOR BUFFALO SEWER AUTHORITY USE ONLY
Date Application Received: _____
Permit Number: _____
Industrial Waste Investigator: _____

BUFFALO SEWER AUTHORITY
TEMPORARY DISCHARGE PERMIT APPLICATION

GENERAL INFORMATION

A 1. Applicant Business Name: Hazard Evaluations Inc.

A. 2a. Business address:

3636 North Buffalo Rd. Orchard Park New York 14127
Street City State Zip

A 2b. Mailing Address (*if different than above*):

Street City State Zip

A 3. Chief Business Official:

Mark Hanna President
Name Title

A 4. Person to be contacted about this application:

Mark Hanna President
Name Title
(716) 667-3130 (716) 667-3156 mhanna@hazardevaluations.com
Phone Fax E-Mail

A 5. Person to be contacted in case of emergency:

Mark Hanna President
Name Title
(716) 667-3130 (716) 667-3156
Day phone After hours phone
(716) 998-3130
Cell phone

A 6. Insurance Agent(s) of responsible party: See attached

Certificate of Insurance for responsible party must be attached.

WASTESTREAM

B 1. Location of Wastestream:

MOD-PAC CORP.

Name

1801 Elmwood Ave.

New York

14207

Street

City

State

Zip

B 2. Source of Wastestream: Buffalo Water in excavation at NYSDEC Brownfield site; BCP#C915314.

B 3. Volume of Wastestream 20,000 average flow (gals/day); _____ peak flow (gals/sec)

B 4. Duration of Discharge: 1 day

B 5. Variability of Wastestream Volume: Yes _____ No X

If yes, explain _____

B 6. Attach analytical data (if available)

C 1. Map must be attached detailing source of wastestream, proposed pretreatment equipment and discharge location.

I have personally examined, and am familiar with the information submitted in this document and attachments. Based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information.

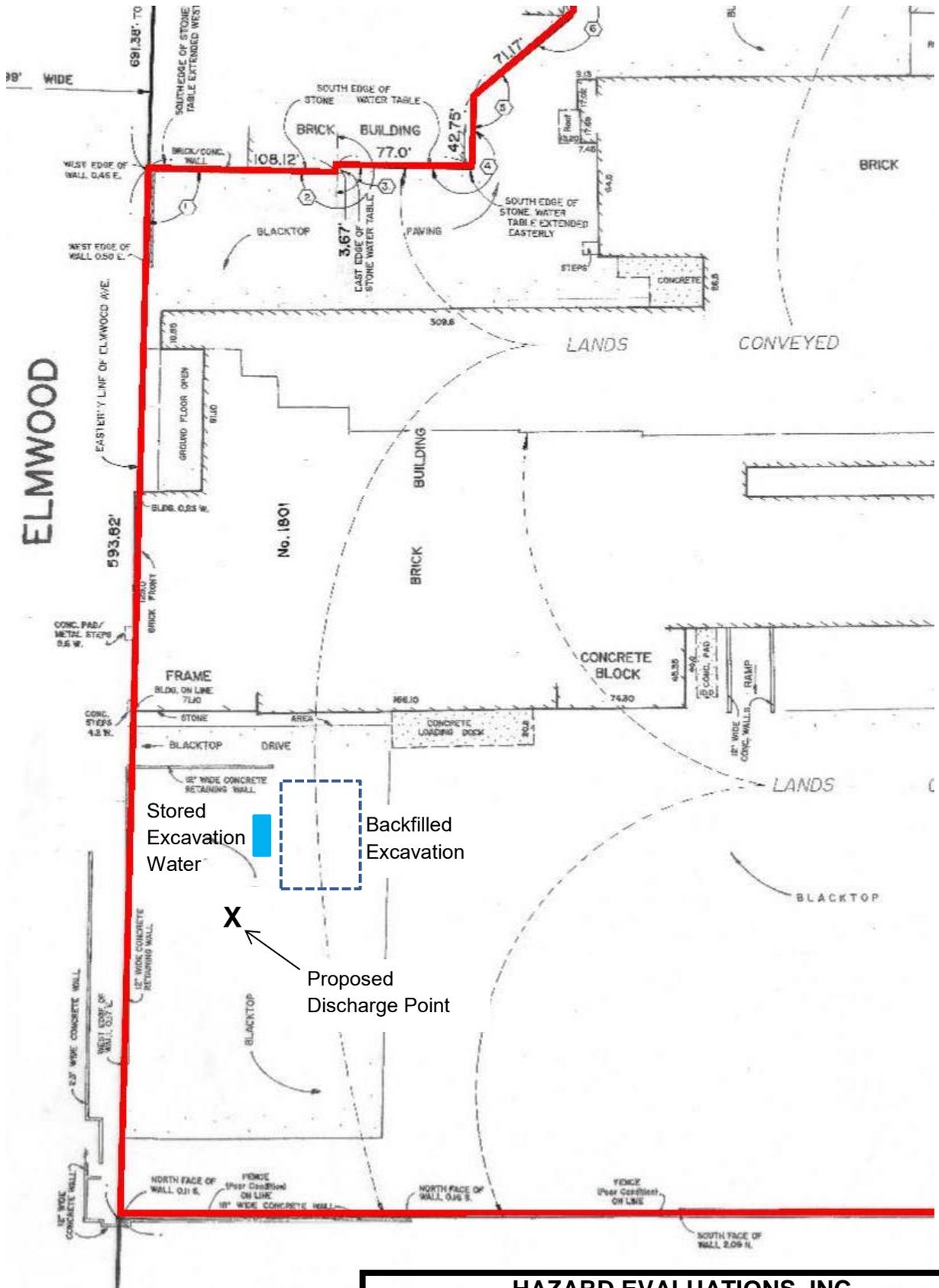
4/30/19

Date

Signature of Official

Attachment 2

Site Map



HAZARD EVALUATIONS, INC.		
<i>Phase I/II Audits – Site Investigations – Facility Inspections</i>		
SITE LOCATION		
MOD-PAC CORP.		
1801 ELMWOOD AVENUE		
BUFFALO, NEW YORK		
DRAWN BY: LSH	SCALE: NOT TO SCALE	PROJECT: e1605
CHECKED BY: EB	DATE: 04/19	FIGURE NO: 1

Attachment 3

Analytical Laboratory Report



ANALYTICAL REPORT

Lab Number:	L1915036
Client:	Hazard Evaluations, Inc. 3636 North Buffalo Road Orchard Park, NY 14127
ATTN:	Mark Hanna
Phone:	(716) 667-3130
Project Name:	SB101 EXCAVATION WATER
Project Number:	E1605
Report Date:	04/22/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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



Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1915036-01	SB101 EXCAVATION WATER	WATER	1801 ELMWOOD AVE., BUFFALO, NY	04/12/19 08:30	04/12/19

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Case Narrative

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

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

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

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

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

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

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Case Narrative (continued)

Report Submission

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

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

Authorized Signature:

 Amita Naik

Title: Technical Director/Representative

Date: 04/22/19

ORGANICS

VOLATILES

Project Name: SB101 EXCAVATION WATER**Lab Number:** L1915036**Project Number:** E1605**Report Date:** 04/22/19**SAMPLE RESULTS**

Lab ID: L1915036-01
 Client ID: SB101 EXCAVATION WATER
 Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
 Date Received: 04/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1
 Analytical Date: 04/15/19 13:05
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	0.56	1
1,1-Dichloroethane	ND		ug/l	1.5	0.40	1
Chloroform	ND		ug/l	1.0	0.38	1
Carbon tetrachloride	ND		ug/l	1.0	0.24	1
1,2-Dichloropropane	ND		ug/l	3.5	0.46	1
Dibromochloromethane	ND		ug/l	1.0	0.27	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34	1
2-Chloroethylvinyl ether	ND		ug/l	10	0.35	1
Tetrachloroethene	ND		ug/l	1.0	0.26	1
Chlorobenzene	ND		ug/l	3.5	0.30	1
Trichlorofluoromethane	ND		ug/l	5.0	0.28	1
1,2-Dichloroethane	ND		ug/l	1.5	0.47	1
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29	1
Bromodichloromethane	ND		ug/l	1.0	0.28	1
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31	1
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34	1
Bromoform	ND		ug/l	1.0	0.22	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20	1
Benzene	ND		ug/l	1.0	0.38	1
Toluene	ND		ug/l	1.0	0.31	1
Ethylbenzene	ND		ug/l	1.0	0.28	1
Chloromethane	ND		ug/l	5.0	1.0	1
Bromomethane	ND		ug/l	5.0	1.2	1
Vinyl chloride	ND		ug/l	1.0	0.38	1
Chloroethane	ND		ug/l	2.0	0.37	1
1,1-Dichloroethene	ND		ug/l	1.0	0.31	1
trans-1,2-Dichloroethene	ND		ug/l	1.5	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.17	1

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915036-01
 Client ID: SB101 EXCAVATION WATER
 Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
 Date Received: 04/12/19
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	0.33	1
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28	1
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27	1
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29	1
p/m-Xylene	ND		ug/l	2.0	0.30	1
o-xylene	ND		ug/l	1.0	0.34	1
Xylenes, Total	ND		ug/l	1.0	0.30	1
Styrene	ND		ug/l	1.0	0.37	1
Acetone	14		ug/l	10	2.4	1
Carbon disulfide	ND		ug/l	5.0	0.28	1
2-Butanone	ND		ug/l	10	1.0	1
Vinyl acetate	ND		ug/l	10	0.41	1
4-Methyl-2-pentanone	ND		ug/l	10	0.19	1
2-Hexanone	ND		ug/l	10	0.55	1
Acrolein	ND		ug/l	8.0	1.8	1
Acrylonitrile	ND		ug/l	10	0.33	1
Dibromomethane	ND		ug/l	1.0	0.23	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	89		60-140
Fluorobenzene	85		60-140
4-Bromofluorobenzene	115		60-140

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 04/15/19 11:35
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1226796-8					
Methylene chloride	ND		ug/l	1.0	0.56
1,1-Dichloroethane	ND		ug/l	1.5	0.40
Chloroform	ND		ug/l	1.0	0.38
Carbon tetrachloride	ND		ug/l	1.0	0.24
1,2-Dichloropropane	ND		ug/l	3.5	0.46
Dibromochloromethane	ND		ug/l	1.0	0.27
1,1,2-Trichloroethane	ND		ug/l	1.5	0.34
2-Chloroethylvinyl ether	ND		ug/l	10	0.35
Tetrachloroethene	ND		ug/l	1.0	0.26
Chlorobenzene	ND		ug/l	3.5	0.30
Trichlorofluoromethane	ND		ug/l	5.0	0.28
1,2-Dichloroethane	ND		ug/l	1.5	0.47
1,1,1-Trichloroethane	ND		ug/l	2.0	0.29
Bromodichloromethane	ND		ug/l	1.0	0.28
trans-1,3-Dichloropropene	ND		ug/l	1.5	0.31
cis-1,3-Dichloropropene	ND		ug/l	1.5	0.34
Bromoform	ND		ug/l	1.0	0.22
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	0.20
Benzene	ND		ug/l	1.0	0.38
Toluene	ND		ug/l	1.0	0.31
Ethylbenzene	ND		ug/l	1.0	0.28
Chloromethane	ND		ug/l	5.0	1.0
Bromomethane	ND		ug/l	5.0	1.2
Vinyl chloride	ND		ug/l	1.0	0.38
Chloroethane	ND		ug/l	2.0	0.37
1,1-Dichloroethene	ND		ug/l	1.0	0.31
trans-1,2-Dichloroethene	ND		ug/l	1.5	0.33
cis-1,2-Dichloroethene	ND		ug/l	1.0	0.17
Trichloroethene	ND		ug/l	1.0	0.33

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 04/15/19 11:35
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1226796-8					
1,2-Dichlorobenzene	ND		ug/l	5.0	0.28
1,3-Dichlorobenzene	ND		ug/l	5.0	0.27
1,4-Dichlorobenzene	ND		ug/l	5.0	0.29
p/m-Xylene	ND		ug/l	2.0	0.30
o-xylene	ND		ug/l	1.0	0.34
Xylenes, Total	ND		ug/l	1.0	0.30
Styrene	ND		ug/l	1.0	0.37
Acetone	ND		ug/l	10	2.4
Carbon disulfide	ND		ug/l	5.0	0.28
2-Butanone	ND		ug/l	10	1.0
Vinyl acetate	ND		ug/l	10	0.41
4-Methyl-2-pentanone	ND		ug/l	10	0.19
2-Hexanone	ND		ug/l	10	0.55
Acrolein	ND		ug/l	8.0	1.8
Acrylonitrile	ND		ug/l	10	0.33
n-Hexane ¹	ND		ug/l	20	0.17
Methyl tert butyl ether	ND		ug/l	10	0.19
Dibromomethane	ND		ug/l	1.0	0.23
1,4-Dioxane ¹	73	J	ug/l	2000	30.
Tert-Butyl Alcohol	ND		ug/l	100	3.9
Tertiary-Amyl Methyl Ether	ND		ug/l	20	0.28
Dichlorodifluoromethane ¹	ND		ug/l	1.0	0.32

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	97		60-140
Fluorobenzene	96		60-140
4-Bromofluorobenzene	107		60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1226796-7								
Methylene chloride	100		-		60-140	-		28
1,1-Dichloroethane	95		-		50-150	-		49
Chloroform	100		-		70-135	-		54
Carbon tetrachloride	100		-		70-130	-		41
1,2-Dichloropropane	95		-		35-165	-		55
Dibromochloromethane	110		-		70-135	-		50
1,1,2-Trichloroethane	105		-		70-130	-		45
2-Chloroethylvinyl ether	90		-		1-225	-		71
Tetrachloroethene	115		-		70-130	-		39
Chlorobenzene	110		-		65-135	-		53
Trichlorofluoromethane	95		-		50-150	-		84
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	105		-		70-130	-		36
Bromodichloromethane	105		-		65-135	-		56
trans-1,3-Dichloropropene	90		-		50-150	-		86
cis-1,3-Dichloropropene	95		-		25-175	-		58
Bromoform	115		-		70-130	-		42
1,1,2,2-Tetrachloroethane	115		-		60-140	-		61
Benzene	100		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	115		-		60-140	-		63
Chloromethane	90		-		1-205	-		60
Bromomethane	70		-		15-185	-		61

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1226796-7								
Vinyl chloride	125		-		5-195	-		66
Chloroethane	105		-		40-160	-		78
1,1-Dichloroethene	105		-		50-150	-		32
trans-1,2-Dichloroethene	100		-		70-130	-		45
cis-1,2-Dichloroethene	100		-		60-140	-		30
Trichloroethene	105		-		65-135	-		48
1,2-Dichlorobenzene	125		-		65-135	-		57
1,3-Dichlorobenzene	120		-		70-130	-		43
1,4-Dichlorobenzene	120		-		65-135	-		57
p/m-Xylene	120		-		60-140	-		30
o-xylene	115		-		60-140	-		30
Styrene	115		-		60-140	-		30
Acetone	88		-		40-160	-		30
Carbon disulfide	100		-		60-140	-		30
2-Butanone	86		-		60-140	-		30
Vinyl acetate	80		-		60-140	-		30
4-Methyl-2-pentanone	92		-		60-140	-		30
2-Hexanone	90		-		60-140	-		30
Acrolein	70		-		60-140	-		30
Acrylonitrile	82		-		60-140	-		60
Methyl tert butyl ether	90		-		60-140	-		30
Dibromomethane	100		-		70-130	-		30
1,4-Dioxane ¹	95		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1226796-7								
Tert-Butyl Alcohol	88		-		60-140	-		30
Tertiary-Amyl Methyl Ether	85		-		60-140	-		30
Dichlorodifluoromethane ¹	80		-		70-130	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	96				60-140
Fluorobenzene	98				60-140
4-Bromofluorobenzene	108				60-140

SEMIVOLATILES

Project Name: SB101 EXCAVATION WATER**Lab Number:** L1915036**Project Number:** E1605**Report Date:** 04/22/19**SAMPLE RESULTS**

Lab ID: L1915036-01
 Client ID: SB101 EXCAVATION WATER
 Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
 Date Received: 04/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 129,625.1
 Analytical Date: 04/19/19 21:57
 Analyst: SZ

Extraction Method: EPA 625.1
 Extraction Date: 04/17/19 15:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.41	1
Benzidine ¹	ND		ug/l	20	12.	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.5	1
Hexachlorobenzene	ND		ug/l	2.0	0.95	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.60	1
2-Chloronaphthalene	ND		ug/l	2.0	0.32	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.46	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.64	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.63	1
Azobenzene ¹	ND		ug/l	2.0	0.89	1
Fluoranthene	ND		ug/l	2.0	0.74	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.37	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.45	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.82	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.58	1
Hexachlorobutadiene	ND		ug/l	2.0	0.92	1
Hexachlorocyclopentadiene ¹	ND		ug/l	10	1.4	1
Hexachloroethane	ND		ug/l	2.0	0.97	1
Isophorone	ND		ug/l	5.0	0.55	1
Naphthalene	ND		ug/l	2.0	0.90	1
Nitrobenzene	ND		ug/l	2.0	0.79	1
NDPA/DPA ¹	ND		ug/l	2.0	0.78	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.63	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	1.7	1
Butyl benzyl phthalate	ND		ug/l	5.0	0.67	1
Di-n-butylphthalate	ND		ug/l	5.0	0.63	1
Di-n-octylphthalate	ND		ug/l	5.0	0.63	1
Diethyl phthalate	ND		ug/l	5.0	0.72	1

Project Name: SB101 EXCAVATION WATER**Lab Number:** L1915036**Project Number:** E1605**Report Date:** 04/22/19**SAMPLE RESULTS**

Lab ID: L1915036-01

Date Collected: 04/12/19 08:30

Client ID: SB101 EXCAVATION WATER

Date Received: 04/12/19

Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dimethyl phthalate	ND		ug/l	5.0	1.4	1
Benzo(a)anthracene	ND		ug/l	2.0	0.66	1
Benzo(a)pyrene	ND		ug/l	2.0	0.61	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.74	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.74	1
Chrysene	ND		ug/l	2.0	0.67	1
Acenaphthylene	ND		ug/l	2.0	0.93	1
Anthracene	ND		ug/l	2.0	0.79	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.67	1
Fluorene	ND		ug/l	2.0	0.93	1
Phenanthrene	ND		ug/l	2.0	0.82	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.69	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.63	1
Pyrene	ND		ug/l	2.0	0.73	1
4-Chloroaniline ¹	ND		ug/l	5.0	0.79	1
Dibenzofuran ¹	ND		ug/l	2.0	0.37	1
2-Methylnaphthalene ¹	ND		ug/l	2.0	0.35	1
n-Nitrosodimethylamine ¹	ND		ug/l	2.0	0.41	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol ¹	ND		ug/l	2.0	0.53	1
2-Chlorophenol	ND		ug/l	2.0	0.51	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.55	1
2,4-Dimethylphenol	ND		ug/l	5.0	0.85	1
2-Nitrophenol	ND		ug/l	5.0	0.60	1
4-Nitrophenol	ND		ug/l	10	0.83	1
2,4-Dinitrophenol	ND		ug/l	20	1.2	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.2	1
Pentachlorophenol	ND		ug/l	5.0	0.62	1
Phenol	ND		ug/l	5.0	0.26	1
2-Methylphenol ¹	ND		ug/l	5.0	0.77	1
3-Methylphenol/4-Methylphenol ¹	ND		ug/l	5.0	0.51	1
2,4,5-Trichlorophenol ¹	ND		ug/l	5.0	0.64	1
Benzoic Acid ¹	ND		ug/l	50	1.2	1
Benzyl Alcohol ¹	ND		ug/l	2.0	0.49	1

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915036-01
 Client ID: SB101 EXCAVATION WATER
 Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
 Date Received: 04/12/19
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	44		25-87
Phenol-d6	28		16-65
Nitrobenzene-d5	64		42-122
2-Fluorobiphenyl	61		46-121
2,4,6-Tribromophenol	52		45-128
4-Terphenyl-d14	69		47-138

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 04/18/19 23:07
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 04/16/19 16:52

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1226993-1					
Acenaphthene	ND		ug/l	2.0	0.41
Benzidine ¹	ND		ug/l	20	12.
1,2,4-Trichlorobenzene	ND		ug/l	5.0	1.5
Hexachlorobenzene	ND		ug/l	2.0	0.95
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.60
2-Chloronaphthalene	ND		ug/l	2.0	0.32
3,3'-Dichlorobenzidine	ND		ug/l	5.0	0.46
2,4-Dinitrotoluene	ND		ug/l	5.0	0.64
2,6-Dinitrotoluene	ND		ug/l	5.0	0.63
Azobenzene ¹	ND		ug/l	2.0	0.89
Fluoranthene	ND		ug/l	2.0	0.74
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.37
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.45
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.82
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.58
Hexachlorobutadiene	ND		ug/l	2.0	0.92
Hexachlorocyclopentadiene ¹	ND		ug/l	10	1.4
Hexachloroethane	ND		ug/l	2.0	0.97
Isophorone	ND		ug/l	5.0	0.55
Naphthalene	ND		ug/l	2.0	0.90
Nitrobenzene	ND		ug/l	2.0	0.79
NDPA/DPA ¹	ND		ug/l	2.0	0.78
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.63
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	1.7
Butyl benzyl phthalate	ND		ug/l	5.0	0.67
Di-n-butylphthalate	ND		ug/l	5.0	0.63
Di-n-octylphthalate	ND		ug/l	5.0	0.63
Diethyl phthalate	ND		ug/l	5.0	0.72
Dimethyl phthalate	ND		ug/l	5.0	1.4

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 04/18/19 23:07
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 04/16/19 16:52

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1226993-1					
Benzo(a)anthracene	ND		ug/l	2.0	0.66
Benzo(a)pyrene	ND		ug/l	2.0	0.61
Benzo(b)fluoranthene	ND		ug/l	2.0	0.74
Benzo(k)fluoranthene	ND		ug/l	2.0	0.74
Chrysene	ND		ug/l	2.0	0.67
Acenaphthylene	ND		ug/l	2.0	0.93
Anthracene	ND		ug/l	2.0	0.79
Benzo(ghi)perylene	ND		ug/l	2.0	0.67
Fluorene	ND		ug/l	2.0	0.93
Phenanthrene	ND		ug/l	2.0	0.82
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.69
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.63
Pyrene	ND		ug/l	2.0	0.73
4-Chloroaniline ¹	ND		ug/l	5.0	0.79
Dibenzofuran ¹	ND		ug/l	2.0	0.37
2-Methylnaphthalene ¹	ND		ug/l	2.0	0.35
n-Nitrosodimethylamine ¹	ND		ug/l	2.0	0.41
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol ¹	ND		ug/l	2.0	0.53
2-Chlorophenol	ND		ug/l	2.0	0.51
2,4-Dichlorophenol	ND		ug/l	5.0	0.55
2,4-Dimethylphenol	ND		ug/l	5.0	0.85
2-Nitrophenol	ND		ug/l	5.0	0.60
4-Nitrophenol	ND		ug/l	10	0.83
2,4-Dinitrophenol	ND		ug/l	20	1.2
4,6-Dinitro-o-cresol	ND		ug/l	10	1.2
Pentachlorophenol	ND		ug/l	5.0	0.62
Phenol	ND		ug/l	5.0	0.26
2-Methylphenol ¹	ND		ug/l	5.0	0.77

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 04/18/19 23:07
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 04/16/19 16:52

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1226993-1					
3-Methylphenol/4-Methylphenol ¹	ND		ug/l	5.0	0.51
2,4,5-Trichlorophenol ¹	ND		ug/l	5.0	0.64
Benzoic Acid ¹	ND		ug/l	50	1.2
Benzyl Alcohol ¹	ND		ug/l	2.0	0.49

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		25-87
Phenol-d6	37		16-65
Nitrobenzene-d5	83		42-122
2-Fluorobiphenyl	87		46-121
2,4,6-Tribromophenol	60		45-128
4-Terphenyl-d14	98		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1226993-2								
Acenaphthene	74		-		60-132	-		30
Benzidine ¹	16		-		0-70	-		30
1,2,4-Trichlorobenzene	70		-		57-130	-		30
Hexachlorobenzene	78		-		8-142	-		30
Bis(2-chloroethyl)ether	75		-		43-126	-		30
2-Chloronaphthalene	77		-		65-120	-		30
3,3'-Dichlorobenzidine	39		-		8-213	-		30
2,4-Dinitrotoluene	88		-		48-127	-		30
2,6-Dinitrotoluene	92		-		68-137	-		30
Azobenzene ¹	84		-		44-115	-		30
Fluoranthene	84		-		43-121	-		30
4-Chlorophenyl phenyl ether	78		-		38-145	-		30
4-Bromophenyl phenyl ether	80		-		65-120	-		30
Bis(2-chloroisopropyl)ether	73		-		63-139	-		30
Bis(2-chloroethoxy)methane	82		-		49-165	-		30
Hexachlorobutadiene	68		-		38-120	-		30
Hexachlorocyclopentadiene ¹	62		-		7-118	-		30
Hexachloroethane	62		-		55-120	-		30
Isophorone	86		-		47-180	-		30
Naphthalene	70		-		36-120	-		30
Nitrobenzene	83		-		54-158	-		30
NDPA/DPA ¹	80		-		45-112	-		30
n-Nitrosodi-n-propylamine	89		-		14-198	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1226993-2								
Bis(2-ethylhexyl)phthalate	88		-		29-137	-		30
Butyl benzyl phthalate	94		-		1-140	-		30
Di-n-butylphthalate	92		-		8-120	-		30
Di-n-octylphthalate	93		-		19-132	-		30
Diethyl phthalate	84		-		1-120	-		30
Dimethyl phthalate	87		-		1-120	-		30
Benzo(a)anthracene	85		-		42-133	-		30
Benzo(a)pyrene	87		-		32-148	-		30
Benzo(b)fluoranthene	83		-		42-140	-		30
Benzo(k)fluoranthene	87		-		25-146	-		30
Chrysene	78		-		44-140	-		30
Acenaphthylene	84		-		54-126	-		30
Anthracene	81		-		43-120	-		30
Benzo(ghi)perylene	83		-		1-195	-		30
Fluorene	80		-		70-120	-		30
Phenanthrene	76		-		65-120	-		30
Dibenzo(a,h)anthracene	85		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	86		-		1-151	-		30
Pyrene	80		-		70-120	-		30
4-Chloroaniline ¹	64		-		10-100	-		30
Dibenzofuran ¹	77		-		23-126	-		30
2-Methylnaphthalene ¹	77		-		40-109	-		30
n-Nitrosodimethylamine ¹	44		-		15-68	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1226993-2								
2,4,6-Trichlorophenol	87		-		52-129	-		30
p-Chloro-m-cresol ¹	90		-		68-130	-		30
2-Chlorophenol	76		-		36-120	-		30
2,4-Dichlorophenol	88		-		53-122	-		30
2,4-Dimethylphenol	75		-		42-120	-		30
2-Nitrophenol	84		-		45-167	-		30
4-Nitrophenol	56		-		13-129	-		30
2,4-Dinitrophenol	67		-		1-173	-		30
4,6-Dinitro-o-cresol	81		-		56-130	-		30
Pentachlorophenol	66		-		38-152	-		30
Phenol	41		-		17-120	-		30
2-Methylphenol ¹	73		-		38-102	-		30
3-Methylphenol/4-Methylphenol ¹	74		-		35-103	-		30
2,4,5-Trichlorophenol ¹	89		-		47-126	-		30
Benzoic Acid ¹	16		-		2-55	-		30
Benzyl Alcohol ¹	76		-		31-103	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1226993-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria
2-Fluorophenol	56				25-87
Phenol-d6	40				16-65
Nitrobenzene-d5	85				42-122
2-Fluorobiphenyl	82				46-121
2,4,6-Tribromophenol	68				45-128
4-Terphenyl-d14	84				47-138

PCBS

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915036-01
Client ID: SB101 EXCAVATION WATER
Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
Date Received: 04/12/19
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 04/22/19 15:19
Analyst: KB

Extraction Method: EPA 608.3
Extraction Date: 04/19/19 07:46
Cleanup Method: EPA 3665A
Cleanup Date: 04/19/19
Cleanup Method: EPA 3660B
Cleanup Date: 04/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.050	0.008	1	A
Aroclor 1221	ND		ug/l	0.050	0.011	1	A
Aroclor 1232	ND		ug/l	0.050	0.023	1	A
Aroclor 1242	ND		ug/l	0.050	0.018	1	A
Aroclor 1248	ND		ug/l	0.050	0.023	1	A
Aroclor 1254	ND		ug/l	0.050	0.008	1	A
Aroclor 1260	ND		ug/l	0.050	0.017	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		37-123	A
Decachlorobiphenyl	71		38-114	A
2,4,5,6-Tetrachloro-m-xylene	86		37-123	B
Decachlorobiphenyl	82		38-114	B

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 127,608.3
Analytical Date: 04/22/19 14:15
Analyst: KB

Extraction Method: EPA 608.3
Extraction Date: 04/19/19 07:46
Cleanup Method: EPA 3665A
Cleanup Date: 04/19/19
Cleanup Method: EPA 3660B
Cleanup Date: 04/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1228115-1						
Aroclor 1016	ND		ug/l	0.050	0.008	A
Aroclor 1221	ND		ug/l	0.050	0.011	A
Aroclor 1232	ND		ug/l	0.050	0.023	A
Aroclor 1242	ND		ug/l	0.050	0.018	A
Aroclor 1248	ND		ug/l	0.050	0.023	A
Aroclor 1254	ND		ug/l	0.050	0.008	A
Aroclor 1260	ND		ug/l	0.050	0.017	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77		37-123	A
Decachlorobiphenyl	64		38-114	A
2,4,5,6-Tetrachloro-m-xylene	88		37-123	B
Decachlorobiphenyl	66		38-114	B

Lab Control Sample Analysis Batch Quality Control

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1228115-2									
Aroclor 1016	93		-		50-140	-		36	A
Aroclor 1260	79		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68				37-123	A
Decachlorobiphenyl	50				38-114	A
2,4,5,6-Tetrachloro-m-xylene	89				37-123	B
Decachlorobiphenyl	52				38-114	B

PESTICIDES

Project Name: SB101 EXCAVATION WATER**Lab Number:** L1915036**Project Number:** E1605**Report Date:** 04/22/19**SAMPLE RESULTS**

Lab ID: L1915036-01
 Client ID: SB101 EXCAVATION WATER
 Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
 Date Received: 04/12/19
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 127,608.3
 Analytical Date: 04/19/19 14:33
 Analyst: KEG

Extraction Method: EPA 608.3
 Extraction Date: 04/18/19 17:50
 Cleanup Method: EPA 3620B
 Cleanup Date: 04/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.003	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.009	1	A
Heptachlor	ND		ug/l	0.020	0.005	1	A
Aldrin	ND		ug/l	0.020	0.005	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.007	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin aldehyde	ND		ug/l	0.040	0.017	1	A
Endrin ketone ¹	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.003	1	A
4,4'-DDE	ND		ug/l	0.040	0.003	1	A
4,4'-DDD	ND		ug/l	0.040	0.008	1	A
4,4'-DDT	ND		ug/l	0.040	0.008	1	A
Endosulfan I	ND		ug/l	0.020	0.008	1	A
Endosulfan II	ND		ug/l	0.040	0.003	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.017	1	A
Methoxychlor ¹	ND		ug/l	0.100	0.008	1	A
Toxaphene	ND		ug/l	0.400	0.126	1	A
Chlordane	ND		ug/l	0.200	0.042	1	A
cis-Chlordane ¹	ND		ug/l	0.020	0.005	1	A
trans-Chlordane ¹	ND		ug/l	0.020	0.008	1	A

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915036-01
 Client ID: SB101 EXCAVATION WATER
 Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
 Date Received: 04/12/19
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		47-124	A
Decachlorobiphenyl	100		32-167	A
2,4,5,6-Tetrachloro-m-xylene	69		47-124	B
Decachlorobiphenyl	76		32-167	B

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 04/19/19 13:43
Analyst: KEG

Extraction Method: EPA 608.3
Extraction Date: 04/18/19 17:50
Cleanup Method: EPA 3620B
Cleanup Date: 04/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01 Batch: WG1227924-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.003	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.009	A
Heptachlor	ND		ug/l	0.020	0.005	A
Aldrin	ND		ug/l	0.020	0.005	A
Heptachlor epoxide	ND		ug/l	0.020	0.007	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin aldehyde	ND		ug/l	0.040	0.017	A
Endrin ketone ¹	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.003	A
4,4'-DDE	ND		ug/l	0.040	0.003	A
4,4'-DDD	ND		ug/l	0.040	0.008	A
4,4'-DDT	ND		ug/l	0.040	0.008	A
Endosulfan I	ND		ug/l	0.020	0.008	A
Endosulfan II	ND		ug/l	0.040	0.003	A
Endosulfan sulfate	ND		ug/l	0.040	0.017	A
Methoxychlor ¹	ND		ug/l	0.100	0.008	A
Toxaphene	ND		ug/l	0.400	0.126	A
Chlordane	ND		ug/l	0.200	0.042	A
cis-Chlordane ¹	ND		ug/l	0.020	0.005	A
trans-Chlordane ¹	ND		ug/l	0.020	0.008	A

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 04/19/19 13:43
Analyst: KEG

Extraction Method: EPA 608.3
Extraction Date: 04/18/19 17:50
Cleanup Method: EPA 3620B
Cleanup Date: 04/19/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01 Batch: WG1227924-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		47-124	A
Decachlorobiphenyl	85		32-167	A
2,4,5,6-Tetrachloro-m-xylene	60		47-124	B
Decachlorobiphenyl	62		32-167	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG1227924-2									
Delta-BHC	93		-		19-140	-		52	A
Lindane	87		-		32-140	-		39	A
Alpha-BHC	87		-		37-140	-		36	A
Beta-BHC	85		-		17-147	-		44	A
Heptachlor	73		-		34-140	-		43	A
Aldrin	65		-		42-140	-		35	A
Heptachlor epoxide	55		-		37-142	-		26	A
Endrin	85		-		30-147	-		48	A
Endrin aldehyde	63		-		30-150	-		30	A
Endrin ketone ¹	89		-		30-150	-		30	A
Dieldrin	86		-		36-146	-		49	A
4,4'-DDE	71		-		30-145	-		35	A
4,4'-DDD	85		-		31-141	-		39	A
4,4'-DDT	82		-		25-160	-		42	A
Endosulfan I	73		-		45-153	-		28	A
Endosulfan II	85		-		1-202	-		53	A
Endosulfan sulfate	94		-		26-144	-		38	A
Methoxychlor ¹	83		-		30-150	-		30	A
cis-Chlordane ¹	58		-		45-140	-		35	A
trans-Chlordane ¹	92		-		45-140	-		35	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01 Batch: WG1227924-2

<i>Surrogate</i>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria	<i>Column</i>
2,4,5,6-Tetrachloro-m-xylene	59				47-124	A
Decachlorobiphenyl	101				32-167	A
2,4,5,6-Tetrachloro-m-xylene	70				47-124	B
Decachlorobiphenyl	82				32-167	B

METALS

Project Name: SB101 EXCAVATION WATER**Lab Number:** L1915036**Project Number:** E1605**Report Date:** 04/22/19**SAMPLE RESULTS**

Lab ID: L1915036-01

Date Collected: 04/12/19 08:30

Client ID: SB101 EXCAVATION WATER

Date Received: 04/12/19

Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.050	0.007	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Arsenic, Total	ND		mg/l	0.005	0.002	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Barium, Total	0.200		mg/l	0.010	0.002	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Beryllium, Total	ND		mg/l	0.005	0.001	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Cadmium, Total	ND		mg/l	0.005	0.001	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Chromium, Total	0.002	J	mg/l	0.010	0.002	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Copper, Total	0.007	J	mg/l	0.010	0.002	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Lead, Total	0.005	J	mg/l	0.010	0.003	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Mercury, Total	ND		mg/l	0.00020	0.00009	1	04/15/19 12:37	04/15/19 20:06	EPA 245.1	3,245.1	EA
Nickel, Total	ND		mg/l	0.025	0.002	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Selenium, Total	ND		mg/l	0.010	0.004	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Silver, Total	ND		mg/l	0.007	0.003	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Thallium, Total	ND		mg/l	0.020	0.003	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Titanium, Total	0.019		mg/l	0.010	0.002	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC
Zinc, Total	0.007	J	mg/l	0.050	0.002	1	04/16/19 13:24	04/17/19 01:49	EPA 3005A	19,200.7	MC



Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis Batch Quality Control

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1226481-1									
Mercury, Total	ND	mg/l	0.00020	0.00009	1	04/15/19 12:37	04/15/19 19:38	3,245.1	EA

Prep Information

Digestion Method: EPA 245.1

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1226869-1									
Antimony, Total	ND	mg/l	0.050	0.007	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Arsenic, Total	ND	mg/l	0.005	0.002	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Barium, Total	ND	mg/l	0.010	0.002	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Beryllium, Total	ND	mg/l	0.005	0.001	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Cadmium, Total	ND	mg/l	0.005	0.001	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Chromium, Total	ND	mg/l	0.010	0.002	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Copper, Total	ND	mg/l	0.010	0.002	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Lead, Total	ND	mg/l	0.010	0.003	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Nickel, Total	ND	mg/l	0.025	0.002	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Selenium, Total	ND	mg/l	0.010	0.004	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Silver, Total	ND	mg/l	0.007	0.003	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Thallium, Total	ND	mg/l	0.020	0.003	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Titanium, Total	ND	mg/l	0.010	0.002	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB
Zinc, Total	ND	mg/l	0.050	0.002	1	04/16/19 13:24	04/16/19 20:37	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1226481-2								
Mercury, Total	103		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1226869-2								
Antimony, Total	101		-		85-115	-		
Arsenic, Total	115		-		85-115	-		
Barium, Total	107		-		85-115	-		
Beryllium, Total	104		-		85-115	-		
Cadmium, Total	107		-		85-115	-		
Chromium, Total	100		-		85-115	-		
Copper, Total	102		-		85-115	-		
Lead, Total	111		-		85-115	-		
Nickel, Total	104		-		85-115	-		
Selenium, Total	112		-		85-115	-		
Silver, Total	101		-		85-115	-		
Thallium, Total	108		-		85-115	-		
Titanium, Total	100		-		85-115	-		
Zinc, Total	108		-		85-115	-		

Matrix Spike Analysis Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226481-3 QC Sample: L1915197-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00486	97	-	-	-	-	70-130	-	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226481-5 QC Sample: L1915179-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00489	98	-	-	-	-	70-130	-	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226869-3 QC Sample: L1914649-01 Client ID: MS Sample												
Antimony, Total	0.008J	0.5	0.530	106	-	-	-	-	75-125	-	-	20
Arsenic, Total	0.002J	0.12	0.142	118	-	-	-	-	75-125	-	-	20
Barium, Total	0.023	2	2.14	106	-	-	-	-	75-125	-	-	20
Beryllium, Total	ND	0.05	0.051	103	-	-	-	-	75-125	-	-	20
Cadmium, Total	ND	0.051	0.054	106	-	-	-	-	75-125	-	-	20
Chromium, Total	ND	0.2	0.197	98	-	-	-	-	75-125	-	-	20
Copper, Total	0.008J	0.25	0.267	107	-	-	-	-	75-125	-	-	20
Lead, Total	ND	0.51	0.546	107	-	-	-	-	75-125	-	-	20
Nickel, Total	0.013J	0.5	0.519	104	-	-	-	-	75-125	-	-	20
Selenium, Total	ND	0.12	0.146	122	-	-	-	-	75-125	-	-	20
Silver, Total	ND	0.05	0.051	101	-	-	-	-	75-125	-	-	20
Thallium, Total	ND	0.12	0.124	103	-	-	-	-	75-125	-	-	20
Titanium, Total	ND	1	1.00	100	-	-	-	-	75-125	-	-	20
Zinc, Total	0.015J	0.5	0.549	110	-	-	-	-	75-125	-	-	20

Matrix Spike Analysis Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226869-7 QC Sample: L1915107-04 Client ID: MS Sample									
Antimony, Total	0.008J	0.5	0.497	99	-	-	75-125	-	20
Arsenic, Total	0.002J	0.12	0.128	107	-	-	75-125	-	20
Barium, Total	0.720	2	2.71	100	-	-	75-125	-	20
Beryllium, Total	ND	0.05	0.049	98	-	-	75-125	-	20
Cadmium, Total	ND	0.051	0.052	102	-	-	75-125	-	20
Chromium, Total	0.036	0.2	0.230	97	-	-	75-125	-	20
Copper, Total	0.120	0.25	0.354	94	-	-	75-125	-	20
Lead, Total	0.004J	0.51	0.508	100	-	-	75-125	-	20
Nickel, Total	0.031	0.5	0.504	94	-	-	75-125	-	20
Selenium, Total	0.005J	0.12	0.134	112	-	-	75-125	-	20
Silver, Total	ND	0.05	0.053	105	-	-	75-125	-	20
Thallium, Total	ND	0.12	0.112	93	-	-	75-125	-	20
Titanium, Total	0.006J	1	0.947	95	-	-	75-125	-	20
Zinc, Total	0.399	0.5	0.901	100	-	-	75-125	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226481-4 QC Sample: L1915197-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226481-6 QC Sample: L1915179-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226869-4 QC Sample: L1914649-01 Client ID: DUP Sample						
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.008J	0.008J	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.013J	0.013J	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.015J	0.014J	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1226869-8 QC Sample: L1915107-04 Client ID: DUP Sample						
Barium, Total	0.720	0.702	mg/l	3		20

INORGANICS & MISCELLANEOUS

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

SAMPLE RESULTS

Lab ID: L1915036-01
Client ID: SB101 EXCAVATION WATER
Sample Location: 1801 ELMWOOD AVE., BUFFALO, NY

Date Collected: 04/12/19 08:30
Date Received: 04/12/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	3600		mg/l	10	NA	1	-	04/15/19 10:00	121,2540B	DW
Solids, Total Dissolved	3500		mg/l	10	3.1	1	-	04/17/19 09:45	121,2540C	DW
Solids, Total Suspended	91.		mg/l	10	NA	2	-	04/15/19 11:57	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	04/14/19 17:50	04/15/19 12:42	121,4500CN-CE	LH
pH (H)	7.6		SU	-	NA	1	-	04/15/19 18:19	121,4500H+-B	AS
Phosphorus, Total	0.059		mg/l	0.010	0.003	1	04/17/19 12:05	04/18/19 08:59	121,4500P-E	SD
Oil & Grease, Hem-Grav	ND		mg/l	2.0	0.46	1	04/13/19 17:15	04/13/19 20:30	74,1664A	MM



Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1226202-1										
Oil & Grease, Hem-Grav	0.57	J	mg/l	2.0	0.46	1	04/13/19 17:15	04/13/19 20:30	74,1664A	MM
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1226303-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	04/14/19 17:50	04/15/19 12:28	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1226365-1										
Solids, Total	ND		mg/l	10	NA	1	-	04/15/19 10:00	121,2540B	DW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1226403-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	04/15/19 11:57	121,2540D	DR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1227148-1										
Solids, Total Dissolved	ND		mg/l	10	3.1	1	-	04/17/19 09:45	121,2540C	DW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1227245-1										
Phosphorus, Total	ND		mg/l	0.010	0.003	1	04/17/19 12:05	04/18/19 08:46	121,4500P-E	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1226202-2								
Oil & Grease, Hem-Grav	80		-		78-114	-		18
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1226303-2								
Cyanide, Total	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1226365-2								
Solids, Total	96		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1226597-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1227148-2								
Solids, Total Dissolved	87		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1227245-2								
Phosphorus, Total	101		-		80-120	-		

Matrix Spike Analysis Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Lab Number: L1915036

Project Number: E1605

Report Date: 04/22/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	RPD Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1226202-4 QC Sample: L1914293-03 Client ID: MS Sample												
Oil & Grease, Hem-Grav	ND	400	260	66	Q	-	-		78-114	-		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1226303-4 QC Sample: L1914717-02 Client ID: MS Sample												
Cyanide, Total	0.005	0.2	0.190	92		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1227245-3 QC Sample: L1914682-01 Client ID: MS Sample												
Phosphorus, Total	1.14	0.5	1.69	110		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: SB101 EXCAVATION WATER

Project Number: E1605

Lab Number: L1915036

Report Date: 04/22/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1226202-3 QC Sample: L1914293-01 Client ID: DUP Sample						
Oil & Grease, Hem-Grav	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1226303-3 QC Sample: L1914717-01 Client ID: DUP Sample						
Cyanide, Total	0.006	0.005	mg/l	10		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1226365-3 QC Sample: L1914435-01 Client ID: DUP Sample						
Solids, Total	190000	190000	mg/l	0		16
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1226403-2 QC Sample: L1915103-01 Client ID: DUP Sample						
Solids, Total Suspended	27.	28	mg/l	4		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1226597-2 QC Sample: L1915028-01 Client ID: DUP Sample						
pH	8.1	8.1	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1227148-3 QC Sample: L1915036-01 Client ID: SB101 EXCAVATION WATER						
Solids, Total Dissolved	3500	3400	mg/l	3		10
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1227245-4 QC Sample: L1914682-01 Client ID: DUP Sample						
Phosphorus, Total	1.14	1.17	mg/l	3		20

Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Serial_No:04221918:12
Lab Number: L1915036
Report Date: 04/22/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler **Custody Seal**
A Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1915036-01A	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1(3)
L1915036-01B	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1(3)
L1915036-01C	Vial Na2S2O3 preserved	A	NA		5.0	Y	Absent		624.1(3)
L1915036-01D	Plastic 250ml NaOH preserved	A	>12	>12	5.0	Y	Absent		TCN-4500(14)
L1915036-01E	Plastic 250ml HNO3 preserved	A	<2	<2	5.0	Y	Absent		BA-UI(180),NI-UI(180),SB-UI(180),AG-UI(180),ZN-UI(180),TI-UI(180),SE-UI(180),HG-U(28),CD-UI(180),BE-UI(180),CR-UI(180),AS-UI(180),CU-UI(180),PB-UI(180),TL-UI(180)
L1915036-01F	Plastic 250ml H2SO4 preserved	A	<2	<2	5.0	Y	Absent		TPHOS-4500(28)
L1915036-01G	Plastic 500ml unpreserved	A	7	7	5.0	Y	Absent		TSC-2540(7),PH-4500(.01),TDS-2540(7)
L1915036-01H	Plastic 950ml unpreserved	A	7	7	5.0	Y	Absent		TSS-2540(7)
L1915036-01I	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		PESTICIDE-608.3(7),NYPCB-608-2L(7)
L1915036-01J	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		PESTICIDE-608.3(7),NYPCB-608-2L(7)
L1915036-01K	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		PESTICIDE-608.3(7),NYPCB-608-2L(7)
L1915036-01L	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		625.1(7)
L1915036-01M	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		625.1(7)
L1915036-01N	Amber 1000ml Na2S2O3	A	7	7	5.0	Y	Absent		625.1(7)
L1915036-01O	Amber 1000ml HCl preserved	A	NA		5.0	Y	Absent		NY-OG-1664-LOW(28)
L1915036-01P	Amber 1000ml HCl preserved	A	NA		5.0	Y	Absent		NY-OG-1664-LOW(28)

*Values in parentheses indicate holding time in days



Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

Report Format: DU Report with 'J' Qualifiers



Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

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

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



Project Name: SB101 EXCAVATION WATER
Project Number: E1605

Lab Number: L1915036
Report Date: 04/22/19

REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 74 Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 127 Method 608.3: Organochlorine Pesticides and PCBs by GC/HSD, EPA 821-R-16-009, December 2016.
- 128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.
- 129 Method 625.1: Base/Neutrals and Acids by GC/MS, EPA 821-R-16-007, December 2016.

LIMITATION OF LIABILITIES

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

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



Certification Information

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

Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B

EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water

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

EPA 522.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

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



NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

Mansfield, MA 02048
320 Forbes Blvd
TEL: 508-822-9300
FAX: 508-822-3288

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

Page

1 of 1

Date Rec'd in Lab 4/13/19

ALPHA Job # L1915036

Client Information		Project Information				Deliverables				Billing Information			
Client: Hazard Evaluations Inc		Project Name: SB101 Excavation Water				<input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other				<input checked="" type="checkbox"/> Same as Client Info PO #			
Address: 3636 North Buffalo Rd Orchard Park NY 14217		Project Location: 1801 Elmwood Ave. Buffalo, NY				<input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge				Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:			
Phone: 716 667 3130		Project # 21605				Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge				Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:			
Fax:		Turn-Around Time				Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:				Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:			
Email: mbarne@hazardevaluations.com		Standard <input type="checkbox"/> Due Date: Rush (only if pre approved) <input type="checkbox"/> # of Days: 5				Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:				Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:			
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: Please specify Metals or TAL.						ANALYSIS 024-1 TPHOS-4500 TCN TSS 2540 PHTDS-2540TSC-2540 TOTAL METALS 06-11664 NYPS-608-2L-POST-6551				Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)		Total Bottle	
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials								
		Date	Time										
15036-01	SB101 Excavation Water	4/12/19	8:30a	Wa	GB	X	X	X	X	X	X		X
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type V P P P P P A A		Preservative H D E A A C B H		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)			
Relinquished By: [Signature]		Date/Time 12:45 PM 12 April 2019 1245		Received By: [Signature]		Date/Time 4/13/19 01:50							

Attachment 4

Liability Insurance Certificate



New York State Insurance Fund

Workers' Compensation & Disability Benefits Specialists Since 1914

225 OAK STREET, BUFFALO, NEW YORK 14203-1685

CERTIFICATE OF WORKERS' COMPENSATION INSURANCE (RENEWED)

^^^^^^ 161313808
HAZARD EVALUATIONS INC
3636 N. BUFFALO RD.
ORCHARD PARK NY 14127



SCAN TO VALIDATE
AND SUBSCRIBE

POLICYHOLDER HAZARD EVALUATIONS INC 3636 N. BUFFALO RD. ORCHARD PARK NY 14127
--

CERTIFICATE HOLDER

POLICY NUMBER B 913 830-6	CERTIFICATE NUMBER 926434	POLICY PERIOD 07/15/2018 TO 07/15/2019	DATE 8/16/2018
------------------------------	------------------------------	---	-------------------

THIS IS TO CERTIFY THAT THE POLICYHOLDER NAMED ABOVE IS INSURED WITH THE NEW YORK STATE INSURANCE FUND UNDER POLICY NO. 913 830-6, COVERING THE ENTIRE OBLIGATION OF THIS POLICYHOLDER FOR WORKERS' COMPENSATION UNDER THE NEW YORK WORKERS' COMPENSATION LAW WITH RESPECT TO ALL OPERATIONS IN THE STATE OF NEW YORK, EXCEPT AS INDICATED BELOW.

IF YOU WISH TO RECEIVE NOTIFICATIONS REGARDING SAID POLICY, INCLUDING ANY NOTIFICATION OF CANCELLATIONS, OR TO VALIDATE THIS CERTIFICATE, VISIT OUR WEBSITE AT [HTTPS://WWW.NYSIF.COM/CERT/CERTVAL.ASP](https://www.nysif.com/cert/certval.asp). THE NEW YORK STATE INSURANCE FUND IS NOT LIABLE IN THE EVENT OF FAILURE TO GIVE SUCH NOTIFICATIONS.

THE POLICY INCLUDES A WAIVER OF SUBROGATION ENDORSEMENT UNDER WHICH NYSIF AGREES TO WAIVE ITS RIGHT OF SUBROGATION TO BRING AN ACTION AGAINST THE CERTIFICATE HOLDER TO RECOVER AMOUNTS WE PAID IN WORKERS' COMPENSATION AND/OR MEDICAL BENEFITS TO OR ON BEHALF OF AN EMPLOYEE OF OUR INSURED IN THE EVENT THAT, PRIOR TO THE DATE OF THE ACCIDENT, THE CERTIFICATE HOLDER HAS ENTERED INTO A WRITTEN CONTRACT WITH OUR INSURED THAT REQUIRES THAT SUCH RIGHT OF SUBROGATION BE WAIVED.

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS NOR INSURANCE COVERAGE UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICY.

NEW YORK STATE INSURANCE FUND

DIRECTOR, INSURANCE FUND UNDERWRITING

VALIDATION NUMBER: 615596956

BUFFALO SEWER AUTHORITY
TEMPORARY DISCHARGE PERMIT

Permittee: HAZARD EVALUATIONS INC.

Location Address: 3636 North Buffalo Road, Orchard Park, New York 14127

The above named Permittee is hereby approved to discharge **treated groundwater** to the BSA Wastewater Treatment Plant only, from:

MOD-PAC CORP.
1801 Elmwood Avenue, Buffalo, New York 14207

to the Buffalo Sewer Authority facilities in accordance with the Buffalo Sewer Authority Regulations, Article VI, Section 14, and subject to the following conditions:

ARTICLE 1 CONDITIONS OF ACCEPTANCE

The discharge of the approved waste by the Permittee shall be subject to the following conditions:

a. Times, Location & Rate

The following location is designated for discharge during the hours listed and subject to the limit for rate of discharge specified:

Location: **1801 Elmwood Avenue, Buffalo, New York 14207**

Time Discharge is Permitted: **7:30am – 4pm, Monday - Friday**

Limit on Rate of Discharge: **60 gallons per minute**, Buffalo Sewer Authority Wastewater Treatment Plant only, **dry weather only**

b. Operations

The Permittee shall maintain cleanliness, minimize odors, ensure necessary sediment control measures are in place and maintained and protect the Buffalo Sewer Authority facilities during the permittee's operations. The Permittee shall not permit any condition to arise which may pose a threat to public health or safety.

c. Samples and Analyses

The Buffalo Sewer Authority may from time to time, require the Permittee to sample and analyze its waste discharges. Such sampling and analyses shall be performed and results submitted by a New York State Dept. of Health certified laboratory. The analyses required shall be as specified by the Buffalo Sewer Authority, which also reserves the right, at its convenience, to sample wastes discharged by the Permittee.

d. Refusal to Discharge

The Buffalo Sewer Authority may refuse the Permittee permission to discharge wastes at any time and for any reason whatsoever, for the protection of sewer facilities against damage or flooding; to assure the proper operation and maintenance of said facilities; or to protect public health, safety or welfare.

e. Local Limits

Except as otherwise specified in this permit, the permit holder shall comply with all specific prohibitions, limits on pollutants or pollutant parameters set forth in the Buffalo Sewer Authority Sewer Use Regulations, as amended from time to time, and such prohibitions, limits and parameters shall be deemed pretreatment standards for purposes for the Clean Water Act.

ARTICLE 2 REGULATIONS

The Permittee must conform to all Buffalo Sewer Authority regulations and appropriate Federal, State and County Statutes, rules, mandates, directives, and orders concerning the collection, transportation, treatment and disposal of wastewaters.

ARTICLE 3 INSURANCE AND INDEMNIFICATION

The Permittee, agrees to indemnify and hold harmless the Buffalo Sewer Authority and its agents and employees against any and all claims resulting from work performed under this permit. The permittee shall be solely responsible for any and all injury or damage to its employees or property arising from use of Buffalo Sewer Authority facilities under this permit.

In the event of any alteration, non-renewal or cancellation of these policies, at least (45) forty-five days advance notice shall be given to the Industrial Waste Section, Bird Island Treatment Plant, 90 West Ferry Street, Buffalo, New York 14213 - before such change shall be effective.

ARTICLE 4 TERMINATION FOR VIOLATION OF AGREEMENT

In the event of a violation of any of the terms and conditions of this permit by the Permittee or upon the failure to pay the charges herein specified, the Buffalo Sewer Authority shall terminate the permit by service of notice of termination by registered mail at the Permittee's office address as set forth above.

ARTICLE 5 PERMITTEE APPROVAL

Official: C. Mark Hanna Title: President
Print Name Print

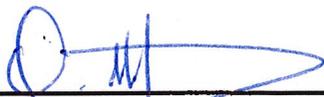
Signature:  Date: 05/09/2019

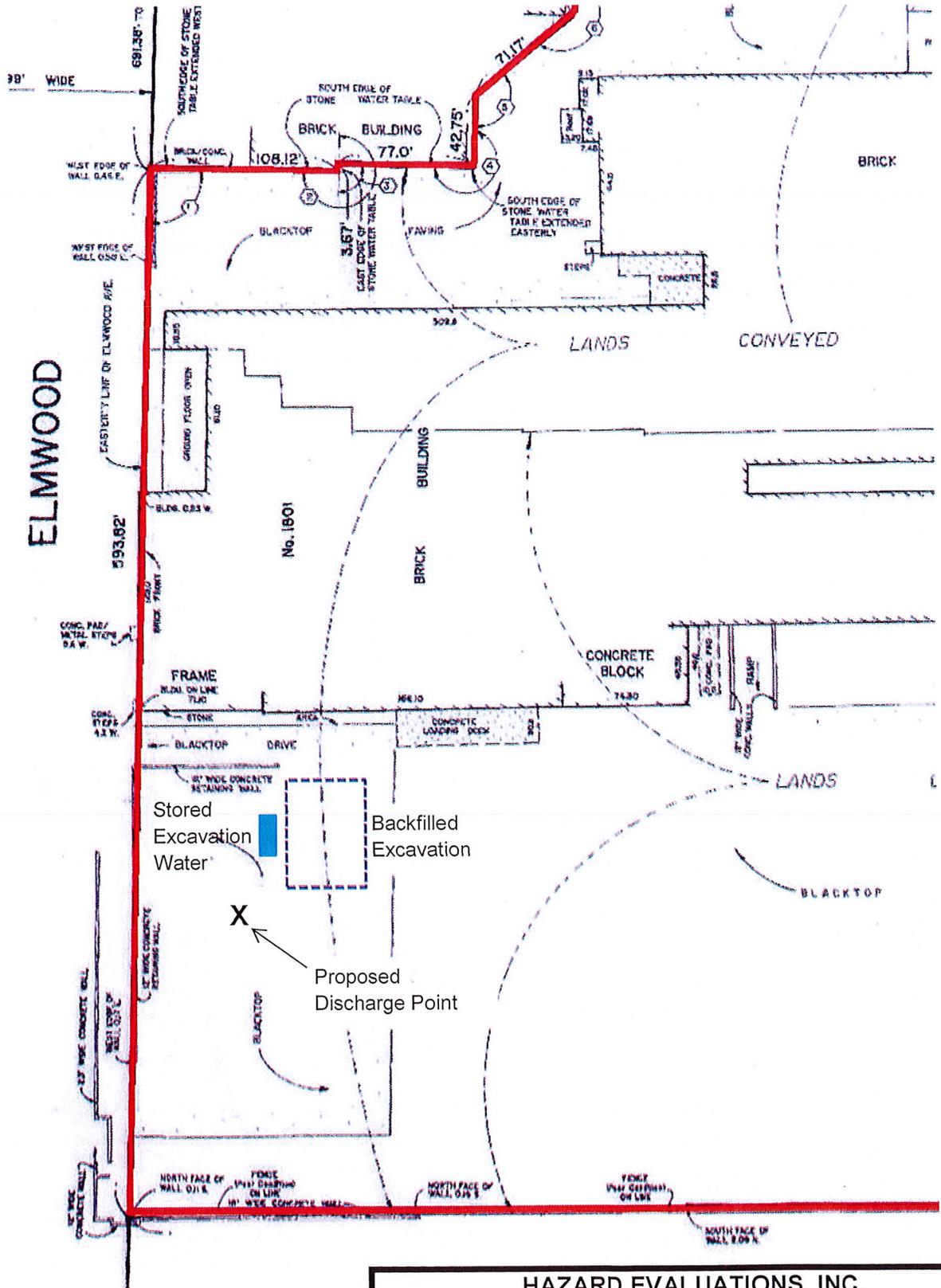
ARTICLE 6 BUFFALO SEWER AUTHORITY APPROVAL

Approved as to Content:

Signature:  Date: 05/09/2019
Industrial Waste Administrator

Effective this 9th day of May, 2019


General Manager
Buffalo Sewer Authority



HAZARD EVALUATIONS, INC.		
<i>Phase III Audits – Site Investigations – Facility Inspections</i>		
SITE LOCATION		
MOD-PAC CORP.		
1801 ELMWOOD AVENUE BUFFALO, NEW YORK		
DRAWN BY: LSH	SCALE: NOT TO SCALE	PROJECT: e1605
CHECKED BY: EB	DATE: 04/19	FIGURE NO: 1