



ARM Group LLC

Engineers and Scientists

August 26, 2022

Ms. Barbara Brown
Project Coordinator
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, MD 21230

Re: Soil Excavation Report
Area A: Sub-Parcel A11-2
North of the Proposed A11-2 Building
Tradepoint Atlantic
Sparrows Point, MD 21219

Dear Ms. Brown:

ARM Group LLC (ARM), on behalf of Tradepoint Atlantic (TPA), has prepared this Soil Excavation Report to summarize recent excavation activities performed inside Sub-Parcel A11-2 (the Site) on the Tradepoint Atlantic (TPA) property located in Sparrows Point, Maryland. The Soil Excavation Work Plan (Revision 2, dated June 30, 2022) outlining the scope of the proposed work was approved by the Maryland Department of the Environment (MDE) and the United States Environmental Protection Agency (USEPA) via email on July 8, 2022. The overall objective of this excavation program was to reduce the potential environmental risk within the subsurface of Sub-Parcel A11-2. This report addresses the excavation of areas of concern in the northern portion of the Sub-Parcel. The material removal activities presented herein represent a significant risk reduction for the Site. A subsequent Soil Excavation Completion Report will be submitted covering excavation of areas of concern in the southern portion of Sub-Parcel A11-2.

1. PROJECT BACKGROUND

A Phase II Investigation was performed for the Site in accordance with the requirements outlined in the Administrative Consent Order (ACO) as further described in the Phase II Investigation Work Plan for Area A: Parcel A11 (Revision 1 dated May 18, 2016). Findings from the original Parcel A11 Phase II Investigation were presented within the Phase II Investigation Report (Revision 1 dated May 22, 2020). During the Phase II Investigation, several soil samples were identified with elevated concentrations of semi-volatile organic compounds (SVOCs), particularly naphthalene. To supplement the original Phase II Investigation, additional delineation activities were conducted

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in accordance with the Work Plan for Delineation of Naphthalene: Parcel A11 (Revision 1 dated June 7, 2018). A total of 293 soil samples (from 119 boring locations) and 21 shallow groundwater samples were collected for analysis between June 12, 2018 and August 23, 2018 as part of the supplemental delineation activities.

There were multiple soil exceedances for volatile organic compounds (VOC) and SVOC parameters, in particular elevated levels of benzene, benzo[a]pyrene, and naphthalene, which have been identified as the main constituents of potential concern (COPCs) at the Site. These constituents are provided in Table 1 (below) along with concentrations corresponding to baseline carcinogenic risk screening levels of 1E-6 to 1E-4:

Table 1: Individual Risk Screening Levels (RSLs)

Parameter	1E-6 RSLs	1E-5 RSLs	1E-4 RSLs
	(mg/kg)	(mg/kg)	(mg/kg)
Benzene	5.1	51	510
Benzo(a)pyrene	2.1	21	210
Naphthalene	8.6	86	860

The concentrations associated with a risk level of 1E-4 were considered to be the delineation thresholds for each individual compound during the preceding delineation activities. However, since the carcinogenic risk is cumulative for polynuclear aromatic hydrocarbons (PAHs), the delineation thresholds for the three primary risk drivers were set at approximately 1/3 of the concentration corresponding to the risk level of 1E-4, as provided in Table 2 (below):

Table 2: VOC and SVOC Delineation Thresholds

Delineation Thresholds (mg/kg)	
Benzene	150
Benzo(a)pyrene	75
Naphthalene	275

The soil data obtained during the original Phase II Investigation and the supplemental delineation sampling were compared to the delineation thresholds listed in Table 2. If a soil sample contained a concentration of benzene, benzo[a]pyrene, or naphthalene above one of the specified delineation thresholds, the associated soil boring was flagged to indicate elevated chemical data. Soil borings exhibiting these analytical exceedances were often co-located with observations of non-aqueous phase liquid (NAPL) in the soil cores.



2. SITE RESPONSE ACTIVITIES

As discussed in the Work Plan, soil concentrations were first compared to the delineation thresholds (Table 2), and then to the Individual 1E-04 risk screening level (Table 1). A location may exceed the delineation threshold for one parameter, but not exceed the cumulative 1E-04 risk level due to low concentrations of the other parameters. Hot spot excavation was proposed for locations above the groundwater table (in the vadose or unsaturated zone) with concentrations of benzene, benzo[a]pyrene, or naphthalene that resulted in a cumulative carcinogenic risk greater than 1E-04. The following locations were proposed for hot spot excavation, also refer to **Figure 1**:

- A11-024B-SB
- A11-024CC-SB
- A11-024H-SB
- A11-024O-SB
- A11-024S-SB
- A11-024V-SB

This Soil Excavation Completion Report covers the three hot spot excavations to the north of the proposed A11-2 building (refer to **Figure 1** for the proposed building footprint): A11-024B-SB, A11-024CC-SB, A11-024H-SB. A Soil Excavation Completion Report for the three hot spot excavations to the south of the A11-2 building will be submitted separately. The following sections provide detailed descriptions of each aspect of the completed excavation activities at each of the three areas.

The Work Plan proposed a 10-foot by 10-foot excavation area surrounding each of the soil boring locations noted above. The lateral excavation extents would be expanded at the direction of TPA based on observations of NAPL and sheen. Vertically, it was anticipated that the top 3-feet of soil would be suitable for reuse and would be stockpiled. It was also anticipated that the hot spot excavations would encounter a layer of soil with visible black staining and elevated PID readings from depths of approximately 3-5 feet below ground surface (bgs). Soil with observations of NAPL or sheen would be excavated and stockpiled for disposal. The Work Plan indicated that the excavations would stop immediately below this impacted layer of soil or when the groundwater table was encountered. Specific actions and observations for each excavation area are provided below in Section 2.1.

Excavation oversight and confirmation sampling was performed by TPA and ARM. TPA and Hillis-Carnes Engineering Associates (HCEA) conducted stockpile soil sampling and provided oversight and approvals for all backfilling activities.



2.1 Excavation Activities

Impacted material was excavated from the each of the three excavation areas on the dates indicated in Table 3 below. Initially, an excavation of 10 feet by 10 feet was proposed for each Excavation Area. The approximate volume of excavated material is also indicated for each Excavation Area. The final extent of each excavation is shown for each Excavation Area on **Figure 2** through **Figure 4**. Notable observations at each Excavation Area are discussed in detail in the sub-sections following Table 3. A photographic log of the excavation completed for each Excavation Area is included as **Attachment 1**. The final extent of each excavation was recorded via a hand-held GPS.

Table 3: Excavation Area Excavation Details

Response Area	Excavation Start Date	Excavation End Date	Excavated Area (ft ²)	Average Depth (ft)	Excavated Volume (CY)
A11-024B-SB	7/6/2022	7/14/2022	1,070	7.25	287
A11-024CC-SB	7/12/2022	7/14/2022	760	4	113
A11-024H-SB	7/14/2022	7/21/2022	19,030	8	5,638

ft²: square feet

ft: feet

CY: Cubic yards

2.1.1 A11-024B-SB Excavation Area

At the A11-024B-SB Excavation Area, the top 3.5 feet of excavated material had PID readings of less than 10 ppm with no visible NAPL, and was stockpiled for reuse. Material from 3.5 feet bgs to the excavation base of 7.5 feet bgs exhibited elevated PID readings and indications of NAPL. At approximately 7 to 7.5 feet bgs, groundwater began entering the excavation and remained at a level of approximately 6.5 feet bgs. The excavation was expanded beyond the originally proposed 10 feet by 10 feet area to the west, north, and east based on observations of NAPL and sheen, for a total excavation area of approximately 1,070 square feet (refer to **Figure 2**). An estimated total of 290 CY was removed from the excavation, with an estimated 140 CY stockpiled for reuse and an estimated 150 CY stockpiled for offsite disposal.

2.1.2 A11-024CC-SB Excavation Area

At the A11-024B-SB Excavation Area, the top 1 foot of excavated material had PID readings of less than 10 ppm with no visible NAPL, and was stockpiled for reuse. Material from 1 foot bgs to the excavation base of 4 feet bgs exhibited elevated PID readings and indications of NAPL. At approximately 4 feet bgs, groundwater began entering the excavation. The excavation was expanded beyond the originally proposed 10 feet by 10 feet area to the northeast based on observations of NAPL and sheen, for a total excavation area of approximately 760 square feet (refer to **Figure 3**). An estimated total of 113 CY was removed from the excavation, with an estimated 28 CY stockpiled for reuse and an estimated 85 CY stockpiled for offsite disposal.



2.1.3 A11-024H-SB Excavation Area

At the A11-024B-SB Excavation Area, the top 3 feet of excavated material had PID readings of less than 10 ppm with no visible NAPL, and was stockpiled for reuse. Material from 3 feet bgs to the excavation base of 8 feet bgs exhibited elevated PID readings and indications of NAPL. Significant groundwater did not enter the excavation area. Vertically, the excavation was halted at 8 feet bgs as the black material was removed and the soil underneath exhibited no staining or elevated PID readings. The excavation was expanded multiple times in all directions based on black stained soil and elevated PID readings, and the results of sidewall confirmation samples (refer to Section 2.6.3). During the ongoing excavation and confirmatory testing it became apparent that the targeted toxic material exhibited higher PID readings and appeared distinctly black and mobile compared to other material that was being removed. Based on discussions between TPA and the USEPA on July 19, 2022 (and summarized via email on July 20, 2022), TPA would continue removal of a seam of the heavy mobile black material with elevated PID readings (typically above approximately 170 ppm) and would cease excavation when PID readings were below 60 ppm with no mobile black material evident.

The final excavation area included a total of approximately 19,030 square feet (refer to **Figure 4**). An estimated total of 5,640 CY were removed from the excavation, of which an estimated 2,114 CY were stockpiled for reuse and an estimated 3,524 CY stockpiled for disposal. This material removal represents a significant risk reduction for the Site.

2.2 Soil Management

Excavated soils that were observed to have PID readings of less than 10 ppm and did not show indication of NAPL were placed into stockpiles adjacent to the excavations for reuse during backfilling. Impacted soils that showed elevated PID readings and/or indications of NAPL, were transported by Maryland Materials Management (MMM) to an area designated by TPA and located within Parcel A11 to the north of Greys Landfill. In order to minimize dust generation and prevent run-on/runoff, the impacted soil stockpiles were placed on poly sheeting and were covered at the end of field work.

2.3 Waste Characterization

One 10-point composite waste characterization sample was collected by Hillis-Carnes from the impacted soil stockpiles. The waste characterization sample was analyzed by Maryland Spectral Services for Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP SVOCs, TCLP Metals, and polychlorinated biphenyls (PCBs) to characterize the stockpiles for proper disposal. The laboratory results for the waste characterization sample are included as **Attachment 2**. The waste characterization sample results indicated that the excavated materials were non-hazardous.



2.4 Soil Disposal

Based on the results of the composite soil sample, all impacted soil stockpiles will be transported to Greys Landfill. Dimension calculations of the excavations indicates approximately 3,760 bank CY of non-hazardous material will be transported from the excavation stockpiles associated with the Excavation Areas on Parcel A11 to Greys Landfill for disposal.

2.5 Water Management & Disposal

The excavations advanced only until the groundwater table was encountered; no groundwater was removed from the excavation or transported offsite for disposal.

2.6 Confirmation Sampling

Once all of the apparent impacted material was removed from an excavation, soil confirmation samples were collected from each sidewall and the bottom of the excavation. For the A11-024B-SB and A11-024CC-SB Excavation Areas, confirmation soil samples were collected in accordance with the Work Plan: at a frequency of one sample per 20 feet from each side wall of the excavation. For both the A11-024B-SB and A11-024CC-SB Excavation Areas, no base confirmation samples were collected as the base of the excavation was within the saturated zone.

For the A11-024H-SB Excavation Area, confirmation soil samples were collected in accordance with the July 19, 2022 discussion with the USEPA: at a frequency of one sample per 50 feet from each side wall of the excavation, as well as a total of 14 samples from the base of the excavation. Each confirmation sample was collected from the midpoint depth of each interior-facing wall. Confirmation sample locations were evenly spaced on the sidewall/bottom of the excavation.

Confirmation samples were sent to Maryland Spectral Services and analyzed for benzene via USEPE Method 8260 and benzo(a)pyrene and naphthalene via USEPA Method 8270. Laboratory results for samples collected from all Sub-Parcel A11-2 excavation areas have been included as **Attachment 3**. Confirmation sample results were compared to both the Delineation Threshold values (Table 2) and the individual 1E-04 values (refer to Table 1). If a confirmation sample had a concentration above the individual 1E-04 threshold, the excavation was extended, and another confirmation sample was collected from the new sidewall or bottom. For the A11-024H-SB Excavation Area this protocol was adjusted pursuant to the July 19, 2022, discussion with the USEPA. The location where each confirmation sample was collected is shown on the excavation figure for each of the Excavation Areas, which are attached as **Figure 2** through **Figure 4**. The location of each confirmation sample was recorded via GPS.

2.6.1 A11-024B-SB Excavation Area

At the A11-024B-SB Excavation Area, 11 sidewall confirmation samples were collected based on the final excavation extents. There were no exceedances of the Delineation Threshold values or



the individual 1E-04 values (refer to **Table A-1**). No samples were collected from the base of the excavation as it was within the saturated zone.

2.6.2 A11-024CC-SB Excavation Area

At the A11-024CC-SB Excavation Area, six sidewall confirmation samples were collected based on the final excavation extents. There were no exceedances of the Delineation Threshold values or the individual 1E-04 values (refer to **Table A-1**). No samples were collected from the base of the excavation as it was within the saturated zone.

2.6.3 A11-024H-SB Excavation Area

At the A11-024H-SB Excavation Area, 25 sidewall and 14 base confirmation samples were collected. However, nine of the sidewall confirmation samples were then removed (excavated) as the excavation was expanded based on visual observations and laboratory results. This excavation resulted in a significant risk reduction for the Site. All confirmation samples are included in **Table A-1**, which also notes which samples were subsequently excavated. Based on the final excavation extents, there were four locations with exceedances of the Delineation Threshold values and individual 1E-04 values (H-49, H-51, H-52, and H-63), however each location did not exhibit a PID reading above 60 ppm or show evidence of the black mobile material (pursuant to the July 19, 2022 protocol). The original delineation sampling included a soil boring at A11-024G-SB, which is located directly to the southwest of H-63; the 5-foot sample from A11-024G-SB did not exceed the Delineation Threshold values or the individual 1E-04 values. In addition, a soil sample was taken from the utility trench to the south of H-63 (soil sample labeled as 'East'). The 'East' soil sample did not exceed the Delineation Threshold values or the individual 1E-04 values.

In the southwest corner, the excavation was expanded until it reached the original delineation sampling point A11-024I-SB. The 5-foot sample from A11-024I-SB did not exceed the Delineation Threshold values or the individual 1E-04 values. In addition, another soil sample was collected from the utility trench to the south of the H-52 location (soil sample labeled as 'West'). The 'West' soil sample did not exceed the Delineation Threshold values or the individual 1E-04 values.

Results from the 'East' and 'West' soil samples are also included in **Table A-1**.

2.7 Backfilling

Each excavation area was initially backfilled with the shallow soil (with PID readings less than 10 ppm and no visual signs of NAPL) that was stockpiled for reuse. Stockpiled soil was replaced in the excavation it originated from. Then, each excavation was backfilled with processed slag to the surface. The excavation areas will ultimately be capped pursuant to the Response and Development Work Plan. All backfill materials originated from the Tradepoint Atlantic property. The backfill start and completion dates for each excavation are provided in Table 4 below.



Table 4: Excavation Area Backfill Details

Response Area	Backfill Start Date	Backfill Completion Date
A11-024B-SB	07/08/22	07/08/22
A11-024CC-SB	07/20/22	07/20/22
A11-024H-SB	07/22/22	07/23/22

2.8 Health & Safety

Due to the intrusive nature of these activities and the known petroleum contaminants impacting the soil and groundwater in the Response Areas, the TPA Health and Safety Plan (HASP) dated January 2015 was utilized daily. Every morning, a tailgate safety meeting was held to facilitate discussions about the daily activities and the health and safety protocols associated with such activities.

2.8.1 Air Monitoring

Contingent air monitoring was conducted each day during excavation activities in accordance with Section 7 of the TPA HASP for all ground intrusive work at the site. Each day, a calibrated PID was utilized to monitor the workers' breathing zone in order to ensure safe working conditions while excavating the petroleum impacted soil. Air monitoring protocols and the action levels for general site work and handling NAPL, as presented in Section 7.0 and Table 7-2 of the TPA HASP and Section 3.6 and Table 3 of the Work Plan, were enforced daily.

No sustained PID readings over 5 PPM were observed in the breathing zone throughout the excavation activities.

If you have questions regarding any information covered in this document, please feel free to contact Peter Haid at Tradepoint Atlantic: 443-649-5055.

Respectfully Submitted,
ARM Group LLC



Kaye Guille, P.E., PMP
Senior Engineer



Eric Magdar, P.G.
Vice President



Attachments:

Figure 1: Proposed Excavation Locations and Vadose Zone Isopach

Figure 2: A11-024B-SB Hotspot Excavation and Confirmation Samples

Figure 3: A11-024CC-SB Hotspot Excavation and Confirmation Samples

Figure 4: A11-024H-SB Hotspot Excavation and Confirmation Samples

Table A-1: A11-2 Soil Confirmation Sampling

Attachment 1: Photo Log

Attachment 2: Waste Characterization Sample Lab Report






Attachment 3: Confirmation Sample Lab Reports



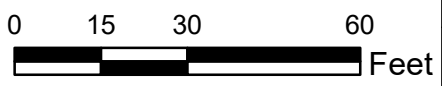


FIGURES



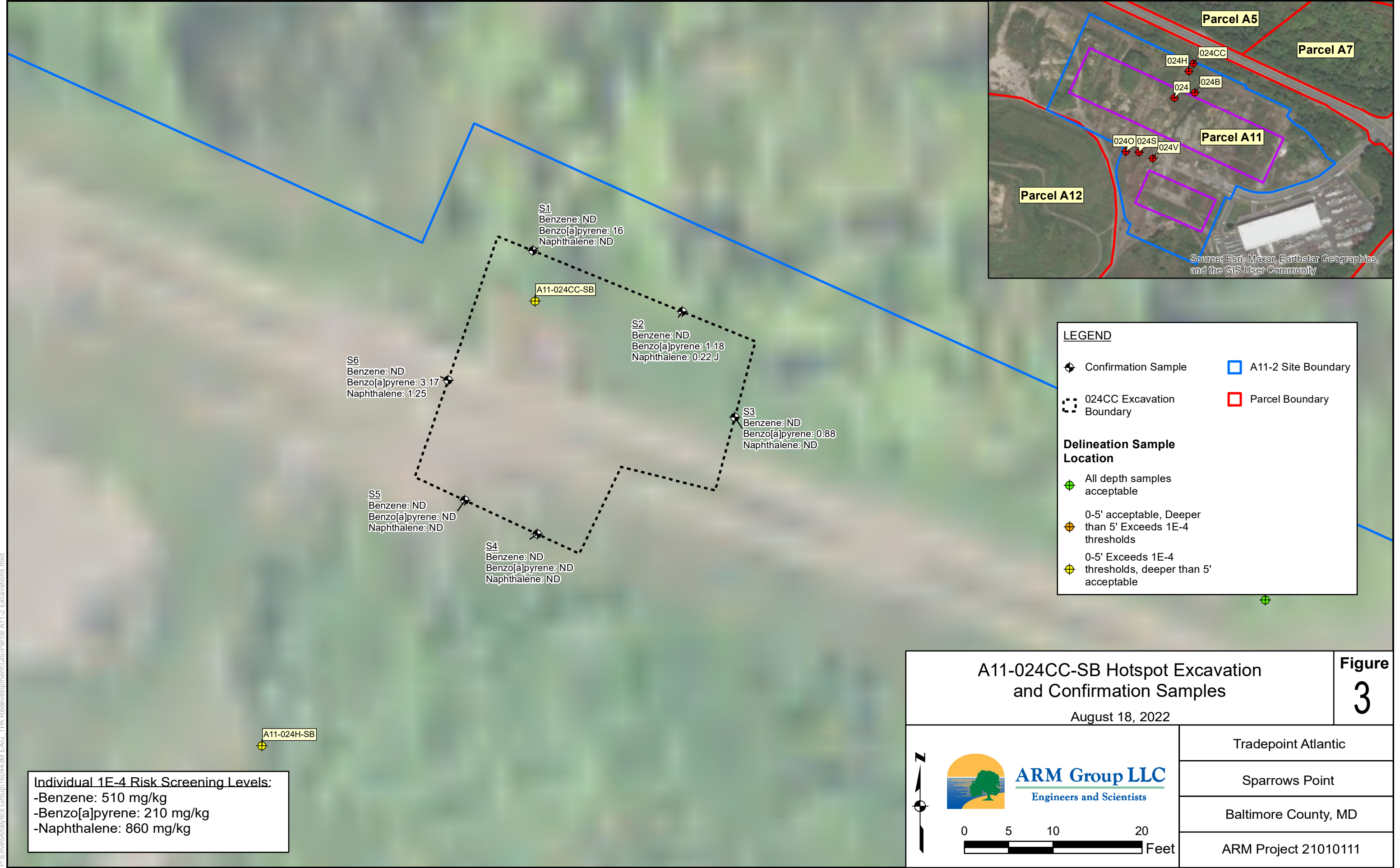
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-  Soil Boring
-  Building
-  Proposed Excavation
-  A11-2 Site Boundary
-  Parcel Boundary

<p>Sub-Parcel A11-2 Proposed Northern Excavation Areas June 23, 2022</p>		<p>Figure 1</p>
  <p>ARM Group LLC Engineers and Scientists</p> 	<p>Tradepoint Atlantic</p>	
	<p>Sparrows Point</p>	
	<p>Baltimore County, MD</p>	
	<p>ARM Project 21010111</p>	

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Individual 1E-4 Risk Screening Levels:
 -Benzene: 510 mg/kg
 -Benzo[a]pyrene: 210 mg/kg
 -Naphthalene: 860 mg/kg

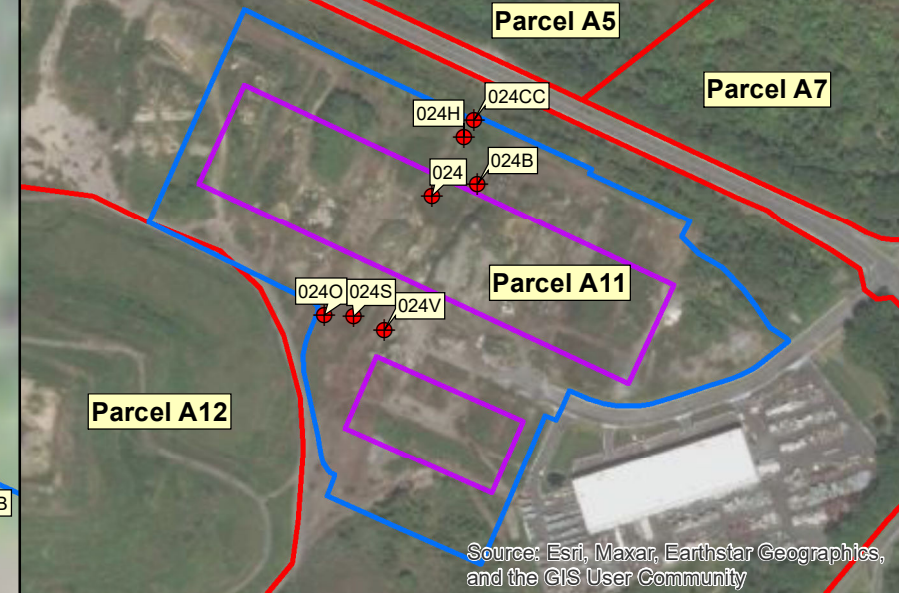
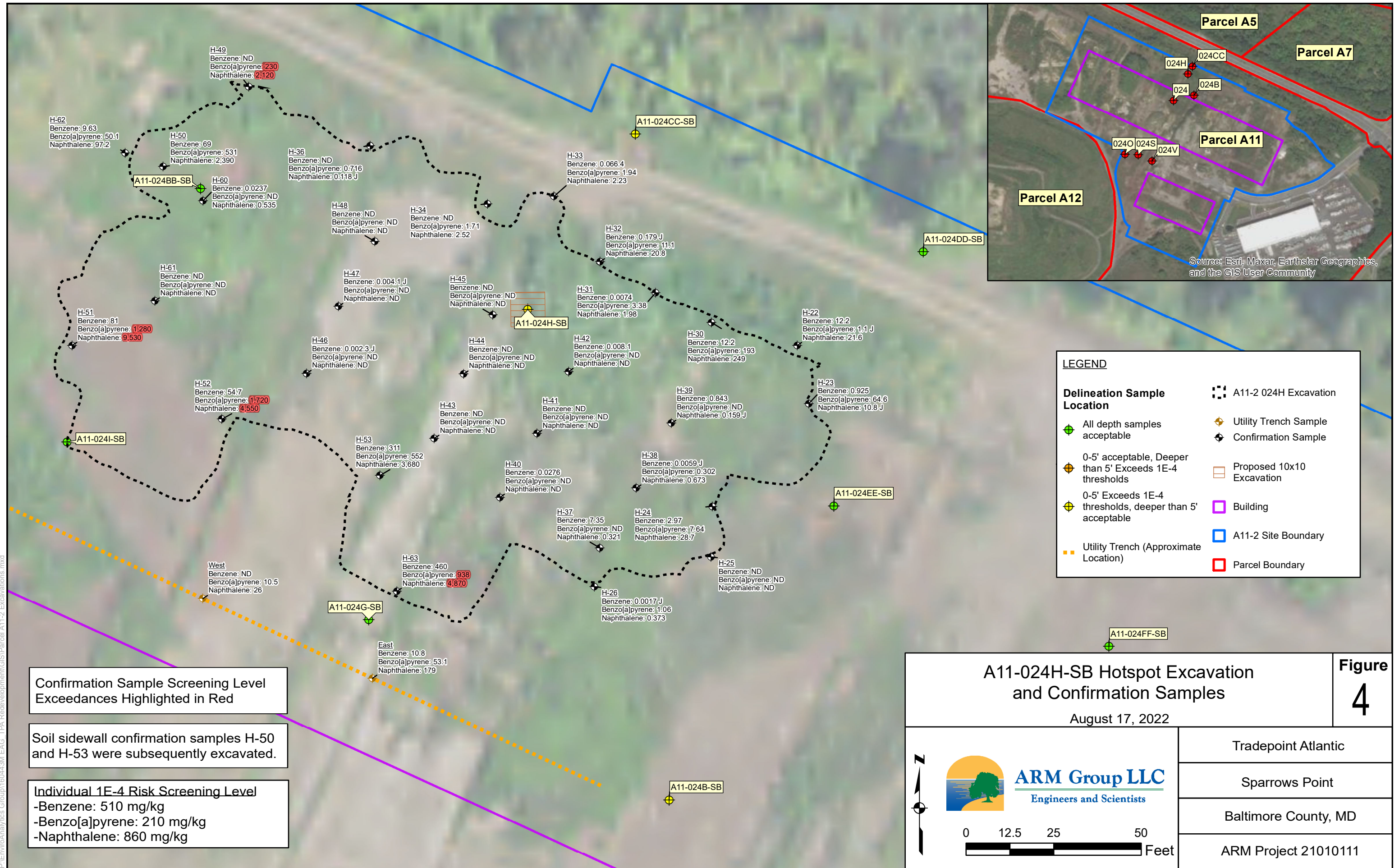
LEGEND

- Confirmation Sample
- A11-2 Site Boundary
- 024CC Excavation Boundary
- Parcel Boundary

Delineation Sample Location

- All depth samples acceptable
- 0-5' acceptable, Deeper than 5' Exceeds 1E-4 thresholds
- 0-5' Exceeds 1E-4 thresholds, deeper than 5' acceptable

A11-024CC-SB Hotspot Excavation and Confirmation Samples		Figure 3
August 18, 2022		
 ARM Group LLC Engineers and Scientists	Tradepoint Atlantic	
	Sparrows Point	
	Baltimore County, MD	
	ARM Project 21010111	



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

LEGEND

All depth samples acceptable	A11-2 024H Excavation
0-5' acceptable, Deeper than 5' Exceeds 1E-4 thresholds	Utility Trench Sample
0-5' Exceeds 1E-4 thresholds, deeper than 5' acceptable	Confirmation Sample
Utility Trench (Approximate Location)	Proposed 10x10 Excavation
	Building
	A11-2 Site Boundary
	Parcel Boundary

Confirmation Sample Screening Level Exceedances Highlighted in Red

Soil sidewall confirmation samples H-50 and H-53 were subsequently excavated.

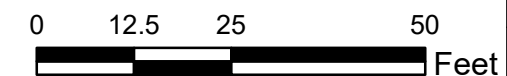
Individual 1E-4 Risk Screening Level
 -Benzene: 510 mg/kg
 -Benzo[a]pyrene: 210 mg/kg
 -Naphthalene: 860 mg/kg

A11-024H-SB Hotspot Excavation and Confirmation Samples

August 17, 2022



ARM Group LLC
 Engineers and Scientists



Tradepoint Atlantic

Sparrows Point

Baltimore County, MD

ARM Project 21010111

Figure 4

TABLES

**Table A-1 - Sub-Parcel A11-2
Soil Confirmation Sampling**

A11-024B Excavation Area

Parameter	Units	Delineation Threshold	Individual 1E-4	S-B-1	S-B-2	S-B-3	S-B-4	S-B-5	S-B-6	S-B-7	S-B-8	S-B-9	S-B-10	S-B-11
				7/7/2022	7/7/2022	7/7/2022	7/7/2022	7/7/2022	7/7/2022	7/7/2022	7/7/2022	7/7/2022	7/7/2022	7/7/2022
Sample Location:				Sidewall (S)	Sidewall (S)	Sidewall (NW)	Sidewall (NW)	Sidewall (NE)	Sidewall (NE)	Sidewall (E)	Sidewall (E)	Sidewall (N)	Sidewall (W)	Sidewall (W)
Benzene	µg/kg	150,000	510,000	2.3 J	4.2 U	1.8 J	3.9 U	4.3 U	5.4 U	5.8 U	5.7 U	6.0 U	4.1 U	6.4
Benzo[a]pyrene	µg/kg	75,000	210,000	241 U	165 J	4,220	2,210	10,000	9,810	8,440	7,630	1,690	2,060	2,040
Naphthalene	µg/kg	275,000	860,000	241 U	235 U	1460 J	233 U	879 U	889 U	342 J	402 J	303	164 J	328 J

A11-024CC Excavation Area

Parameter	Units	Delineation Threshold	Individual 1E-4	S-CC-1	S-CC-2	S-CC-3	S-CC-4	S-CC-5	S-CC-6
				7/12/2022	7/12/2022	7/12/2022	7/12/2022	7/12/2022	7/12/2022
Sample Location:				Sidewall (N)	Sidewall (N)	Sidewall (E)	Sidewall (S)	Sidewall (S)	Sidewall (W)
Benzene	µg/kg	150,000	510,000	4.6 U	4.6 U	7.9 U	3.7 U	4.6 U	4.1 U
Benzo[a]pyrene	µg/kg	75,000	210,000	16,000	1,180	882	270 U	282 U	3,170
Naphthalene	µg/kg	275,000	860,000	2250 U	220 J	233 U	270 U	282 U	1,250

Detections in bold

Highlighted values indicate an exceedance of the Delineation Threshold

Values in red indicate an exceedance of the Individual 1E-4 value

Indicates sample was excavated

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

**Table A-1 - Sub-Parcel A11-2
Soil Confirmation Sampling**

A11-024H Excavation Area

Parameter	Units	Delineation Threshold	Individual 1E-4	H-1	H-2	H-3	H-4	H-5	H-6	H-7	H-22	H-23	H-24	H-25
				7/14/2022	7/14/2022	7/14/2022	7/14/2022	7/14/2022	7/14/2022	7/14/2022	7/14/2022	7/14/2022	7/19/2022	7/19/2022
Sample Location:				Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Sidewall (NE)	Sidewall (E)	Sidewall (E)	Sidewall (E)
Benzene	µg/kg	150,000	510,000	26100 U	5270 U	49500 J	5800 J	11300 U	1,080	2.1 J	12,200	925	2,970	4.8 U
Benzo[a]pyrene	µg/kg	75,000	210,000	297,000	93,900	927,000	295,000	226,000	186,000	222 U	1100 J	64,600	7,640	274 U
Naphthalene	µg/kg	275,000	860,000	982,000	116,000	4,800,000	1,470,000	317,000	179,000	222 U	21,600	10,800 J	28,700	274 U

Parameter	Units	Delineation Threshold	Individual 1E-4	H-26	H-30	HI-31	H-32	HI-33	H-34	H-36	H-37	H-38	H-39	H-40
				7/19/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022
Sample Location:				Sidewall (SE)	Sidewall (N)	Sidewall (N)	Sidewall (N)	Sidewall (N)	Sidewall (N)	Sidewall (N)	Base	Base	Base	Base
Benzene	µg/kg	150,000	510,000	1.7 J	12,200	7.4	179 J	66.4	5.2 U	4.6 U	7,350	5.9 J	843	27.6
Benzo[a]pyrene	µg/kg	75,000	210,000	1,060	193,000	3,380	11,100	1,940	1,710	716	230 U	302	235 U	238 U
Naphthalene	µg/kg	275,000	860,000	373	249,000	1,980	20,800	2,230	2,520	118 J	321	673	159 J	238 U

Parameter	Units	Delineation Threshold	Individual 1E-4	H-41	H-42	H-43	H-44	H-45	H-46	H-47	H-48	H-49	H-50	H-51	
				7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022	7/20/2022
Sample Location:				Base	Base	Base	Base	Base	Base	Base	Base	Base	Sidewall (NW)	Excavated	Sidewall (W)
Benzene	µg/kg	150,000	510,000	4.6 U	8.1	4.5 U	4.5 U	4.9 U	2.3 U	4.1 J	4.2 U	12,200 U	69,000	819,000	
Benzo[a]pyrene	µg/kg	75,000	210,000	225 U	227 U	233 U	230 U	227 U	238 U	233 U	227 U	230,000	531,000	1,280,000	
Naphthalene	µg/kg	275,000	860,000	225 U	227 U	233 U	230 U	227 U	238 U	233 U	227 U	2,120,000	2,390,000	9,530,000	

Parameter	Units	Delineation Threshold	Individual 1E-4	H-52	H-53	H-60	H-61	H-62	H-63
				7/20/2022	7/20/2022	7/21/2022	7/21/2022	7/21/2022	7/21/2022
Sample Location:				Sidewall (SW)	Excavated	Base	Base	Sidewall (W)	Sidewall (S)
Benzene	µg/kg	150,000	510,000	54,700	311,000	24	4.4 U	9,630	460,000
Benzo[a]pyrene	µg/kg	75,000	210,000	1,720,000	552,000	392 U	227 U	50,100	938,000
Naphthalene	µg/kg	275,000	860,000	4,550,000	3,680,000	535	227 U	97,200	4,870,000

A11-2 Utility Line Samples

Parameter	Units	Delineation Threshold	Individual 1E-4	EAST	WEST
				7/28/2022	7/28/2022
Sample Location:					
Benzene	µg/kg	150,000	510,000	10,800	6940 U
Benzo[a]pyrene	µg/kg	75,000	210,000	53,100	10,500
Naphthalene	µg/kg	275,000	860,000	179,000	26,000

Detections in bold

Highlighted values indicate an exceedance of the Delineation Threshold

Values in red indicate an exceedance of the Individual 1E-4 value

Indicates sample was excavated

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

ATTACHMENT 1

Soil Excavation Photo Log
Area A : Sub-Parcel A11-2
Sparrows Point, Maryland



Photo 1: Response Area A11-024B-SB facing north



Photo 2: Response Area A11-024B-SB facing south, post rain event

Development Photograph Log
Sub-Parcel B6-2 Retail Area #2
Sparrows Point, Maryland



Photo 3: Response Area A11-024CC-SB, facing west



Photo 4: Response Area A11-024CC-SB, facing north

Development Photograph Log
Sub-Parcel B6-2 Retail Area #2
Sparrows Point, Maryland



Photo 5: Response Area A11-024H-SB, final excavation area, facing east



Photo 6: Response Area A11-024H-SB, final excavation area, facing south

Development Photograph Log
Sub-Parcel B6-2 Retail Area #2
Sparrows Point, Maryland



Photo 7: Response Area A11-024H-SB, excavation area, facing east



Photo 8: Response Area A11-024H-SB, excavation area, facing northwest

ATTACHMENT 2

03 August 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/27/22 16:11.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: A11-2

Project Number: 18019A
Project Manager: Keith Progin

Reported:
08/03/22 11:01

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WC-1		2072729-01	Soil	07/27/22 15:28	07/27/22 16:11



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: 18019A
Project Manager: Keith Progin

Reported:
08/03/22 11:01

WC-1

2072729-01 (Soil)
Sample Date: 07/27/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/28/22	07/29/22 08:42	BW
POLYCHLORINATED BIPHENYLS BY EPA 8082A (GC/ECD) Prepared by 3540-GC(Soxhlet) CIpestPCB									
Aroclor-1016	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1221	ND		ug/kg dry	200	200	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1232	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1242	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1248	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1254	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1260	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1262	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
Aroclor-1268	ND		ug/kg dry	97.6	97.6	1	07/28/22	07/29/22 11:45	SJA
<i>Surrogate: Tetrachloro-m-xylene</i>			40-150	54 %	07/28/22		07/29/22 11:45		
<i>Surrogate: Decachlorobiphenyl</i>			40-150	39 %	07/28/22		07/29/22 11:45		S-GC
TCLP Volatile Organics by EPA 1311/8260B (GC/MS) Prepared by 5030-GCMS (TCLP)									
Benzene	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
2-Butanone (MEK)	ND		ug/L	50.0	50.0	5	07/29/22	07/29/22 20:21	LL
Carbon tetrachloride	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
Chlorobenzene	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
Chloroform	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
1,4-Dichlorobenzene	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
1,2-Dichloroethane	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
1,1-Dichloroethene	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
Tetrachloroethene	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
Trichloroethene	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
Vinyl chloride	ND		ug/L	25.0	25.0	5	07/29/22	07/29/22 20:21	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	98 %	07/29/22		07/29/22 20:21		
<i>Surrogate: Toluene-d8</i>			75-125	99 %	07/29/22		07/29/22 20:21		
<i>Surrogate: 4-Bromofluorobenzene</i>			75-125	87 %	07/29/22		07/29/22 20:21		

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 18019A
Project Manager: Keith Progin

Reported:
08/03/22 11:01

WC-1

2072729-01 (Soil)
Sample Date: 07/27/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
TCLP Semivolatile Organics by EPA 1311/8270D (GC/MS) Prepared by 3510-GCMS(Sep Funnel) (TCLP)									
1,4-Dichlorobenzene	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
2,4-Dinitrotoluene	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
Hexachlorobenzene	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
Hexachlorobutadiene	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
Hexachloroethane	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
3&4-Methylphenol	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
2-Methylphenol	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
Nitrobenzene	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
Pentachlorophenol	ND		ug/L	500	250	5	07/29/22	08/02/22 14:00	EH
Pyridine	ND		ug/L	62.5	62.5	5	07/29/22	08/02/22 14:00	EH
2,4,5-Trichlorophenol	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
2,4,6-Trichlorophenol	ND		ug/L	62.5	25.0	5	07/29/22	08/02/22 14:00	EH
<i>Surrogate: 2-Fluorophenol</i>		23-121		35 %	07/29/22		08/02/22 14:00		
<i>Surrogate: Phenol-d5</i>		24-113		69 %	07/29/22		08/02/22 14:00		
<i>Surrogate: Nitrobenzene-d5</i>		23-120		86 %	07/29/22		08/02/22 14:00		
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		101 %	07/29/22		08/02/22 14:00		
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		98 %	07/29/22		08/02/22 14:00		
<i>Surrogate: Terphenyl-d14</i>		18-137		94 %	07/29/22		08/02/22 14:00		
TCLP Metals by EPA 1311/3010A/6020B (ICP-MS) Prepared by 3010A-Metals Digestion(TCLP)									
Arsenic	ND		mg/L	0.500	0.500	1	08/01/22	08/02/22 12:06	AWH
Barium	ND		mg/L	0.500	0.500	1	08/01/22	08/02/22 12:06	AWH
Cadmium	ND		mg/L	0.500	0.500	1	08/01/22	08/02/22 12:06	AWH
Chromium	ND		mg/L	0.500	0.500	1	08/01/22	08/02/22 12:06	AWH
Lead	ND		mg/L	0.500	0.500	1	08/01/22	08/02/22 12:06	AWH
Mercury	ND		mg/L	0.0100	0.0100	1	08/01/22	08/02/22 12:06	AWH
Selenium	ND		mg/L	0.500	0.500	1	08/01/22	08/02/22 12:06	AWH
Silver	ND		mg/L	0.500	0.500	1	08/01/22	08/02/22 12:06	AWH



Rabecka Koons, Quality Assurance Officer

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Analytical Results

1500 Caton Center Dr Suite G
Baltimore MD 21227
410-247-7600
www.mdspectral.com

Project: A11-2

Project Number: 18019A
Project Manager: Keith Progin

Reported:
08/03/22 11:01

Maryland Spectral Services does not maintain certification for the following analytical parameters:

Maryland Spectral Services

Matrix , Method , Analyte _____

Rabecka Koons

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 18019A
Project Manager: Keith Progin

Reported:
08/03/22 11:01

Notes and Definitions

- S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Company Name: <i>Hillis Carnes</i>		Project Manager: <i>Keith Progin</i>		Analysis Requested										CHAIN-OF-CUSTODY RECORD						
Project Name: <i>A11-2</i>		Project ID: <i>18019A</i>		No. of Containers <i>TCIP VOCs</i> <i>TCIP SVOCs</i> <i>TCIP metals</i> <i>PCB</i>										Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 reporting@mdspectral.com						
Sampler(s): <i>Brian Poole</i>		P.O. Number:												Matrix Codes: NW (non-potable water), DW (drinking water)						
Field Sample ID	Date	Time	DW	Water	Soil	Other	No. of Containers											Preservative	Field Notes	MSS Lab ID
<i>WC-1</i>	<i>7/27</i>	<i>3:28</i>			<input checked="" type="checkbox"/>		<i>3</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							<i>2072729-01</i>		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received by: (Signature)										
<i>B Poole</i>		<i>7/27/22</i>		<i>B Poole</i>		<i>B Poole</i>		<i>7/27/22</i>		<i>7:10 AM</i>										
(Printed)				(Printed)		(Printed)				(Printed)										
Relinquished by: (Signature)		Date/Time		Received by Lab: (Signature)		Turn Around Time:		Lab Use:												
<i>B Poole</i>		<i>7/27/22</i>		<i>WAT Out</i>		<input type="checkbox"/> Normal (7 day) <input checked="" type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day <input type="checkbox"/> Rush (2 day) <input type="checkbox"/> Next Day <input type="checkbox"/> Other: _____ <input type="checkbox"/> Specific Due Date: _____		Temp: <i>19.8</i> °C <input checked="" type="checkbox"/> Received on Ice <input checked="" type="checkbox"/> Received same day												
(Printed)		<i>16:11</i>		<i>Victoria Davenport</i>																
Delivery Method:		Special Instructions/QC Requirements & Comments:										Sample Disposal:								
<input type="checkbox"/> Courier <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____												<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for ____ days								

ATTACHMENT 3

11 July 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/07/22 14:27.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-B-1		2070720-01	Soil	07/07/22 11:20	07/07/22 14:27
S-B-2		2070720-02	Soil	07/07/22 11:40	07/07/22 14:27
S-B-3		2070720-03	Soil	07/07/22 11:50	07/07/22 14:27
S-B-4		2070720-04	Soil	07/07/22 12:00	07/07/22 14:27
S-B-5		2070720-05	Soil	07/07/22 12:10	07/07/22 14:27
S-B-6		2070720-06	Soil	07/07/22 12:20	07/07/22 14:27
S-B-7		2070720-07	Soil	07/07/22 12:25	07/07/22 14:27
S-B-8		2070720-08	Soil	07/07/22 12:30	07/07/22 14:27
S-B-9		2070720-09	Soil	07/07/22 12:35	07/07/22 14:27
S-B-10		2070720-10	Soil	07/07/22 12:40	07/07/22 14:27
S-B-11		2070720-11	Soil	07/07/22 12:45	07/07/22 14:27

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-1

2070720-01 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	2.3	J	ug/kg dry	4.8	1.9	1	07/07/22	07/07/22 17:01	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	105 %	07/07/22		07/07/22 17:01		
<i>Surrogate: Toluene-d8</i>			75-120	101 %	07/07/22		07/07/22 17:01		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	92 %	07/07/22		07/07/22 17:01		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	241	96	1	07/07/22	07/08/22 14:57	WB
Naphthalene	ND		ug/kg dry	241	96	1	07/07/22	07/08/22 14:57	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	81 %	07/07/22		07/08/22 14:57		
<i>Surrogate: Phenol-d5</i>			24-113	85 %	07/07/22		07/08/22 14:57		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	80 %	07/07/22		07/08/22 14:57		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	101 %	07/07/22		07/08/22 14:57		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	88 %	07/07/22		07/08/22 14:57		
<i>Surrogate: Terphenyl-d14</i>			18-137	96 %	07/07/22		07/08/22 14:57		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	83		%			1	07/07/22	07/08/22 10:07	TA



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-2

2070720-02 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.2	1.7	1	07/07/22	07/07/22 17:28	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	104 %	07/07/22		07/07/22 17:28		
Surrogate: Toluene-d8			75-120	100 %	07/07/22		07/07/22 17:28		
Surrogate: 4-Bromofluorobenzene			70-120	91 %	07/07/22		07/07/22 17:28		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	165	J	ug/kg dry	235	94	1	07/07/22	07/08/22 15:17	WB
Naphthalene	ND		ug/kg dry	235	94	1	07/07/22	07/08/22 15:17	WB
Surrogate: 2-Fluorophenol			23-121	63 %	07/07/22		07/08/22 15:17		
Surrogate: Phenol-d5			24-113	67 %	07/07/22		07/08/22 15:17		
Surrogate: Nitrobenzene-d5			23-120	65 %	07/07/22		07/08/22 15:17		
Surrogate: 2,4,6-Tribromophenol			19-122	77 %	07/07/22		07/08/22 15:17		
Surrogate: 2-Fluorobiphenyl			30-115	65 %	07/07/22		07/08/22 15:17		
Surrogate: Terphenyl-d14			18-137	73 %	07/07/22		07/08/22 15:17		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/07/22	07/08/22 10:07	TA

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-3

2070720-03 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	1.8	J	ug/kg dry	3.4	1.4	1	07/08/22	07/08/22 13:17	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	92 %	07/08/22		07/08/22 13:17		
<i>Surrogate: Toluene-d8</i>			75-120	102 %	07/08/22		07/08/22 13:17		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	93 %	07/08/22		07/08/22 13:17		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	4220		ug/kg dry	2330	930	10	07/07/22	07/08/22 15:45	WB
Naphthalene	1460	J	ug/kg dry	2330	930	10	07/07/22	07/08/22 15:45	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	98 %	07/07/22		07/08/22 15:45		
<i>Surrogate: Phenol-d5</i>			24-113	103 %	07/07/22		07/08/22 15:45		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	94 %	07/07/22		07/08/22 15:45		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	112 %	07/07/22		07/08/22 15:45		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	105 %	07/07/22		07/08/22 15:45		
<i>Surrogate: Terphenyl-d14</i>			18-137	118 %	07/07/22		07/08/22 15:45		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	86		%			1	07/07/22	07/08/22 10:07	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-4

2070720-04 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	3.9	1.6	1	07/08/22	07/08/22 13:42	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	91 %	07/08/22		07/08/22 13:42		
Surrogate: Toluene-d8			75-120	101 %	07/08/22		07/08/22 13:42		
Surrogate: 4-Bromofluorobenzene			70-120	100 %	07/08/22		07/08/22 13:42		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	2210		ug/kg dry	233	93	1	07/07/22	07/08/22 16:05	WB
Naphthalene	ND		ug/kg dry	233	93	1	07/07/22	07/08/22 16:05	WB
Surrogate: 2-Fluorophenol			23-121	80 %	07/07/22		07/08/22 16:05		
Surrogate: Phenol-d5			24-113	86 %	07/07/22		07/08/22 16:05		
Surrogate: Nitrobenzene-d5			23-120	82 %	07/07/22		07/08/22 16:05		
Surrogate: 2,4,6-Tribromophenol			19-122	98 %	07/07/22		07/08/22 16:05		
Surrogate: 2-Fluorobiphenyl			30-115	89 %	07/07/22		07/08/22 16:05		
Surrogate: Terphenyl-d14			18-137	96 %	07/07/22		07/08/22 16:05		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	86		%			1	07/07/22	07/08/22 10:07	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-5

2070720-05 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.3	1.7	1	07/08/22	07/08/22 14:07	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	94 %	07/08/22		07/08/22 14:07		
Surrogate: Toluene-d8			75-120	100 %	07/08/22		07/08/22 14:07		
Surrogate: 4-Bromofluorobenzene			70-120	92 %	07/08/22		07/08/22 14:07		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	10000		ug/kg dry	879	352	4	07/07/22	07/08/22 16:25	WB
Naphthalene	ND		ug/kg dry	879	352	4	07/07/22	07/08/22 16:25	WB
Surrogate: 2-Fluorophenol			23-121	94 %	07/07/22		07/08/22 16:25		
Surrogate: Phenol-d5			24-113	98 %	07/07/22		07/08/22 16:25		
Surrogate: Nitrobenzene-d5			23-120	95 %	07/07/22		07/08/22 16:25		
Surrogate: 2,4,6-Tribromophenol			19-122	105 %	07/07/22		07/08/22 16:25		
Surrogate: 2-Fluorobiphenyl			30-115	98 %	07/07/22		07/08/22 16:25		
Surrogate: Terphenyl-d14			18-137	106 %	07/07/22		07/08/22 16:25		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	91		%			1	07/07/22	07/08/22 10:07	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-6

2070720-06 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	5.4	2.2	1	07/08/22	07/08/22 14:31	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	95 %	07/08/22		07/08/22 14:31		
Surrogate: Toluene-d8			75-120	102 %	07/08/22		07/08/22 14:31		
Surrogate: 4-Bromofluorobenzene			70-120	96 %	07/08/22		07/08/22 14:31		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	9810		ug/kg dry	889	356	4	07/07/22	07/08/22 16:46	WB
Naphthalene	ND		ug/kg dry	889	356	4	07/07/22	07/08/22 16:46	WB
Surrogate: 2-Fluorophenol			23-121	97 %	07/07/22		07/08/22 16:46		
Surrogate: Phenol-d5			24-113	102 %	07/07/22		07/08/22 16:46		
Surrogate: Nitrobenzene-d5			23-120	97 %	07/07/22		07/08/22 16:46		
Surrogate: 2,4,6-Tribromophenol			19-122	113 %	07/07/22		07/08/22 16:46		
Surrogate: 2-Fluorobiphenyl			30-115	106 %	07/07/22		07/08/22 16:46		
Surrogate: Terphenyl-d14			18-137	115 %	07/07/22		07/08/22 16:46		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	90		%			1	07/07/22	07/08/22 10:07	TA

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-7

2070720-07 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	8440		ug/kg dry	465	186	2	07/07/22	07/08/22 17:06	WB
Naphthalene	342	J	ug/kg dry	465	186	2	07/07/22	07/08/22 17:06	WB
<i>Surrogate: 2-Fluorophenol</i>				23-121	100 %		07/07/22	07/08/22 17:06	
<i>Surrogate: Phenol-d5</i>				24-113	105 %		07/07/22	07/08/22 17:06	
<i>Surrogate: Nitrobenzene-d5</i>				23-120	99 %		07/07/22	07/08/22 17:06	
<i>Surrogate: 2,4,6-Tribromophenol</i>				19-122	111 %		07/07/22	07/08/22 17:06	
<i>Surrogate: 2-Fluorobiphenyl</i>				30-115	102 %		07/07/22	07/08/22 17:06	
<i>Surrogate: Terphenyl-d14</i>				18-137	105 %		07/07/22	07/08/22 17:06	
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	86		%			1	07/07/22	07/08/22 10:07	TA

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-7

2070720-07RE1 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	5.8	2.3	1	07/11/22	07/11/22 14:13	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	92 %	07/11/22		07/11/22 14:13		
Surrogate: Toluene-d8			75-120	100 %	07/11/22		07/11/22 14:13		
Surrogate: 4-Bromofluorobenzene			70-120	102 %	07/11/22		07/11/22 14:13		



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-8

2070720-08 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	7630		ug/kg dry	455	182	2	07/07/22	07/08/22 17:27	WB
Naphthalene	402	J	ug/kg dry	455	182	2	07/07/22	07/08/22 17:27	WB
<i>Surrogate: 2-Fluorophenol</i>				23-121	92 %		07/07/22	07/08/22 17:27	
<i>Surrogate: Phenol-d5</i>				24-113	97 %		07/07/22	07/08/22 17:27	
<i>Surrogate: Nitrobenzene-d5</i>				23-120	96 %		07/07/22	07/08/22 17:27	
<i>Surrogate: 2,4,6-Tribromophenol</i>				19-122	109 %		07/07/22	07/08/22 17:27	
<i>Surrogate: 2-Fluorobiphenyl</i>				30-115	102 %		07/07/22	07/08/22 17:27	
<i>Surrogate: Terphenyl-d14</i>				18-137	109 %		07/07/22	07/08/22 17:27	
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	88		%			1	07/07/22	07/08/22 10:07	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-8

2070720-08RE1 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	5.7	2.3	1	07/11/22	07/11/22 12:09	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	96 %	07/11/22		07/11/22 12:09		
Surrogate: Toluene-d8			75-120	104 %	07/11/22		07/11/22 12:09		
Surrogate: 4-Bromofluorobenzene			70-120	96 %	07/11/22		07/11/22 12:09		



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-9

2070720-09 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1690		ug/kg dry	238	95	1	07/07/22	07/08/22 17:47	WB
Naphthalene	303		ug/kg dry	238	95	1	07/07/22	07/08/22 17:47	WB
<i>Surrogate: 2-Fluorophenol</i>		23-121		80 %	07/07/22		07/08/22 17:47		
<i>Surrogate: Phenol-d5</i>		24-113		84 %	07/07/22		07/08/22 17:47		
<i>Surrogate: Nitrobenzene-d5</i>		23-120		79 %	07/07/22		07/08/22 17:47		
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		101 %	07/07/22		07/08/22 17:47		
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		82 %	07/07/22		07/08/22 17:47		
<i>Surrogate: Terphenyl-d14</i>		18-137		90 %	07/07/22		07/08/22 17:47		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	84		%			1	07/07/22	07/08/22 10:07	TA

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-9

2070720-09RE1 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	6.0	2.4	1	07/11/22	07/11/22 12:34	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	95 %	07/11/22		07/11/22 12:34		
Surrogate: Toluene-d8			75-120	102 %	07/11/22		07/11/22 12:34		
Surrogate: 4-Bromofluorobenzene			70-120	100 %	07/11/22		07/11/22 12:34		



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-10

2070720-10 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.1	1.6	1	07/08/22	07/08/22 16:10	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	97 %	07/08/22		07/08/22 16:10		
Surrogate: Toluene-d8			75-120	98 %	07/08/22		07/08/22 16:10		
Surrogate: 4-Bromofluorobenzene			70-120	98 %	07/08/22		07/08/22 16:10		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	2060		ug/kg dry	244	98	1	07/07/22	07/08/22 18:08	WB
Naphthalene	164	J	ug/kg dry	244	98	1	07/07/22	07/08/22 18:08	WB
Surrogate: 2-Fluorophenol			23-121	84 %	07/07/22		07/08/22 18:08		
Surrogate: Phenol-d5			24-113	88 %	07/07/22		07/08/22 18:08		
Surrogate: Nitrobenzene-d5			23-120	83 %	07/07/22		07/08/22 18:08		
Surrogate: 2,4,6-Tribromophenol			19-122	104 %	07/07/22		07/08/22 18:08		
Surrogate: 2-Fluorobiphenyl			30-115	94 %	07/07/22		07/08/22 18:08		
Surrogate: Terphenyl-d14			18-137	99 %	07/07/22		07/08/22 18:08		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	82		%			1	07/07/22	07/08/22 10:07	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Reported:
07/11/22 16:35

S-B-11

2070720-11 (Soil)
Sample Date: 07/07/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	6.4		ug/kg dry	4.0	1.6	1	07/08/22	07/08/22 16:35	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	97 %	07/08/22		07/08/22 16:35		
<i>Surrogate: Toluene-d8</i>			75-120	104 %	07/08/22		07/08/22 16:35		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	91 %	07/08/22		07/08/22 16:35		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	2040		ug/kg dry	471	188	2	07/07/22	07/08/22 18:28	WB
Naphthalene	328	J	ug/kg dry	471	188	2	07/07/22	07/08/22 18:28	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	51 %	07/07/22		07/08/22 18:28		
<i>Surrogate: Phenol-d5</i>			24-113	54 %	07/07/22		07/08/22 18:28		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	49 %	07/07/22		07/08/22 18:28		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	61 %	07/07/22		07/08/22 18:28		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	55 %	07/07/22		07/08/22 18:28		
<i>Surrogate: Terphenyl-d14</i>			18-137	60 %	07/07/22		07/08/22 18:28		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/07/22	07/08/22 10:07	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 22010112
Project Manager: Keith Progin

Notes and Definitions

- V-01 A compliant analysis was not achieved using the available 5035 sample containers. An alternate sample container was used for the reported results.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Rabecka Koons, Quality Assurance Officer

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CHAIN OF CUSTODY

PAGE 1 OF 2

ALPHA Job #:

Date Rec'd in Lab:

Project Information

WESTBORO, MA
TEL: 508-898-9220
FAX: 508-898-9193

MANSFIELD, MA
TEL: 508-822-9300
FAX: 508-822-3288

Report Information - Data Deliverables
 FAX EMAIL
 ADEX Add'l Deliverables

Billing Information
 Same as Client info PO #:

Client Information

Client: **FPA**
Address:

Project Name: **A-11-Z - Soil Excavation**
Project Location: **A11-Z**
Project #: **22010112**
Project Manager: **Bob Tworkowski**

ALPHA Quote #:

Phone: **240 461 0750**

Fax:

Email:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: Time:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS
Benzene 8260
Naphthalene + Benzene 8270

Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
S-B-1	7/7/22	1120	S	TJP	2070720-01
S-B-2		1140	S	TJP	-02
S-B-3		1150	S	TJP	-03
S-B-4		1200	S	TJP	-04
S-B-5		1210	S	TJP	-05
S-B-6		1220	S	TJP	-06
S-B-7		1225	S	TJP	-07
S-B-8		1230	S	TJP	-08
S-B-9		1235	S	TJP	-09
S-B-10		1240	S	TJP	-10

SAMPLE HANDLING
Filtration _____
 Done
 Not needed
 Lab to do
Preservation
 Lab to do
(Please specify below)

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Container Type	Preservative	Date/Time	Received By:
E	A	7/7/22	[Signature]
O	A	7/7/22	[Signature]

Relinquished By:	Date/Time	Received By:	Date/Time
[Signature]	7/7/22	[Signature]	7-7-22
[Signature]	7/7/22	[Signature]	7-7-22

CHAIN OF CUSTODY

PAGE 2 OF 2

ALPHA ANALYTICAL
 WESTBORO, MA
 TEL: 508-895-9220
 FAX: 508-898-9199

MANFIELD, MA
 TEL: 508-822-9300
 FAX: 508-822-3288

Client Information

Client: **TPA**
 Address:

Phone: **2404610250**

Fax:

Email:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Project Information

Project Name: **A11-2-Sol Excavation**
 Project Location: **A11-2**
 Project #: _____
 Project Manager: **Bob Twolkowski**
 ALPHA Quote #: _____

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: _____ Time: _____

Date Rec'd in Lab:

Report Information - Data Deliverables

FAX EMAIL
 ADEX Add'l Deliverables

Regulatory Requirements/Report Limits

State /Fed Program _____ Criteria _____

ALPHA Job #:

Billing Information

Same as Client info PO #: _____

ANALYSIS	Sample Specific Comments	TOTAL # BOTTLES
Benzene 266 Naphthalene 2 Benzene (a) 1/2 8/20	Filtration _____ <input type="checkbox"/> Done <input type="checkbox"/> Not needed <input type="checkbox"/> Lab to do Preservation _____ <input type="checkbox"/> Lab to do (Please specify below)	5
		2070720-11

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Time	Sample Matrix	Sampler's Initials
	S-B-11	7/7/22	1245	S	TSR

Container Type	Preservative	Date/Time	Received By:	Date/Time
E A	O A	7/7/22	<i>[Signature]</i>	7-7-22
			<i>[Signature]</i>	14-2-7

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

15 July 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/13/22 16:12.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

Project: A11-2

Project Number: PIT CC 22010111

Project Manager: Keith Progin

Reported:

07/15/22 13:29

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-CC-1		2071319-01	Soil	07/12/22 13:30	07/13/22 16:12
S-CC-2		2071319-02	Soil	07/12/22 13:35	07/13/22 16:12
S-CC-3		2071319-03	Soil	07/12/22 13:40	07/13/22 16:12
S-CC-4		2071319-04	Soil	07/12/22 13:45	07/13/22 16:12
S-CC-5		2071319-05	Soil	07/12/22 13:50	07/13/22 16:12
S-CC-6		2071319-06	Soil	07/12/22 13:55	07/13/22 16:12



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: PIT CC 22010111
Project Manager: Keith Progin

Reported:
07/15/22 13:29

S-CC-1

2071319-01 (Soil)
Sample Date: 07/12/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.6	1.8	1	07/14/22	07/14/22 17:02	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	16000		ug/kg dry	2250	899	10	07/13/22	07/14/22 21:34	WB
Naphthalene	ND		ug/kg dry	2250	899	10	07/13/22	07/14/22 21:34	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	89		%			1	07/14/22	07/15/22 10:44	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: PIT CC 22010111
Project Manager: Keith Progin

Reported:
07/15/22 13:29

S-CC-2

2071319-02 (Soil)
Sample Date: 07/12/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.6	1.9	1	07/14/22	07/14/22 17:29	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1180		ug/kg dry	230	92	1	07/13/22	07/14/22 21:54	WB
Naphthalene	220	J	ug/kg dry	230	92	1	07/13/22	07/14/22 21:54	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	87		%			1	07/14/22	07/15/22 10:44	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: PIT CC 22010111
Project Manager: Keith Progin

Reported:
07/15/22 13:29

S-CC-3

2071319-03 (Soil)
Sample Date: 07/12/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	7.9	3.1	1	07/14/22	07/14/22 17:56	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	882		ug/kg dry	233	93	1	07/13/22	07/14/22 22:15	WB
Naphthalene	ND		ug/kg dry	233	93	1	07/13/22	07/14/22 22:15	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	86		%			1	07/14/22	07/15/22 10:44	TA

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Analytical Results

Project: A11-2

Project Number: PIT CC 22010111
Project Manager: Keith Progin

Reported:
07/15/22 13:29

S-CC-4

2071319-04 (Soil)
Sample Date: 07/12/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	3.7	1.5	1	07/14/22	07/14/22 18:23	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	270	108	1	07/13/22	07/14/22 22:35	WB
Naphthalene	ND		ug/kg dry	270	108	1	07/13/22	07/14/22 22:35	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	74		%			1	07/14/22	07/15/22 10:44	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: PIT CC 22010111
Project Manager: Keith Progin

Reported:
07/15/22 13:29

S-CC-5

2071319-05 (Soil)
Sample Date: 07/12/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.6	1.8	1	07/14/22	07/14/22 18:50	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	282	113	1	07/13/22	07/14/22 22:56	WB
Naphthalene	ND		ug/kg dry	282	113	1	07/13/22	07/14/22 22:56	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	71		%			1	07/14/22	07/15/22 10:44	TA

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: PIT CC 22010111
Project Manager: Keith Progin

Reported:
07/15/22 13:29

S-CC-6

2071319-06 (Soil)
Sample Date: 07/12/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.1	1.6	1	07/14/22	07/14/22 19:17	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	3170		ug/kg dry	435	174	2	07/13/22	07/14/22 23:16	WB
Naphthalene	1250		ug/kg dry	435	174	2	07/13/22	07/14/22 23:16	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	92		%			1	07/14/22	07/15/22 10:44	TA

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Analytical Results

Project: A11-2

Project Number: PIT CC 22010111

Project Manager: Keith Progin

Notes and Definitions

T	Sample temperature upon receipt was above acceptance criteria.
J	Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
RE	Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
%-Solids	Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Rabecka Koons, Quality Assurance Officer

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CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA Job #:

Date Rec'd in Lab:

ALPHA ANALYTICAL
 WESTBORO, MA
 TEL: 508-898-9220
 FAX: 508-898-9193

MANSFIELD, MA
 TEL: 508-822-9300
 FAX: 508-822-3288

Client Information

Client: **TPA**

Address:

Project Information

Project Name: **All-z Pit CC**
 Project Location: **Twort Kowak**
 Project #: **2201011**
 Project Manager: **Twort Kowak**

ALPHA Quote #:

Turn-Around Time

Phone: **240 461 0750**

Fax:

Standard RUSH (only confirmed if pre-approved!)

Date Due: **2day** Time:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS
 Benzene 2260
 Benzene(a) 1760
 Naphthalene 2270

Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Sample Specific Comments
S-CC-1	7/12/22	1330	S	YJP	2071319-01
S-CC-2		1335	S	YJP	-02
S-CC-3		1340	S	YJP	-03
S-CC-4		1345	S	YJP	-04
S-CC-5		1350	S	YJP	-05
S-CC-6		1355	S	YJP	-06

SAMPLE HANDLING

- Filtration _____
 Done
 Not needed
 Lab to do
 Lab to do
 Preservation _____
 Lab to do
 (Please specify below)

ALPHA Lab ID (Lab Use Only)

Sample ID

Collection Date

Collection Time

Sample Matrix

Sampler's Initials

Sample Specific Comments

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By: **Leslie Deland** Date/Time: **7/12/22 4:10pm**

Received By: **[Signature]** Date/Time: **7-13-22 16:12**

Container Type: **EA** Preservative: **EA**

Temp: **23.9°C** on ice **14.3**

18 July 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/14/22 16:33.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

Project: A11-2

Project Number: Pit H 22010111

Project Manager: Keith Progin

Reported:

07/18/22 16:46

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
H-1		2071416-01	Soil	07/14/22 14:10	07/14/22 16:33
H-2		2071416-02	Soil	07/14/22 14:20	07/14/22 16:33
H-3		2071416-03	Soil	07/14/22 14:30	07/14/22 16:33
H-4		2071416-04	Soil	07/14/22 14:35	07/14/22 16:33
H-5		2071416-05	Soil	07/14/22 14:40	07/14/22 16:33
H-6		2071416-06	Soil	07/14/22 14:45	07/14/22 16:33
H-7		2071416-07	Soil	07/14/22 14:50	07/14/22 16:33



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-1

2071416-01 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	26100	10400	5000	07/15/22	07/15/22 18:50	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	297000		ug/kg dry	164000	65800	25	07/15/22	07/18/22 13:20	WB
Naphthalene	982000		ug/kg dry	164000	65800	25	07/15/22	07/18/22 13:20	WB
Surrogate: 2-Fluorophenol		23-121	%		07/15/22		07/18/22 13:20		S-01
Surrogate: Phenol-d5		24-113	%		07/15/22		07/18/22 13:20		S-01
Surrogate: Nitrobenzene-d5		23-120	%		07/15/22		07/18/22 13:20		S-01
Surrogate: 2,4,6-Tribromophenol		19-122	%		07/15/22		07/18/22 13:20		S-01
Surrogate: 2-Fluorobiphenyl		30-115	%		07/15/22		07/18/22 13:20		S-01
Surrogate: Terphenyl-d14		18-137	%		07/15/22		07/18/22 13:20		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	76		%			1	07/18/22	07/18/22 15:21	LN



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-2

2071416-02 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	5270	2110	1000	07/15/22	07/15/22 14:48	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	93900		ug/kg dry	16900	6750	20	07/14/22	07/15/22 15:12	WB
Naphthalene	116000		ug/kg dry	16900	6750	20	07/14/22	07/15/22 15:12	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	79		%			1	07/14/22	07/15/22 11:00	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-3

2071416-03 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	49500	J	ug/kg dry	77200	30900	5000	07/15/22	07/15/22 14:21	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	927000		ug/kg dry	309000	123000	100	07/14/22	07/15/22 15:34	WB
Naphthalene	4800000		ug/kg dry	309000	123000	100	07/14/22	07/15/22 15:34	WB
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	81		%			1	07/14/22	07/15/22 11:00	TA



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-4

2071416-04 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	5800	J	ug/kg dry	10500	4200	2000	07/15/22	07/15/22 19:17	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	295000		ug/kg dry	118000	47100	50	07/15/22	07/18/22 13:41	WB
Naphthalene	1470000		ug/kg dry	118000	47100	50	07/15/22	07/18/22 13:41	WB
Surrogate: 2-Fluorophenol		23-121		%	07/15/22		07/18/22 13:41		S-01
Surrogate: Phenol-d5		24-113		%	07/15/22		07/18/22 13:41		S-01
Surrogate: Nitrobenzene-d5		23-120		%	07/15/22		07/18/22 13:41		S-01
Surrogate: 2,4,6-Tribromophenol		19-122		%	07/15/22		07/18/22 13:41		S-01
Surrogate: 2-Fluorobiphenyl		30-115		%	07/15/22		07/18/22 13:41		S-01
Surrogate: Terphenyl-d14		18-137		%	07/15/22		07/18/22 13:41		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/18/22	07/18/22 15:21	LN



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-5

2071416-05 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	11300	4510	2000	07/15/22	07/15/22 19:44	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	226000		ug/kg dry	57500	23000	25	07/15/22	07/18/22 14:01	WB
Naphthalene	317000		ug/kg dry	57500	23000	25	07/15/22	07/18/22 14:01	WB
Surrogate: 2-Fluorophenol		23-121	%		07/15/22		07/18/22 14:01		S-01
Surrogate: Phenol-d5		24-113	%		07/15/22		07/18/22 14:01		S-01
Surrogate: Nitrobenzene-d5		23-120	%		07/15/22		07/18/22 14:01		S-01
Surrogate: 2,4,6-Tribromophenol		19-122	%		07/15/22		07/18/22 14:01		S-01
Surrogate: 2-Fluorobiphenyl		30-115	%		07/15/22		07/18/22 14:01		S-01
Surrogate: Terphenyl-d14		18-137	%		07/15/22		07/18/22 14:01		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	87		%			1	07/18/22	07/18/22 15:21	LN



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-6

2071416-06 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	1080		ug/kg dry	676	270	100	07/15/22	07/15/22 20:11	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	186000		ug/kg dry	46500	18600	20	07/15/22	07/18/22 14:22	WB
Naphthalene	179000		ug/kg dry	46500	18600	20	07/15/22	07/18/22 14:22	WB
<i>Surrogate: 2-Fluorophenol</i>		<i>23-121</i>		%	<i>07/15/22</i>		<i>07/18/22 14:22</i>		<i>S-01</i>
<i>Surrogate: Phenol-d5</i>		<i>24-113</i>		%	<i>07/15/22</i>		<i>07/18/22 14:22</i>		<i>S-01</i>
<i>Surrogate: Nitrobenzene-d5</i>		<i>23-120</i>		%	<i>07/15/22</i>		<i>07/18/22 14:22</i>		<i>S-01</i>
<i>Surrogate: 2,4,6-Tribromophenol</i>		<i>19-122</i>		%	<i>07/15/22</i>		<i>07/18/22 14:22</i>		<i>S-01</i>
<i>Surrogate: 2-Fluorobiphenyl</i>		<i>30-115</i>		%	<i>07/15/22</i>		<i>07/18/22 14:22</i>		<i>S-01</i>
<i>Surrogate: Terphenyl-d14</i>		<i>18-137</i>		%	<i>07/15/22</i>		<i>07/18/22 14:22</i>		<i>S-01</i>
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	86		%			1	07/18/22	07/18/22 15:21	LN



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-7

2071416-07 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	222	89	1	07/15/22	07/18/22 14:42	WB
Naphthalene	ND		ug/kg dry	222	89	1	07/15/22	07/18/22 14:42	WB
Surrogate: 2-Fluorophenol		23-121		66 %	07/15/22		07/18/22 14:42		
Surrogate: Phenol-d5		24-113		69 %	07/15/22		07/18/22 14:42		
Surrogate: Nitrobenzene-d5		23-120		66 %	07/15/22		07/18/22 14:42		
Surrogate: 2,4,6-Tribromophenol		19-122		80 %	07/15/22		07/18/22 14:42		
Surrogate: 2-Fluorobiphenyl		30-115		71 %	07/15/22		07/18/22 14:42		
Surrogate: Terphenyl-d14		18-137		80 %	07/15/22		07/18/22 14:42		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	90		%			1	07/18/22	07/18/22 15:21	LN



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Reported:
07/18/22 16:46

H-7

2071416-07RE1 (Soil)
Sample Date: 07/14/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	2.1	J	ug/kg dry	4.8	1.9	1	07/18/22	07/18/22 12:24	LL

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: Pit H 22010111
Project Manager: Keith Progin

Notes and Definitions

- V-01 A compliant analysis was not achieved using the available 5035 sample containers. An alternate sample container was used for the reported results.
- S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN OF CUSTODY



WESTBORO, MA
 TEL: 508-898-9220
 FAX: 508-898-9193

MANSFIELD, MA
 TEL: 508-822-9300
 FAX: 508-822-3288

Client Information

Client: TPA

Address:

Phone: 240 461 0750

Fax:

Email:

These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Project Information

Project Name: Alt-Z-PIT H

Project Location: Alt-Z

Project #: 22010111

Project Manager: Bob Tworobski

ALPHA Quote #:

Turn-Around Time

Standard RUSH (only confirmed if pre-approved)

Date Due: 2 day Time:

Date Rec'd in Lab:

Report Information - Data Deliverables

FAX EMAIL

ADEX Add'l Deliverables

Regulatory Requirements/Report Limits

State /Fed Program Criteria

ALPHA Job #:

Billing Information

Same as Client info PO #:

TOTAL # BOTTLES

SAMPLE HANDLING

- Filtration _____
- Done
- Not needed
- Lab to do
- Preservation
- Lab to do

Sample Specific Comments

2071416-01
-02
-03
-04
-05
-06
-07

ANALYSIS
 Benzene 8660
 Benzocapsrene 8220
 Naphthalene 8220

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials
		Date	Time		
H-1	H-1	7/14/22	1410	Soil	XX
H-2	H-2		1420		XX
H-3	H-3		1430		XX
	H-4		1435		XX
	H-5		1440		XX
	H-6		1445		XX
	H-7		1450		XX

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Container Type	EA	EA	EA
Preservative	EA	EA	EA
Relinquished By:	<u>Leslie DeLud</u>	Date/Time	<u>7/14/22 4:30pm</u>
Received By:	<u>Rab...</u>	Date/Time	<u>7/14/22 16:33</u>
Temp: <u>6.2°C</u> on ice			

21 July 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/19/22 16:36.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/21/22 09:58

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
H-22		2071925-01	Soil	07/19/22 15:05	07/19/22 16:36
H-23		2071925-02	Soil	07/19/22 15:10	07/19/22 16:36
H-24		2071925-03	Soil	07/19/22 15:15	07/19/22 16:36
H-25		2071925-04	Soil	07/19/22 15:20	07/19/22 16:36
H-26		2071925-05	Soil	07/19/22 15:30	07/19/22 16:36



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/21/22 09:58

H-22

2071925-01 (Soil)
Sample Date: 07/19/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	12200		ug/kg dry	432	173	100	07/20/22	07/20/22 12:49	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1100	J	ug/kg dry	1120	449	5	07/19/22	07/20/22 16:23	WB
Naphthalene	21600		ug/kg dry	1120	449	5	07/19/22	07/20/22 16:23	WB
Surrogate: 2-Fluorophenol			23-121	93 %	07/19/22		07/20/22 16:23		
Surrogate: Phenol-d5			24-113	97 %	07/19/22		07/20/22 16:23		
Surrogate: Nitrobenzene-d5			23-120	90 %	07/19/22		07/20/22 16:23		
Surrogate: 2,4,6-Tribromophenol			19-122	108 %	07/19/22		07/20/22 16:23		
Surrogate: 2-Fluorobiphenyl			30-115	97 %	07/19/22		07/20/22 16:23		
Surrogate: Terphenyl-d14			18-137	100 %	07/19/22		07/20/22 16:23		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	89		%			1	07/19/22	07/20/22 08:17	LN

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/21/22 09:58

H-23

2071925-02 (Soil)
Sample Date: 07/19/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	925		ug/kg dry	229	91.7	50	07/20/22	07/20/22 13:16	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	64600		ug/kg dry	12700	5060	10	07/19/22	07/20/22 16:44	WB
Naphthalene	10800	J	ug/kg dry	12700	5060	10	07/19/22	07/20/22 16:44	WB
Surrogate: 2-Fluorophenol		23-121		85 %	07/19/22		07/20/22 16:44		
Surrogate: Phenol-d5		24-113		88 %	07/19/22		07/20/22 16:44		
Surrogate: Nitrobenzene-d5		23-120		83 %	07/19/22		07/20/22 16:44		
Surrogate: 2,4,6-Tribromophenol		19-122		88 %	07/19/22		07/20/22 16:44		
Surrogate: 2-Fluorobiphenyl		30-115		79 %	07/19/22		07/20/22 16:44		
Surrogate: Terphenyl-d14		18-137		90 %	07/19/22		07/20/22 16:44		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	79		%			1	07/19/22	07/20/22 08:17	LN



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/21/22 09:58

H-24

2071925-03 (Soil)
Sample Date: 07/19/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	2970		ug/kg dry	200	80.2	50	07/20/22	07/20/22 13:43	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	7640		ug/kg dry	1300	519	5	07/19/22	07/20/22 17:04	WB
Naphthalene	28700		ug/kg dry	1300	519	5	07/19/22	07/20/22 17:04	WB
Surrogate: 2-Fluorophenol		23-121		96 %	07/19/22		07/20/22 17:04		
Surrogate: Phenol-d5		24-113		100 %	07/19/22		07/20/22 17:04		
Surrogate: Nitrobenzene-d5		23-120		92 %	07/19/22		07/20/22 17:04		
Surrogate: 2,4,6-Tribromophenol		19-122		107 %	07/19/22		07/20/22 17:04		
Surrogate: 2-Fluorobiphenyl		30-115		102 %	07/19/22		07/20/22 17:04		
Surrogate: Terphenyl-d14		18-137		108 %	07/19/22		07/20/22 17:04		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	77		%			1	07/19/22	07/20/22 08:17	LN



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/21/22 09:58

H-25

2071925-04 (Soil)
Sample Date: 07/19/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.8	1.9	1	07/20/22	07/20/22 11:28	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	274	110	1	07/19/22	07/20/22 17:25	WB
Naphthalene	ND		ug/kg dry	274	110	1	07/19/22	07/20/22 17:25	WB
Surrogate: 2-Fluorophenol			23-121	84 %	07/19/22		07/20/22 17:25		
Surrogate: Phenol-d5			24-113	86 %	07/19/22		07/20/22 17:25		
Surrogate: Nitrobenzene-d5			23-120	83 %	07/19/22		07/20/22 17:25		
Surrogate: 2,4,6-Tribromophenol			19-122	101 %	07/19/22		07/20/22 17:25		
Surrogate: 2-Fluorobiphenyl			30-115	86 %	07/19/22		07/20/22 17:25		
Surrogate: Terphenyl-d14			18-137	92 %	07/19/22		07/20/22 17:25		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	73		%			1	07/19/22	07/20/22 08:17	LN

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/21/22 09:58

H-26

2071925-05 (Soil)
Sample Date: 07/19/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	1.7	J	ug/kg dry	3.2	1.3	1	07/20/22	07/20/22 11:55	LL
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1060		ug/kg dry	220	88	1	07/19/22	07/20/22 17:45	WB
Naphthalene	373		ug/kg dry	220	88	1	07/19/22	07/20/22 17:45	WB
Surrogate: 2-Fluorophenol		23-121		80 %	07/19/22		07/20/22 17:45		
Surrogate: Phenol-d5		24-113		84 %	07/19/22		07/20/22 17:45		
Surrogate: Nitrobenzene-d5		23-120		81 %	07/19/22		07/20/22 17:45		
Surrogate: 2,4,6-Tribromophenol		19-122		102 %	07/19/22		07/20/22 17:45		
Surrogate: 2-Fluorobiphenyl		30-115		92 %	07/19/22		07/20/22 17:45		
Surrogate: Terphenyl-d14		18-137		93 %	07/19/22		07/20/22 17:45		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	91		%			1	07/19/22	07/20/22 08:17	LN

Rabecka Koons, Quality Assurance Officer

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All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/21/22 09:58

Notes and Definitions

- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD

Maryland Spectral Services, Inc.
1500 Caton Center Drive, Suite G
Baltimore, MD 21227
410-247-7600 • Fax 410-247-7602
reporting@mdspectral.com

Matrix Codes: NW (non-potable water), DW (drinking water), S (soil), SV (soil vapor)

Preservative	Field Notes	MSS Lab ID
		2071925-01
		-02
		-03
		-04
		-05

Analysis Requested

Benzene 8260	<input checked="" type="checkbox"/>
Benzo(a)pyrene 8270	<input checked="" type="checkbox"/>
Naphthalene 8260	<input checked="" type="checkbox"/>

Company Address:
1600 Sparrows Point Blvd
Sparrows Point, MD 21219

Project Manager: 240 461 0750
Bob Tworowski (443) 649-5073

Attention/Invoice:
ap@tradeointatlantic.com

Date	Time	DW	Water	Soil	SV	No. of Containers
7/19/22	1505			X		5
	1510			X		5
	1515			X		5
	1520			X		5
7/19/22	1530			X		5

Company Name:
Tradepoint Atlantic

Project Name:
Sub-Parcel A11-2

Sampler(s):
Guy Davis/ARM Group
(443) 610-0211

Field Sample ID	Date	Time	DW	Water	Soil	SV
H-22	7/19/22	1505			X	
H-23		1510			X	
H-24		1515			X	
H-25		1520			X	
H-26	7/19/22	1530			X	

Relinquished by: (Signature) <i>[Signature]</i>	Date/Time 7/19/22 1545	Received by: (Signature) <i>[Signature]</i>	Date/Time 7/19/22 16:36
Relinquished by: (Signature) Goyl Davis	Date/Time 7-19-22	Received by Lab: (Signature) <i>[Signature]</i>	Date/Time 16:36

Turn Around Time:
 Normal (7 day)
 5 day
 4 day
 3 day
 Rush (2 day)
 Next Day
 Other: _____
 Specific Due Date: _____

Lab Use:
Temp: _____ °C
 Received on Ice
 Received same day

Sample Disposal:
 Return to Client
 Disposal by lab
 Archive for _____ days

Delivery Method:
 Courier
 Client
 UPS
 FedEx
 USPS
 Other: _____

Special Instructions/QC Requirements & Comments:
 Please report to:
 Bob Tworowski btworowski@tradeointatlantic.com
 24-hour TAT

22 July 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/20/22 15:28.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Will Brewington
President

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
H-37		2072019-01	Soil	07/20/22 10:10	07/20/22 15:28
H-38		2072019-02	Soil	07/20/22 10:15	07/20/22 15:28
H-39		2072019-03	Soil	07/20/22 10:20	07/20/22 15:28
H-40		2072019-04	Soil	07/20/22 10:30	07/20/22 15:28
H-41		2072019-05	Soil	07/20/22 10:35	07/20/22 15:28
H-42		2072019-06	Soil	07/20/22 10:40	07/20/22 15:28
H-43		2072019-07	Soil	07/20/22 10:50	07/20/22 15:28
H-44		2072019-08	Soil	07/20/22 10:55	07/20/22 15:28
H-45		2072019-09	Soil	07/20/22 11:00	07/20/22 15:28
H-46		2072019-10	Soil	07/20/22 11:10	07/20/22 15:28
H-47		2072019-11	Soil	07/20/22 11:15	07/20/22 15:28
H-48		2072019-12	Soil	07/20/22 11:20	07/20/22 15:28

Will Brewington, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-37

2072019-01 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	7350		ug/kg dry	236	94.2	50	07/21/22	07/21/22 13:36	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>		70-130		93 %	07/21/22		07/21/22 13:36		
<i>Surrogate: Toluene-d8</i>		75-120		82 %	07/21/22		07/21/22 13:36		
<i>Surrogate: 4-Bromofluorobenzene</i>		70-120		107 %	07/21/22		07/21/22 13:36		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	230	92	1	07/20/22	07/21/22 14:24	WB
Naphthalene	321		ug/kg dry	230	92	1	07/20/22	07/21/22 14:24	WB
<i>Surrogate: 2-Fluorophenol</i>		23-121		76 %	07/20/22		07/21/22 14:24		
<i>Surrogate: Phenol-d5</i>		24-113		80 %	07/20/22		07/21/22 14:24		
<i>Surrogate: Nitrobenzene-d5</i>		23-120		74 %	07/20/22		07/21/22 14:24		
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		92 %	07/20/22		07/21/22 14:24		
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		80 %	07/20/22		07/21/22 14:24		
<i>Surrogate: Terphenyl-d14</i>		18-137		83 %	07/20/22		07/21/22 14:24		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	87		%			1	07/21/22	07/22/22 09:41	MH

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-38

2072019-02 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	302		ug/kg dry	238	95	1	07/20/22	07/21/22 14:44	WB
Naphthalene	673		ug/kg dry	238	95	1	07/20/22	07/21/22 14:44	WB
<i>Surrogate: 2-Fluorophenol</i>		<i>23-121</i>		<i>78 %</i>	<i>07/20/22</i>		<i>07/21/22 14:44</i>		
<i>Surrogate: Phenol-d5</i>		<i>24-113</i>		<i>81 %</i>	<i>07/20/22</i>		<i>07/21/22 14:44</i>		
<i>Surrogate: Nitrobenzene-d5</i>		<i>23-120</i>		<i>74 %</i>	<i>07/20/22</i>		<i>07/21/22 14:44</i>		
<i>Surrogate: 2,4,6-Tribromophenol</i>		<i>19-122</i>		<i>90 %</i>	<i>07/20/22</i>		<i>07/21/22 14:44</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>		<i>30-115</i>		<i>77 %</i>	<i>07/20/22</i>		<i>07/21/22 14:44</i>		
<i>Surrogate: Terphenyl-d14</i>		<i>18-137</i>		<i>80 %</i>	<i>07/20/22</i>		<i>07/21/22 14:44</i>		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	84		%			1	07/21/22	07/22/22 09:41	MH

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-38

2072019-02RE1 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	5.9		J ug/kg dry	6.0	2.4	1	07/22/22	07/22/22 12:53	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>				70-130	98 %		07/22/22	07/22/22 12:53	
<i>Surrogate: Toluene-d8</i>				75-120	80 %		07/22/22	07/22/22 12:53	
<i>Surrogate: 4-Bromofluorobenzene</i>				70-120	109 %		07/22/22	07/22/22 12:53	

V-01



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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-39

2072019-03 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	843		ug/kg dry	254	101	50	07/21/22	07/21/22 14:30	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	95 %	07/21/22		07/21/22 14:30		
<i>Surrogate: Toluene-d8</i>			75-120	84 %	07/21/22		07/21/22 14:30		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	106 %	07/21/22		07/21/22 14:30		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	235	94	1	07/20/22	07/21/22 15:05	WB
Naphthalene	159	J	ug/kg dry	235	94	1	07/20/22	07/21/22 15:05	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	78 %	07/20/22		07/21/22 15:05		
<i>Surrogate: Phenol-d5</i>			24-113	82 %	07/20/22		07/21/22 15:05		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	75 %	07/20/22		07/21/22 15:05		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	96 %	07/20/22		07/21/22 15:05		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	85 %	07/20/22		07/21/22 15:05		
<i>Surrogate: Terphenyl-d14</i>			18-137	87 %	07/20/22		07/21/22 15:05		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/21/22	07/22/22 09:41	MH



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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-40

2072019-04 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	238	95	1	07/20/22	07/21/22 15:25	WB
Naphthalene	ND		ug/kg dry	238	95	1	07/20/22	07/21/22 15:25	WB
Surrogate: 2-Fluorophenol		23-121		79 %	07/20/22		07/21/22 15:25		
Surrogate: Phenol-d5		24-113		80 %	07/20/22		07/21/22 15:25		
Surrogate: Nitrobenzene-d5		23-120		75 %	07/20/22		07/21/22 15:25		
Surrogate: 2,4,6-Tribromophenol		19-122		88 %	07/20/22		07/21/22 15:25		
Surrogate: 2-Fluorobiphenyl		30-115		78 %	07/20/22		07/21/22 15:25		
Surrogate: Terphenyl-d14		18-137		84 %	07/20/22		07/21/22 15:25		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	84		%			1	07/21/22	07/22/22 09:41	MH

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-40

2072019-04RE1 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	27.6		ug/kg dry	4.7	1.9	1	07/22/22	07/22/22 12:26	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>				70-130	107 %		07/22/22	07/22/22 12:26	
<i>Surrogate: Toluene-d8</i>				75-120	80 %		07/22/22	07/22/22 12:26	
<i>Surrogate: 4-Bromofluorobenzene</i>				70-120	108 %		07/22/22	07/22/22 12:26	

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-41

2072019-05 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatiles Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.6	1.8	1	07/21/22	07/21/22 15:24	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	100 %	07/21/22		07/21/22 15:24		
Surrogate: Toluene-d8			75-120	81 %	07/21/22		07/21/22 15:24		
Surrogate: 4-Bromofluorobenzene			70-120	110 %	07/21/22		07/21/22 15:24		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	225	90	1	07/20/22	07/21/22 15:46	WB
Naphthalene	ND		ug/kg dry	225	90	1	07/20/22	07/21/22 15:46	WB
Surrogate: 2-Fluorophenol			23-121	74 %	07/20/22		07/21/22 15:46		
Surrogate: Phenol-d5			24-113	77 %	07/20/22		07/21/22 15:46		
Surrogate: Nitrobenzene-d5			23-120	75 %	07/20/22		07/21/22 15:46		
Surrogate: 2,4,6-Tribromophenol			19-122	87 %	07/20/22		07/21/22 15:46		
Surrogate: 2-Fluorobiphenyl			30-115	81 %	07/20/22		07/21/22 15:46		
Surrogate: Terphenyl-d14			18-137	85 %	07/20/22		07/21/22 15:46		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	89		%			1	07/21/22	07/22/22 09:41	MH



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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-42

2072019-06 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	8.1		ug/kg dry	4.1	1.6	1	07/21/22	07/21/22 15:51	LL
Surrogate: 1,2-Dichloroethane-d4		70-130		98 %	07/21/22		07/21/22 15:51		
Surrogate: Toluene-d8		75-120		81 %	07/21/22		07/21/22 15:51		
Surrogate: 4-Bromofluorobenzene		70-120		110 %	07/21/22		07/21/22 15:51		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	227	91	1	07/20/22	07/21/22 16:06	WB
Naphthalene	ND		ug/kg dry	227	91	1	07/20/22	07/21/22 16:06	WB
Surrogate: 2-Fluorophenol		23-121		79 %	07/20/22		07/21/22 16:06		
Surrogate: Phenol-d5		24-113		81 %	07/20/22		07/21/22 16:06		
Surrogate: Nitrobenzene-d5		23-120		75 %	07/20/22		07/21/22 16:06		
Surrogate: 2,4,6-Tribromophenol		19-122		88 %	07/20/22		07/21/22 16:06		
Surrogate: 2-Fluorobiphenyl		30-115		81 %	07/20/22		07/21/22 16:06		
Surrogate: Terphenyl-d14		18-137		84 %	07/20/22		07/21/22 16:06		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	88		%			1	07/21/22	07/22/22 09:41	MH

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-43

2072019-07 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatiles Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.5	1.8	1	07/21/22	07/21/22 16:18	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	100 %	07/21/22		07/21/22 16:18		
Surrogate: Toluene-d8			75-120	81 %	07/21/22		07/21/22 16:18		
Surrogate: 4-Bromofluorobenzene			70-120	110 %	07/21/22		07/21/22 16:18		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	233	93	1	07/20/22	07/21/22 16:26	WB
Naphthalene	ND		ug/kg dry	233	93	1	07/20/22	07/21/22 16:26	WB
Surrogate: 2-Fluorophenol			23-121	77 %	07/20/22		07/21/22 16:26		
Surrogate: Phenol-d5			24-113	80 %	07/20/22		07/21/22 16:26		
Surrogate: Nitrobenzene-d5			23-120	75 %	07/20/22		07/21/22 16:26		
Surrogate: 2,4,6-Tribromophenol			19-122	90 %	07/20/22		07/21/22 16:26		
Surrogate: 2-Fluorobiphenyl			30-115	80 %	07/20/22		07/21/22 16:26		
Surrogate: Terphenyl-d14			18-137	83 %	07/20/22		07/21/22 16:26		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	86		%			1	07/21/22	07/22/22 09:41	MH



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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-44

2072019-08 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatiles Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.5	1.8	1	07/21/22	07/21/22 16:45	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	100 %	07/21/22		07/21/22 16:45		
Surrogate: Toluene-d8			75-120	81 %	07/21/22		07/21/22 16:45		
Surrogate: 4-Bromofluorobenzene			70-120	111 %	07/21/22		07/21/22 16:45		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	230	92	1	07/20/22	07/21/22 16:47	WB
Naphthalene	ND		ug/kg dry	230	92	1	07/20/22	07/21/22 16:47	WB
Surrogate: 2-Fluorophenol			23-121	80 %	07/20/22		07/21/22 16:47		
Surrogate: Phenol-d5			24-113	83 %	07/20/22		07/21/22 16:47		
Surrogate: Nitrobenzene-d5			23-120	75 %	07/20/22		07/21/22 16:47		
Surrogate: 2,4,6-Tribromophenol			19-122	93 %	07/20/22		07/21/22 16:47		
Surrogate: 2-Fluorobiphenyl			30-115	82 %	07/20/22		07/21/22 16:47		
Surrogate: Terphenyl-d14			18-137	89 %	07/20/22		07/21/22 16:47		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	87		%			1	07/21/22	07/22/22 09:41	MH

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-45

2072019-09 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatiles Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.9	2.0	1	07/21/22	07/21/22 17:12	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	101 %	07/21/22		07/21/22 17:12		
Surrogate: Toluene-d8			75-120	80 %	07/21/22		07/21/22 17:12		
Surrogate: 4-Bromofluorobenzene			70-120	111 %	07/21/22		07/21/22 17:12		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	227	91	1	07/20/22	07/21/22 17:07	WB
Naphthalene	ND		ug/kg dry	227	91	1	07/20/22	07/21/22 17:07	WB
Surrogate: 2-Fluorophenol			23-121	80 %	07/20/22		07/21/22 17:07		
Surrogate: Phenol-d5			24-113	83 %	07/20/22		07/21/22 17:07		
Surrogate: Nitrobenzene-d5			23-120	78 %	07/20/22		07/21/22 17:07		
Surrogate: 2,4,6-Tribromophenol			19-122	93 %	07/20/22		07/21/22 17:07		
Surrogate: 2-Fluorobiphenyl			30-115	84 %	07/20/22		07/21/22 17:07		
Surrogate: Terphenyl-d14			18-137	95 %	07/20/22		07/21/22 17:07		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	88		%			1	07/21/22	07/22/22 09:41	MH



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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-46

2072019-10 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	2.3	J	ug/kg dry	5.0	2.0	1	07/21/22	07/21/22 17:39	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	105 %	07/21/22		07/21/22 17:39		
Surrogate: Toluene-d8			75-120	82 %	07/21/22		07/21/22 17:39		
Surrogate: 4-Bromofluorobenzene			70-120	111 %	07/21/22		07/21/22 17:39		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	238	95	1	07/20/22	07/21/22 17:28	WB
Naphthalene	ND		ug/kg dry	238	95	1	07/20/22	07/21/22 17:28	WB
Surrogate: 2-Fluorophenol			23-121	78 %	07/20/22		07/21/22 17:28		
Surrogate: Phenol-d5			24-113	80 %	07/20/22		07/21/22 17:28		
Surrogate: Nitrobenzene-d5			23-120	73 %	07/20/22		07/21/22 17:28		
Surrogate: 2,4,6-Tribromophenol			19-122	88 %	07/20/22		07/21/22 17:28		
Surrogate: 2-Fluorobiphenyl			30-115	77 %	07/20/22		07/21/22 17:28		
Surrogate: Terphenyl-d14			18-137	86 %	07/20/22		07/21/22 17:28		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	84		%			1	07/21/22	07/22/22 09:41	MH

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-47

2072019-11 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	4.1	J	ug/kg dry	5.0	2.0	1	07/21/22	07/21/22 18:06	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	101 %	07/21/22		07/21/22 18:06		
Surrogate: Toluene-d8			75-120	82 %	07/21/22		07/21/22 18:06		
Surrogate: 4-Bromofluorobenzene			70-120	114 %	07/21/22		07/21/22 18:06		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	233	93	1	07/20/22	07/21/22 17:48	WB
Naphthalene	ND		ug/kg dry	233	93	1	07/20/22	07/21/22 17:48	WB
Surrogate: 2-Fluorophenol			23-121	75 %	07/20/22		07/21/22 17:48		
Surrogate: Phenol-d5			24-113	79 %	07/20/22		07/21/22 17:48		
Surrogate: Nitrobenzene-d5			23-120	73 %	07/20/22		07/21/22 17:48		
Surrogate: 2,4,6-Tribromophenol			19-122	89 %	07/20/22		07/21/22 17:48		
Surrogate: 2-Fluorobiphenyl			30-115	79 %	07/20/22		07/21/22 17:48		
Surrogate: Terphenyl-d14			18-137	85 %	07/20/22		07/21/22 17:48		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	86		%			1	07/21/22	07/22/22 09:41	MH

Will Brewington, President

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All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 14:35

H-48

2072019-12 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatiles Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.2	1.7	1	07/21/22	07/21/22 18:32	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	101 %	07/21/22		07/21/22 18:32		
Surrogate: Toluene-d8			75-120	81 %	07/21/22		07/21/22 18:32		
Surrogate: 4-Bromofluorobenzene			70-120	114 %	07/21/22		07/21/22 18:32		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	227	91	1	07/20/22	07/21/22 18:09	WB
Naphthalene	ND		ug/kg dry	227	91	1	07/20/22	07/21/22 18:09	WB
Surrogate: 2-Fluorophenol			23-121	79 %	07/20/22		07/21/22 18:09		
Surrogate: Phenol-d5			24-113	82 %	07/20/22		07/21/22 18:09		
Surrogate: Nitrobenzene-d5			23-120	77 %	07/20/22		07/21/22 18:09		
Surrogate: 2,4,6-Tribromophenol			19-122	93 %	07/20/22		07/21/22 18:09		
Surrogate: 2-Fluorobiphenyl			30-115	81 %	07/20/22		07/21/22 18:09		
Surrogate: Terphenyl-d14			18-137	92 %	07/20/22		07/21/22 18:09		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	88		%			1	07/21/22	07/22/22 09:41	MH



Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Notes and Definitions

- V-01 A compliant analysis was not achieved using the available 5035 sample containers. An alternate sample container was used for the reported results.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Will Brewington, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

floor

Page 1 of 2

Company Name: Tradepoint Atlantic		Company Address: 1600 Sparrows Point Blvd Sparrows Point, MD 21219						Analysis Requested										CHAIN-OF-CUSTODY RECORD		
Project Name: Sub-Parcel A11-2 / P54-H-floor		Project Manager: Bob Tworkowski (443) 649-5073						Benzene 8260 Benzo(a)pyrene 8270 Naphthalene 8260										Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 reporting@mdspectral.com		
Sampler(s): Tom PALANK Guy Davis/ARM Group (443) 610-0211 - 443 995 5125		Attention/Invoice: ap@tradepointatlantic.com																Matrix Codes: NW (non-potable water), DW (drinking water), S (soil), SV (soil vapor)		
Field Sample ID	Date	Time	DW	Water	Soil	SV	No. of Containers	Benzene 8260	Benzo(a)pyrene 8270	Naphthalene 8260							Preservative	Field Notes	MSS Lab ID	
H-37	7/20/22	1010			X		5	X	X	X							Methanol		2072019-01	
H-38		1015			X		5	X	X	X									- 02	
H-39		1020			X		5	X	X	X									- 03	
H-40		1030			X		5	X	X	X									- 04	
H-41		1035			X		5	X	X	X									- 05	
H-42		1040			X		5	X	X	X									- 06	
H-43		1050			X		5	X	X	X									- 07	
H-44		1055			X		5	X	X	X									- 08	
H-45		1100			X		5	X	X	X									- 09	
H-46		1110			X		5	X	X	X									- 10	
Relinquished by: (Signature)		Date/Time		Received by: (Signature)				Relinquished by: (Signature)				Date/Time		Received by: (Signature)						
(Printed)				(Printed)				(Printed)						(Printed)						
Relinquished by: (Signature)		Date/Time		Received by Lab: (Signature)				Turn Around Time:				Lab Use:								
(Printed)		15:28 7-20-22		Lori Foster				<input type="checkbox"/> Normal (7 day) <input type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day <input type="checkbox"/> Rush (2 day) <input type="checkbox"/> Next Day <input type="checkbox"/> Other: _____ <input type="checkbox"/> Specific Due Date: _____				Temp: _____ °C 2.1 <input type="checkbox"/> Received on Ice <input checked="" type="checkbox"/> Received same day								
Delivery Method:		Special Instructions/QC Requirements & Comments:																		
<input type="checkbox"/> Courier <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____		Please report to: Bob Tworkowski btworkowski@tradepointatlantic.com																		
		Sample Disposal:																		
		<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for _____ days																		

floor

PAGE 2 of 2

Company Name: Tradepoint Atlantic		Company Address: 1600 Sparrows Point Blvd Sparrows Point, MD 21219		Analysis Requested										CHAIN-OF-CUSTODY RECORD					
Project Name: Sub-Parcel A11-2 / Pit H-floor		Project Manager: Bob Tworkowski (443) 649-5073												Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 reporting@mdspectral.com					
Sampler(s): Guy Davis/ARM Group (443) 610-0241		Attention/Invoice: ap@tradepointatlantic.com												Matrix Codes: NW (non-potable water), DW (drinking water), S (soil), SV (soil vapor)					
Field Sample ID	Date	Time	DW	Water	Soil	SV	No. of Containers	Benzene 8260	Benzo(a)pyrene 8270	Naphthalene 8260							Preservative	Field Notes	MSS Lab ID
H-47	7/20/12	1115			X		5	X	X	X							Methanol		2072019
H-48	7/20/12	1120			X		5	X	X	X									- 12
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Relinquished by: (Signature)		Date/Time		Received by: (Signature)									
(Printed)				(Printed)		(Printed)				(Printed)									
Relinquished by: (Signature)		Date/Time		Received by Lab: (Signature)		Turn Around Time:		Lab Use:											
(Printed)		15:20		(Printed)		<input type="checkbox"/> Normal (7 day) <input type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day <input type="checkbox"/> Rush (2 day) <input type="checkbox"/> Next Day <input type="checkbox"/> Other: _____ <input type="checkbox"/> Specific Due Date: _____		Temp: ____°C 2.1 <input checked="" type="checkbox"/> Received on Ice <input checked="" type="checkbox"/> Received same day											
Delivery Method:		Special Instructions/QC Requirements & Comments:						Sample Disposal:											
<input type="checkbox"/> Courier <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____		Please report to: Bob Tworkowski btworkowski@tradepointatlantic.com						<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for ____ days											

- 11

22 July 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/20/22 15:28.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Will Brewington
President

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 15:28

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
H-30		2072020-01	Soil	07/20/22 08:40	07/20/22 15:28
H-32		2072020-02	Soil	07/20/22 08:50	07/20/22 15:28
H-34		2072020-03	Soil	07/20/22 09:00	07/20/22 15:28
H-36		2072020-04	Soil	07/20/22 09:10	07/20/22 15:28



Will Brewington, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 15:28

H-30

2072020-01 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	12200		ug/kg dry	1600	641	250	07/21/22	07/21/22 18:59	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	100 %	07/21/22		07/21/22 18:59		
<i>Surrogate: Toluene-d8</i>			75-120	81 %	07/21/22		07/21/22 18:59		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	112 %	07/21/22		07/21/22 18:59		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	193000		ug/kg dry	53300	21300	20	07/21/22	07/22/22 11:45	WB
Naphthalene	249000		ug/kg dry	53300	21300	20	07/21/22	07/22/22 11:45	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	%	07/21/22		07/22/22 11:45		S-01
<i>Surrogate: Phenol-d5</i>			24-113	%	07/21/22		07/22/22 11:45		S-01
<i>Surrogate: Nitrobenzene-d5</i>			23-120	%	07/21/22		07/22/22 11:45		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	%	07/21/22		07/22/22 11:45		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	%	07/21/22		07/22/22 11:45		S-01
<i>Surrogate: Terphenyl-d14</i>			18-137	%	07/21/22		07/22/22 11:45		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	75		%			1	07/21/22	07/22/22 09:41	MH

Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 15:28

H-32

2072020-02 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	179	J	ug/kg dry	241	96.4	50	07/21/22	07/21/22 19:26	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	98 %	07/21/22		07/21/22 19:26		
Surrogate: Toluene-d8			75-120	82 %	07/21/22		07/21/22 19:26		
Surrogate: 4-Bromofluorobenzene			70-120	111 %	07/21/22		07/21/22 19:26		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	11100		ug/kg dry	2350	941	10	07/21/22	07/22/22 12:06	WB
Naphthalene	20800		ug/kg dry	2350	941	10	07/21/22	07/22/22 12:06	WB
Surrogate: 2-Fluorophenol			23-121	%	07/21/22		07/22/22 12:06		S-01
Surrogate: Phenol-d5			24-113	%	07/21/22		07/22/22 12:06		S-01
Surrogate: Nitrobenzene-d5			23-120	%	07/21/22		07/22/22 12:06		S-01
Surrogate: 2,4,6-Tribromophenol			19-122	%	07/21/22		07/22/22 12:06		S-01
Surrogate: 2-Fluorobiphenyl			30-115	%	07/21/22		07/22/22 12:06		S-01
Surrogate: Terphenyl-d14			18-137	%	07/21/22		07/22/22 12:06		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/21/22	07/22/22 09:41	MH

Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 15:28

H-34

2072020-03 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1710		ug/kg dry	244	98	1	07/21/22	07/22/22 12:26	WB
Naphthalene	2520		ug/kg dry	244	98	1	07/21/22	07/22/22 12:26	WB
<i>Surrogate: 2-Fluorophenol</i>		<i>23-121</i>		<i>72 %</i>	<i>07/21/22</i>		<i>07/22/22 12:26</i>		
<i>Surrogate: Phenol-d5</i>		<i>24-113</i>		<i>77 %</i>	<i>07/21/22</i>		<i>07/22/22 12:26</i>		
<i>Surrogate: Nitrobenzene-d5</i>		<i>23-120</i>		<i>70 %</i>	<i>07/21/22</i>		<i>07/22/22 12:26</i>		
<i>Surrogate: 2,4,6-Tribromophenol</i>		<i>19-122</i>		<i>89 %</i>	<i>07/21/22</i>		<i>07/22/22 12:26</i>		
<i>Surrogate: 2-Fluorobiphenyl</i>		<i>30-115</i>		<i>76 %</i>	<i>07/21/22</i>		<i>07/22/22 12:26</i>		
<i>Surrogate: Terphenyl-d14</i>		<i>18-137</i>		<i>83 %</i>	<i>07/21/22</i>		<i>07/22/22 12:26</i>		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	82		%			1	07/21/22	07/22/22 09:41	MH



Will Brewington, President

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All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 15:28

H-34

2072020-03RE1 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	5.2	2.1	1	07/22/22	07/22/22 11:59	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	106 %	07/22/22		07/22/22 11:59		
Surrogate: Toluene-d8			75-120	82 %	07/22/22		07/22/22 11:59		
Surrogate: 4-Bromofluorobenzene			70-120	104 %	07/22/22		07/22/22 11:59		

Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
07/22/22 15:28

H-36

2072020-04 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.6	1.8	1	07/21/22	07/21/22 20:20	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	107 %	07/21/22		07/21/22 20:20		
Surrogate: Toluene-d8			75-120	80 %	07/21/22		07/21/22 20:20		
Surrogate: 4-Bromofluorobenzene			70-120	112 %	07/21/22		07/21/22 20:20		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	716		ug/kg dry	256	103	1	07/21/22	07/22/22 12:46	WB
Naphthalene	118	J	ug/kg dry	256	103	1	07/21/22	07/22/22 12:46	WB
Surrogate: 2-Fluorophenol			23-121	75 %	07/21/22		07/22/22 12:46		
Surrogate: Phenol-d5			24-113	78 %	07/21/22		07/22/22 12:46		
Surrogate: Nitrobenzene-d5			23-120	73 %	07/21/22		07/22/22 12:46		
Surrogate: 2,4,6-Tribromophenol			19-122	93 %	07/21/22		07/22/22 12:46		
Surrogate: 2-Fluorobiphenyl			30-115	74 %	07/21/22		07/22/22 12:46		
Surrogate: Terphenyl-d14			18-137	76 %	07/21/22		07/22/22 12:46		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	78		%			1	07/21/22	07/22/22 09:41	MH

Will Brewington, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Notes and Definitions

- S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Will Brewington, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Wall

Page 1 of 1

Company Name: Tradepoint Atlantic		Company Address: 1600 Sparrows Point Blvd Sparrows Point, MD 21219		Analysis Requested										CHAIN-OF-CUSTODY RECORD			
Project Name: Sub-Parcel A11-2 Pit H- North Wall		Project Manager: Bob Tworkowski (443) 649-5073												Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 reporting@mdspectral.com			
Sampler(s): TOM PALANK Guy Davis/ARM Group (443) 610-0244 443 9955125		Attention/Invoice: ap@tradepointatlantic.com												Matrix Codes: NW (non-potable water), DW (drinking water), S (soil), SV (soil vapor)			
Field Sample ID	Date	Time	DW	Water	Soil	SV	No. of Containers	Benzene 8260	Benzo(a)pyrene 8270	Naphthalene 8260					Preservative	Field Notes	MSS Lab ID
H-30	7/20/22	0840			X		5	X	X	X					Methanol		2072020-01
H-32	↓	0850			X		5	X	X	X				↓		-02	
H-34	↓	0900			X		5	X	X	X				↓		-03	
H-30	↓	0910			X		5	X	X	X				↓		-04	
Relinquished by: (Signature)		Date/Time		Received by: (Signature)				Relinquished by: (Signature)				Date/Time		Received by: (Signature)			
(Printed)				(Printed)				(Printed)						(Printed)			
Relinquished by: (Signature)		Date/Time		Received by Lab: (Signature)				Turn Around Time:				Lab Use:					
(Printed)		15:28 7-20-22		(Printed) Lori Foster				<input type="checkbox"/> Normal (7 day) <input type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input type="checkbox"/> 3 day <input type="checkbox"/> Rush (2 day) <input type="checkbox"/> Next Day <input type="checkbox"/> Other: _____ <input type="checkbox"/> Specific Due Date: _____				<input checked="" type="checkbox"/> Received on Ice <input type="checkbox"/> Received same day		2.1			
Delivery Method: <input type="checkbox"/> Courier <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____		Special Instructions/QC Requirements & Comments: Please report to: Bob Tworkowski btworkowski@tradepointatlantic.com										Sample Disposal: <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for ___ days					

27 July 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/22/22 14:45.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
H-63		2072217-01	Soil	07/21/22 15:20	07/22/22 14:45
H-62		2072217-02	Soil	07/21/22 10:55	07/22/22 14:45
H-61		2072217-03	Soil	07/21/22 08:55	07/22/22 14:45
H-60		2072217-04	Soil	07/21/22 08:50	07/22/22 14:45
H-53		2072217-05	Soil	07/20/22 14:30	07/22/22 14:45
H-50		2072217-06	Soil	07/20/22 13:40	07/22/22 14:45
H-51		2072217-07	Soil	07/20/22 13:50	07/22/22 14:45
H-52		2072217-08	Soil	07/20/22 14:28	07/22/22 14:45
H-49		2072217-09	Soil	07/20/22 13:30	07/22/22 14:45
H-31		2072217-10	Soil	07/20/22 08:45	07/22/22 14:45
H-33		2072217-11	Soil	07/20/22 08:55	07/22/22 14:45

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-63

2072217-01 (Soil)
Sample Date: 07/21/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	460000		ug/kg dry	33800	13500	5000	07/26/22	07/26/22 12:32	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	105 %	07/26/22		07/26/22 12:32		
<i>Surrogate: Toluene-d8</i>			75-120	90 %	07/26/22		07/26/22 12:32		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	97 %	07/26/22		07/26/22 12:32		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	938000		ug/kg dry	325000	130000	50	07/25/22	07/26/22 16:27	WB
Naphthalene	4870000		ug/kg dry	325000	130000	50	07/25/22	07/26/22 16:27	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	%	07/25/22		07/26/22 16:27		S-01
<i>Surrogate: Phenol-d5</i>			24-113	%	07/25/22		07/26/22 16:27		S-01
<i>Surrogate: Nitrobenzene-d5</i>			23-120	%	07/25/22		07/26/22 16:27		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	%	07/25/22		07/26/22 16:27		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	%	07/25/22		07/26/22 16:27		S-01
<i>Surrogate: Terphenyl-d14</i>			18-137	%	07/25/22		07/26/22 16:27		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	77		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-62

2072217-02 (Soil)
Sample Date: 07/21/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	9630		ug/kg dry	514	206	100	07/26/22	07/26/22 12:58	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	103 %	07/26/22		07/26/22 12:58		
<i>Surrogate: Toluene-d8</i>			75-120	92 %	07/26/22		07/26/22 12:58		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	103 %	07/26/22		07/26/22 12:58		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	50100		ug/kg dry	8230	3290	20	07/25/22	07/26/22 16:48	WB
Naphthalene	97200		ug/kg dry	8230	3290	20	07/25/22	07/26/22 16:48	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	%	07/25/22		07/26/22 16:48		S-01
<i>Surrogate: Phenol-d5</i>			24-113	%	07/25/22		07/26/22 16:48		S-01
<i>Surrogate: Nitrobenzene-d5</i>			23-120	%	07/25/22		07/26/22 16:48		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	%	07/25/22		07/26/22 16:48		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	%	07/25/22		07/26/22 16:48		S-01
<i>Surrogate: Terphenyl-d14</i>			18-137	%	07/25/22		07/26/22 16:48		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	81		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-61

2072217-03 (Soil)
Sample Date: 07/21/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatiles Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	4.4	1.8	1	07/26/22	07/26/22 13:25	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	108 %	07/26/22		07/26/22 13:25		
Surrogate: Toluene-d8			75-120	90 %	07/26/22		07/26/22 13:25		
Surrogate: 4-Bromofluorobenzene			70-120	101 %	07/26/22		07/26/22 13:25		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	227	91	1	07/25/22	07/26/22 17:09	WB
Naphthalene	ND		ug/kg dry	227	91	1	07/25/22	07/26/22 17:09	WB
Surrogate: 2-Fluorophenol			23-121	78 %	07/25/22		07/26/22 17:09		
Surrogate: Phenol-d5			24-113	80 %	07/25/22		07/26/22 17:09		
Surrogate: Nitrobenzene-d5			23-120	76 %	07/25/22		07/26/22 17:09		
Surrogate: 2,4,6-Tribromophenol			19-122	97 %	07/25/22		07/26/22 17:09		
Surrogate: 2-Fluorobiphenyl			30-115	86 %	07/25/22		07/26/22 17:09		
Surrogate: Terphenyl-d14			18-137	93 %	07/25/22		07/26/22 17:09		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	88		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-60

2072217-04 (Soil)
Sample Date: 07/21/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	23.7		ug/kg dry	4.7	1.9	1	07/26/22	07/26/22 13:52	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	106 %	07/26/22		07/26/22 13:52		
<i>Surrogate: Toluene-d8</i>			75-120	91 %	07/26/22		07/26/22 13:52		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	107 %	07/26/22		07/26/22 13:52		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	ND		ug/kg dry	392	157	1	07/25/22	07/26/22 17:29	WB
Naphthalene	535		ug/kg dry	392	157	1	07/25/22	07/26/22 17:29	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	67 %	07/25/22		07/26/22 17:29		
<i>Surrogate: Phenol-d5</i>			24-113	70 %	07/25/22		07/26/22 17:29		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	64 %	07/25/22		07/26/22 17:29		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	86 %	07/25/22		07/26/22 17:29		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	73 %	07/25/22		07/26/22 17:29		
<i>Surrogate: Terphenyl-d14</i>			18-137	89 %	07/25/22		07/26/22 17:29		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-53

2072217-05 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	552000		ug/kg dry	235000	94100	40	07/25/22	07/26/22 17:50	WB
Naphthalene	3680000		ug/kg dry	235000	94100	40	07/25/22	07/26/22 17:50	WB
<i>Surrogate: 2-Fluorophenol</i>		<i>23-121</i>		%	<i>07/25/22</i>		<i>07/26/22 17:50</i>		<i>S-01</i>
<i>Surrogate: Phenol-d5</i>		<i>24-113</i>		%	<i>07/25/22</i>		<i>07/26/22 17:50</i>		<i>S-01</i>
<i>Surrogate: Nitrobenzene-d5</i>		<i>23-120</i>		%	<i>07/25/22</i>		<i>07/26/22 17:50</i>		<i>S-01</i>
<i>Surrogate: 2,4,6-Tribromophenol</i>		<i>19-122</i>		%	<i>07/25/22</i>		<i>07/26/22 17:50</i>		<i>S-01</i>
<i>Surrogate: 2-Fluorobiphenyl</i>		<i>30-115</i>		%	<i>07/25/22</i>		<i>07/26/22 17:50</i>		<i>S-01</i>
<i>Surrogate: Terphenyl-d14</i>		<i>18-137</i>		%	<i>07/25/22</i>		<i>07/26/22 17:50</i>		<i>S-01</i>
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-53

2072217-05RE1 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	311000		ug/kg dry	15000	6000	2500	07/27/22	07/27/22 12:20	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>		70-130		102 %	07/27/22		07/27/22 12:20		
<i>Surrogate: Toluene-d8</i>		75-120		88 %	07/27/22		07/27/22 12:20		
<i>Surrogate: 4-Bromofluorobenzene</i>		70-120		101 %	07/27/22		07/27/22 12:20		



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-50

2072217-06 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	69000		ug/kg dry	25100	10000	5000	07/26/22	07/26/22 14:46	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>		70-130		99 %	07/26/22		07/26/22 14:46		
<i>Surrogate: Toluene-d8</i>		75-120		92 %	07/26/22		07/26/22 14:46		
<i>Surrogate: 4-Bromofluorobenzene</i>		70-120		105 %	07/26/22		07/26/22 14:46		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	531000		ug/kg dry	120000	48200	20	07/25/22	07/26/22 18:10	WB
Naphthalene	2390000		ug/kg dry	120000	48200	20	07/25/22	07/26/22 18:10	WB
<i>Surrogate: 2-Fluorophenol</i>		23-121		%	07/25/22		07/26/22 18:10		S-01
<i>Surrogate: Phenol-d5</i>		24-113		%	07/25/22		07/26/22 18:10		S-01
<i>Surrogate: Nitrobenzene-d5</i>		23-120		%	07/25/22		07/26/22 18:10		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		%	07/25/22		07/26/22 18:10		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		%	07/25/22		07/26/22 18:10		S-01
<i>Surrogate: Terphenyl-d14</i>		18-137		%	07/25/22		07/26/22 18:10		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	83		%			1	07/25/22	07/26/22 07:38	LN



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-51

2072217-07 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	819000		ug/kg dry	63000	25200	10000	07/26/22	07/26/22 15:13	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>		70-130		100 %	07/26/22		07/26/22 15:13		
<i>Surrogate: Toluene-d8</i>		75-120		92 %	07/26/22		07/26/22 15:13		
<i>Surrogate: 4-Bromofluorobenzene</i>		70-120		103 %	07/26/22		07/26/22 15:13		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	81		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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All analyses performed at Maryland Spectral Services included in the report are TNI certified except as indicated at the end of the report

Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-51

2072217-07RE1 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1280000		ug/kg dry	514000	206000	125	07/25/22	07/27/22 13:08	WB
Naphthalene	9530000		ug/kg dry	514000	206000	125	07/25/22	07/27/22 13:08	WB
<i>Surrogate: 2-Fluorophenol</i>		23-121		%	07/25/22		07/27/22 13:08		S-01
<i>Surrogate: Phenol-d5</i>		24-113		%	07/25/22		07/27/22 13:08		S-01
<i>Surrogate: Nitrobenzene-d5</i>		23-120		%	07/25/22		07/27/22 13:08		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		%	07/25/22		07/27/22 13:08		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		%	07/25/22		07/27/22 13:08		S-01
<i>Surrogate: Terphenyl-d14</i>		18-137		100 %	07/25/22		07/27/22 13:08		S-01



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-52

2072217-08 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	54700		ug/kg dry	17000	6810	2500	07/26/22	07/26/22 15:40	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	100 %	07/26/22		07/26/22 15:40		
<i>Surrogate: Toluene-d8</i>			75-120	91 %	07/26/22		07/26/22 15:40		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	106 %	07/26/22		07/26/22 15:40		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1720000		ug/kg dry	294000	118000	40	07/25/22	07/26/22 18:52	WB
Naphthalene	4550000		ug/kg dry	294000	118000	40	07/25/22	07/26/22 18:52	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	%	07/25/22		07/26/22 18:52		S-01
<i>Surrogate: Phenol-d5</i>			24-113	%	07/25/22		07/26/22 18:52		S-01
<i>Surrogate: Nitrobenzene-d5</i>			23-120	%	07/25/22		07/26/22 18:52		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	%	07/25/22		07/26/22 18:52		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	%	07/25/22		07/26/22 18:52		S-01
<i>Surrogate: Terphenyl-d14</i>			18-137	%	07/25/22		07/26/22 18:52		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	68		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-49

2072217-09 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	12200	4880	2500	07/26/22	07/26/22 16:07	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	98 %	07/26/22		07/26/22 16:07		
Surrogate: Toluene-d8			75-120	91 %	07/26/22		07/26/22 16:07		
Surrogate: 4-Bromofluorobenzene			70-120	102 %	07/26/22		07/26/22 16:07		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	230000		ug/kg dry	149000	59500	25	07/25/22	07/26/22 19:12	WB
Naphthalene	2120000		ug/kg dry	149000	59500	25	07/25/22	07/26/22 19:12	WB
Surrogate: 2-Fluorophenol			23-121	%	07/25/22		07/26/22 19:12		S-01
Surrogate: Phenol-d5			24-113	%	07/25/22		07/26/22 19:12		S-01
Surrogate: Nitrobenzene-d5			23-120	%	07/25/22		07/26/22 19:12		S-01
Surrogate: 2,4,6-Tribromophenol			19-122	%	07/25/22		07/26/22 19:12		S-01
Surrogate: 2-Fluorobiphenyl			30-115	%	07/25/22		07/26/22 19:12		S-01
Surrogate: Terphenyl-d14			18-137	%	07/25/22		07/26/22 19:12		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	84		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-31

2072217-10 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	7.4		ug/kg dry	3.0	1.2	1	07/26/22	07/26/22 16:34	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	107 %	07/26/22		07/26/22 16:34		
<i>Surrogate: Toluene-d8</i>			75-120	89 %	07/26/22		07/26/22 16:34		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	106 %	07/26/22		07/26/22 16:34		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	3380		ug/kg dry	449	180	2	07/25/22	07/26/22 19:33	WB
Naphthalene	1980		ug/kg dry	449	180	2	07/25/22	07/26/22 19:33	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	82 %	07/25/22		07/26/22 19:33		
<i>Surrogate: Phenol-d5</i>			24-113	92 %	07/25/22		07/26/22 19:33		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	91 %	07/25/22		07/26/22 19:33		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	89 %	07/25/22		07/26/22 19:33		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	92 %	07/25/22		07/26/22 19:33		
<i>Surrogate: Terphenyl-d14</i>			18-137	101 %	07/25/22		07/26/22 19:33		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	89		%			1	07/25/22	07/26/22 07:38	LN

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Reported:
07/27/22 16:31

H-33

2072217-11 (Soil)
Sample Date: 07/20/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 5035/8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	66.4		ug/kg dry	5.1	2.0	1	07/26/22	07/26/22 17:01	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	98 %	07/26/22		07/26/22 17:01		
<i>Surrogate: Toluene-d8</i>			75-120	94 %	07/26/22		07/26/22 17:01		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	103 %	07/26/22		07/26/22 17:01		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1940		ug/kg dry	1040	416	4	07/25/22	07/26/22 19:53	WB
Naphthalene	2230		ug/kg dry	1040	416	4	07/25/22	07/26/22 19:53	WB
<i>Surrogate: 2-Fluorophenol</i>			23-121	84 %	07/25/22		07/26/22 19:53		
<i>Surrogate: Phenol-d5</i>			24-113	87 %	07/25/22		07/26/22 19:53		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	82 %	07/25/22		07/26/22 19:53		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	93 %	07/25/22		07/26/22 19:53		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	89 %	07/25/22		07/26/22 19:53		
<i>Surrogate: Terphenyl-d14</i>			18-137	95 %	07/25/22		07/26/22 19:53		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	77		%			1	07/25/22	07/26/22 07:38	LN



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: 21010111
Project Manager: Keith Progin

Notes and Definitions

- S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
- B Analyte is found in the associated blank as well as in the sample (CLP B-flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

1/2

Company Name: Tradeport Atlantic		Project Manager: Bob Tworzkowski		Analysis Requested										CHAIN-OF-CUSTODY RECORD										
Project Name: All-2 Excavation		Project ID: 21010111		No. of Containers	benzene 8260	benzo(a)pyrene 8270	naphthalene 8270											Maryland Spectral Services, Inc. 1500 Caton Center Drive, Suite G Baltimore, MD 21227 410-247-7600 • Fax 410-247-7602 reporting@mdspectral.com						
Sampler(s): Tom Palauk		P.O. Number:																			Matrix Codes: NW (non-potable water), DW (drinking water)			
Field Sample ID	Date	Time	DW					Water	Soil	Other											Preservative	Field Notes	MSS Lab ID	
H-63	7/21	1520							X		5	X	X	X										2072217-01
H-62	7/21	1055							X		5	X	X	X										- 02
H-61	7/21	0855							X		5	X	X	X										- 03
H-60	7/21	0850							X		5	X	X	X										- 04
H-53	7/20	1430							X		5	X	X	X										- 05
H-50	7/20	1340							X		5	X	X	X										- 06
H-51	7/20	1350							X		5	X	X	X										- 07
H-52	7/20	1428			X		5	X	X	X										- 08				
H-49	7/20	1330			X		5	X	X	X										- 09				
H-31	7/20	0845			X		5	X	X	X										- 10				
Relinquished by: (Signature) [Signature]		Date/Time 7/22/22		Received by: (Signature) [Signature]		Date/Time 7/22/22 14:45 (RX)		Received by: (Signature)		Date/Time		Received by: (Signature)												
(Printed) Joshua Barua		0810		(Printed) [Signature]		(Printed)		(Printed)		(Printed)		(Printed)												
Relinquished by: (Signature)		Date/Time		Received by Lab: (Signature)		Turn Around Time:		Lab Use:																
(Printed)				(Printed)		<input type="checkbox"/> Normal (7 day) <input type="checkbox"/> 5 day <input type="checkbox"/> 4 day <input checked="" type="checkbox"/> 3 day <input checked="" type="checkbox"/> Rush (2 day) 45 day <input type="checkbox"/> Next Day <input type="checkbox"/> Other: _____ <input type="checkbox"/> Specific Due Date: _____		Temp: 50°C <input checked="" type="checkbox"/> Received on Ice <input type="checkbox"/> Received same day																
Delivery Method:		Special Instructions/QC Requirements & Comments:		Sample Disposal:																				
<input type="checkbox"/> Courier <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____				<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for ____ days																				

02 August 2022

Keith Progin
Hillis-Carnes Engineering Associates
10975 Guilford Rd
Annapolis Junction, MD 20701
RE: A11-2

Enclosed are the results of analyses for samples received by the laboratory on 07/28/22 16:00.

Maryland Spectral Services, Inc. is a TNI 2009 Standard accredited laboratory and as such, all analyses performed at Maryland Spectral Services included in this report are 2009 TNI certified except as indicated at the end of this report. Please visit our website at www.mdspectral.com for a complete listing of our TNI 2009 Standard accreditations.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rabecka Koons
Quality Assurance Officer

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
08/02/22 14:18

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EAST		2072824-01	Soil	07/28/22 14:25	07/28/22 16:00
WEST		2072824-02	Soil	07/28/22 14:20	07/28/22 16:00



Rabecka Koons, Quality Assurance Officer

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
08/02/22 14:18

EAST

2072824-01 (Soil)
Sample Date: 07/28/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	53100		ug/kg dry	19600	7840	50	07/29/22	08/01/22 13:49	WB
Naphthalene	179000		ug/kg dry	19600	7840	50	07/29/22	08/01/22 13:49	WB
<i>Surrogate: 2-Fluorophenol</i>		23-121		%	07/29/22		08/01/22 13:49		S-01
<i>Surrogate: Phenol-d5</i>		24-113		%	07/29/22		08/01/22 13:49		S-01
<i>Surrogate: Nitrobenzene-d5</i>		23-120		%	07/29/22		08/01/22 13:49		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		%	07/29/22		08/01/22 13:49		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		%	07/29/22		08/01/22 13:49		S-01
<i>Surrogate: Terphenyl-d14</i>		18-137		%	07/29/22		08/01/22 13:49		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	85		%			1	07/29/22	08/01/22 08:16	BW

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
08/02/22 14:18

EAST

2072824-01RE1 (Soil)
Sample Date: 07/28/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	10800		ug/kg dry	7350	2940	500	08/01/22	08/01/22 22:41	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	101 %	08/01/22		08/01/22 22:41		
<i>Surrogate: Toluene-d8</i>			75-120	97 %	08/01/22		08/01/22 22:41		
<i>Surrogate: 4-Bromofluorobenzene</i>			65-120	99 %	08/01/22		08/01/22 22:41		

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
08/02/22 14:18

WEST

2072824-02 (Soil)
Sample Date: 07/28/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	10500		ug/kg dry	3700	1480	10	07/29/22	08/01/22 14:09	WB
Naphthalene	26000		ug/kg dry	3700	1480	10	07/29/22	08/01/22 14:09	WB
<i>Surrogate: 2-Fluorophenol</i>		23-121		%	07/29/22		08/01/22 14:09		S-01
<i>Surrogate: Phenol-d5</i>		24-113		%	07/29/22		08/01/22 14:09		S-01
<i>Surrogate: Nitrobenzene-d5</i>		23-120		%	07/29/22		08/01/22 14:09		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		%	07/29/22		08/01/22 14:09		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		%	07/29/22		08/01/22 14:09		S-01
<i>Surrogate: Terphenyl-d14</i>		18-137		%	07/29/22		08/01/22 14:09		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	90		%			1	07/29/22	08/01/22 08:16	BW

Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
08/02/22 14:18

WEST

2072824-02RE1 (Soil)
Sample Date: 07/28/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 8260B (GC/MS) Prepared by 5030-GCMS									
Benzene	ND		ug/kg dry	6940	2780	500	08/01/22	08/01/22 23:08	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	101 %	08/01/22		08/01/22 23:08		
Surrogate: Toluene-d8			75-120	97 %	08/01/22		08/01/22 23:08		
Surrogate: 4-Bromofluorobenzene			65-120	99 %	08/01/22		08/01/22 23:08		



Rabecka Koons, Quality Assurance Officer

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Analytical Results

Project: A11-2

Project Number: [none]
Project Manager: Keith Progin

Reported:
08/02/22 14:18

Notes and Definitions

- S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
- RE Sample reanalyses are done at the laboratory's discretion as a mechanism to improve data quality. Any client requested reanalysis will be identified with a sample qualifier.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- %-Solids Percent Solids is a supportive test and as such does not require accreditation

If this report contains any samples analyzed for gasoline range organics (GRO) by EPA Method 8015C and no trip blank was shipped, stored, and received with the sample(s) as required by Section 3.1 of the EPA Method, the sample analysis contained in this report cannot exclude the possibility that any reportable GRO measurement was due to environmental contamination of the sample during shipping or storage.



Rabecka Koons, Quality Assurance Officer

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