



ARM Group LLC

Engineers and Scientists

September 29, 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
South 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 risk to human health and the environment associated with the impacted soil within the subsurface of Sub-Parcel A11-2. The A11-2 Soil Excavation Report (Northern Portion) was previously submitted to the regulators on August 26, 2022. This report addresses the excavation of areas of concern completed in the southern portion of the Sub-Parcel. The material removal activities presented herein represent a significant risk reduction for the Site.

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.

PRECISE. RESPONSIVE. SOLUTIONS.

9175 Guilford Road, Suite 310, Columbia, MD 21046

To supplement the original Phase II Investigation, additional delineation activities were conducted 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 compound (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 locations that have been proposed for hot spot excavation, are identified on Figure 1 (attached) and Table 3 (below).

Table 3: Hot Spot Excavation Areas

Northern Portion of A11-2	Southern Portion of A11-2
A11-024B-SB	A11-024O-SB
A11-024CC-SB	A11-024S-SB
A11-024H-SB	A11-024V-SB

This Soil Excavation Completion Report covers the three hot spot excavations to the south of the proposed A11-2 building (refer to **Figure 1** for the proposed building footprint): A11-024O-SB, A11-024S-SB, A11-024V-SB. A Soil Excavation Completion Report for the three hot spot excavations to the north of the A11-2 building was submitted on August 26, 2022. The following sections provide detailed descriptions of each aspect of the completed excavation activities at each of the three southern hot spot excavation areas.

The Work Plan proposed a 10-foot by 10-foot excavation area surrounding each of the soil boring locations noted above in **Table 3**. The lateral excavation extents would be expanded at the direction of TPA based on observations of NAPL and sheen. Vertically, the excavations will proceed based on observations of NAPL and sheen, to a maximum depth of the groundwater table. It was anticipated that the top 2-feet of soil would be suitable for reuse and would be stockpiled. Groundwater was anticipated to be between 4 and 5 feet below the ground surface (bgs). However, due to development work in the vicinity, dewatering commenced on June 27, 2022, and has artificially depressed the groundwater table. Therefore, the excavations will advance to the groundwater table or a maximum depth of 6 feet bgs. 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**. 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 4: Excavation Area Details

Response Area	Excavation Start Date	Excavation End Date	Excavated Area (ft ²)	Average Depth (ft)	Excavated Volume (CY)
A11-024O-SB	8/24/2022	9/21/2022	140	6	31
A11-024S-SB	8/24/2022	8/24/2022	100	6	22
A11-024V-SB	8/24/2022	8/24/2022	100	6	22

ft²: square feet

ft: feet

CY: Cubic yards

2.1.1 A11-024O-SB Excavation Area

At the A11-024O-SB Excavation Area, the excavation was advanced to a total depth of 6 feet bgs. No PID readings above 10 ppm were detected, and no visible NAPL was observed. Final excavation extent was the originally proposed 10 feet by 10 feet area. However, based on the confirmation samples (refer to Section 2.6.1), the excavation was extended to the north by approximately 4 feet on September 21, for a total excavation area of approximately 140 square feet (refer to **Figure 2**). An estimated total of 31 CY was removed from the excavation and stockpiled for offsite disposal.

2.1.2 A11-024S-SB Excavation Area

At the A11-024S-SB Excavation Area, the excavation was advanced to a total depth of 6 feet bgs. The maximum PID reading was 18.7 ppm, with PID readings above 10 ppm along the western edge of the excavation. However, no visible NAPL was observed. Final excavation extent was the originally proposed 10 feet by 10 feet area, for a total excavation area of approximately 100 square feet (refer to **Figure 2**). An estimated total of 22 CY was removed from the excavation and stockpiled for offsite disposal.

2.1.3 A11-024V-SB Excavation Area

At the A11-024S-SB Excavation Area, the excavation was advanced to a total depth of 6 feet bgs, where groundwater was encountered. No PID readings above 10 ppm were detected, and no visible NAPL was observed. Final excavation extent was the originally proposed 10 feet by 10 feet area,



for a total excavation area of approximately 100 square feet (refer to **Figure 2**). An estimated total of 22 CY was removed from the excavation and stockpiled for offsite disposal.

2.2 Soil Management

All excavated soils 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 from the northern excavation areas. As the southern excavation areas appear to be less impacted, the characterization sample from the northern excavation area can be used as a conservative result. The waste characterization sample results were included in the A11-2 Soil Excavation Report (Northern Portion), which was submitted to the regulators on August 26, 2022. 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 from the northern excavation areas, all impacted soil stockpiles will be transported to Greys Landfill. Dimension calculations of the excavations indicates approximately 75 bank CY of non-hazardous material will be transported from the excavation stockpiles associated with the Southern Excavation Areas on Sub-Parcel A11-2 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. 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. No base confirmation samples were collected as the base of the excavation was within the saturated zone.

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 2. 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. 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**. The location of each confirmation sample was recorded via GPS.

2.6.1 A11-024O-SB Excavation Area

At the A11-024O-SB Excavation Area, four sidewall confirmation samples were collected based on the final excavation extents. All confirmation samples are included in **Table A-1**. There were two exceedances of the Delineation Threshold values and one exceedance of the individual 1E-04 values (O-1-A11-2 from the north sidewall). However, the corresponding PID reading at O-1-A11-2 was 4.6 ppm, and there was no evidence of NAPL. Based on the laboratory results, the excavation was extended another 4-feet to the north. The additional confirmation sample (O1-N2) exceeded the Delineation Threshold, but not the individual 1E-04 value.

2.6.2 A11-024S-SB Excavation Area

At the A11-024S-SB Excavation Area, four 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**).

2.6.3 A11-024V-SB Excavation Area

At the A11-024V-SB Excavation Area, four sidewall confirmation samples were collected based on the final excavation extents. All confirmation samples are included in **Table A-1**. There was one exceedance of the Delineation Threshold values (V-2-A11-2), but no exceedances of the individual 1E-04 values. In addition, there were no PID readings above 10 ppm, and there was no evidence of NAPL.

2.7 Backfilling

Each excavation area 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.

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: A11-2 Southern Hotspot Excavation and Confirmation Samples

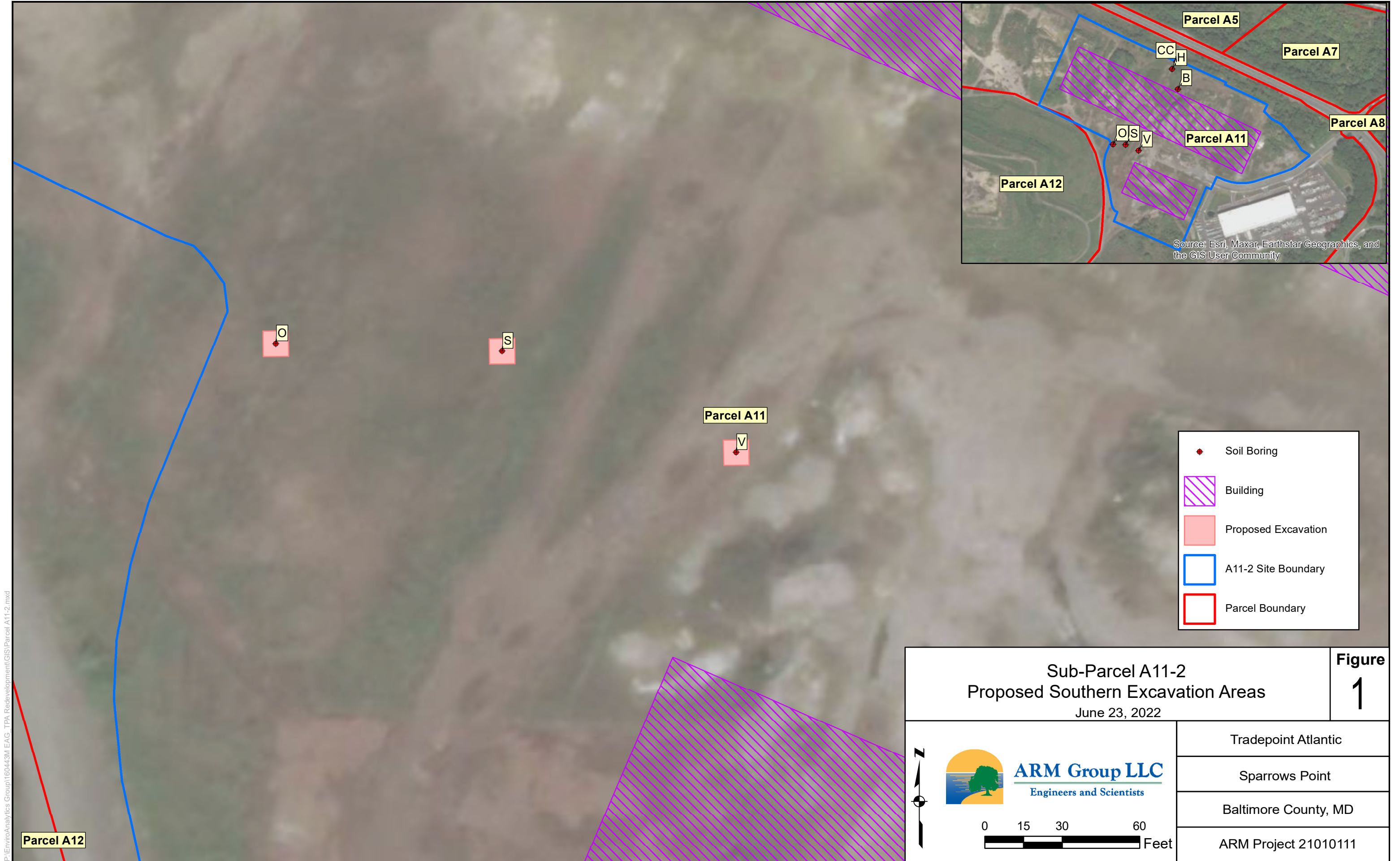
Table A-1: A11-2 Soil Confirmation Sampling

Attachment 1: Photo Log

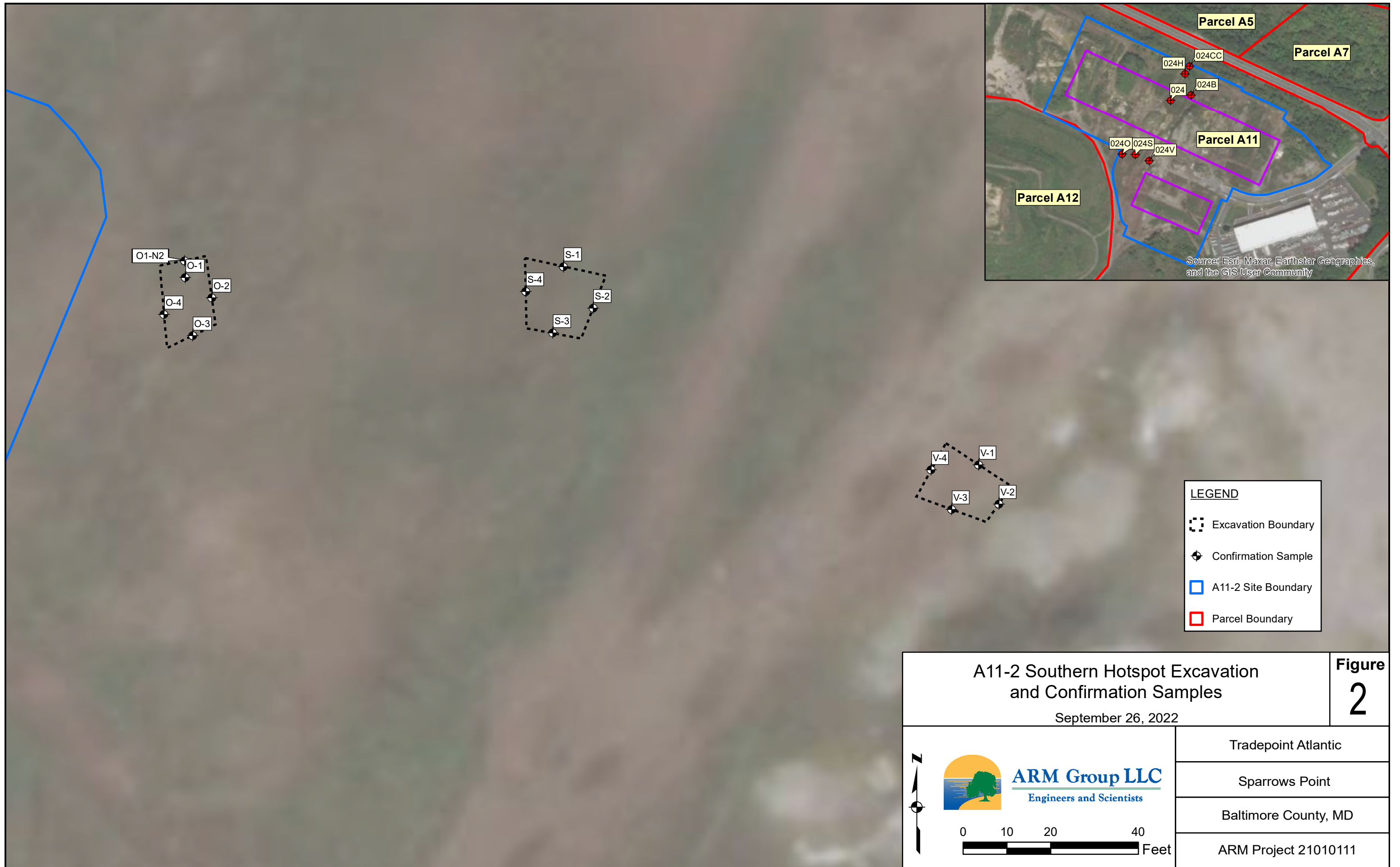
Attachment 2: Confirmation Sample Lab Reports



FIGURES



P:\EnvironAnalytics Group\160443M EAG_TPA Redevelopment\GIS\Parcel A11-2.mxd



TABLES

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

A11-024O Excavation Area

Parameter	Units	Delineation Threshold	Individual 1E-4	O-1-A11-2	O-2-A11-2	O-3-A11-2	O-4-A11-2	O1-N2
				8/24/2022	8/24/2022	8/24/2022	8/24/2022	9/22/2022
Sample Location:				Excavated	Sidewall (E)	Sidewall (S)	Sidewall (W)	Sidewall (N)
Benzene	µg/kg	150,000	510,000	130	390 J	762	2,430	425
Benzo[a]pyrene	µg/kg	75,000	210,000	236,000	45,300	11,200	16,100 J	122,000
Naphthalene	µg/kg	275,000	860,000	200,000	26,900	12,500	348,000	26,800

A11-024S Excavation Area

Parameter	Units	Delineation Threshold	Individual 1E-4	S-1-A11-2	S-2-A11-2	S-3-A11-2	S-4-A11-2
				8/24/2022	8/24/2022	8/24/2022	8/24/2022
Sample Location:				Sidewall (N)	Sidewall (E)	Sidewall (S)	Sidewall (W)
Benzene	µg/kg	150,000	510,000	253 J	48.9	513 J	939
Benzo[a]pyrene	µg/kg	75,000	210,000	4,350	1,170	6,630	17,200
Naphthalene	µg/kg	275,000	860,000	5,410	622	4,650	20,400

A11-024V Excavation Area

Parameter	Units	Delineation Threshold	Individual 1E-4	V-1-A11-2	V-2-A11-2	V-3-A11-2	V-4-A11-2
				8/24/2022	8/24/2022	8/24/2022	8/24/2022
Sample Location:				Sidewall (N)	Sidewall (E)	Sidewall (S)	Sidewall (W)
Benzene	µg/kg	150,000	510,000	668 U	2950 U	8.3	5.6 U
Benzo[a]pyrene	µg/kg	75,000	210,000	19,300	129,000	4,730	3,950
Naphthalene	µg/kg	275,000	860,000	9,720	171,000	996	301 J

Detections in bold

Highlighted values indicate an exceedance of the Delineation Threshold

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

Highlighted values indicate an excavated location

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

Attachment 1 - Soil Excavation Photo Log
Area A : Sub-Parcel A11-2
Sparrows Point, Maryland



Photo 1: Excavation Area A11-024O-SB



Photo 2: Excavation Area A11-024O-SB

Attachment 1 - Soil Excavation Photo Log
Area A : Sub-Parcel A11-2
Sparrows Point, Maryland



Photo 3: Excavation Area A11-024S-SB



Photo 4: Excavation Area A11-024S-SB

Attachment 1 - Soil Excavation Photo Log
Area A : Sub-Parcel A11-2
Sparrows Point, Maryland



Photo 5: Excavation Area A11-024V-SB



Photo 6: Excavation Area A11-024V-SB

ATTACHMENT 2

01 September 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 08/24/22 15:42.

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: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
V-1-A11-2		2082429-01	Soil	08/24/22 09:00	08/24/22 15:42
V-2-A11-2		2082429-02	Soil	08/24/22 11:45	08/24/22 15:42
V-3-A11-2		2082429-03	Soil	08/24/22 12:00	08/24/22 15:42
V-4-A11-2		2082429-04	Soil	08/24/22 12:05	08/24/22 15:42
S-1-A11-2		2082429-05	Soil	08/24/22 12:10	08/24/22 15:42
S-2-A11-2		2082429-06	Soil	08/24/22 12:15	08/24/22 15:42
S-3-A11-2		2082429-07	Soil	08/24/22 12:25	08/24/22 15:42
S-4-A11-2		2082429-08	Soil	08/24/22 12:35	08/24/22 15:42
O-1-A11-2		2082429-09	Soil	08/24/22 12:45	08/24/22 15:42
O-2-A11-2		2082429-10	Soil	08/24/22 12:55	08/24/22 15:42
O-3-A11-2		2082429-11	Soil	08/24/22 13:05	08/24/22 15:42
O-4-A11-2		2082429-12	Soil	08/24/22 13:15	08/24/22 15:42
TB-1		2082429-13	Nonpotable Water	08/24/22 00:00	08/24/22 15:42
TB-2		2082429-14	Nonpotable Water	08/24/22 00:00	08/24/22 15:42



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: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

V-1-A11-2

2082429-01 (Soil)
Sample Date: 08/24/22

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	668	267	50	08/26/22	08/26/22 17:10	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	80 %	08/26/22		08/26/22 17:10		
Surrogate: Toluene-d8			75-120	99 %	08/26/22		08/26/22 17:10		
Surrogate: 4-Bromofluorobenzene			70-120	101 %	08/26/22		08/26/22 17:10		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	19300		ug/kg dry	2080	833	10	08/25/22	08/26/22 19:10	EH
Naphthalene	9720		ug/kg dry	2080	833	10	08/25/22	08/26/22 19:10	EH
Surrogate: 2-Fluorophenol			23-121	93 %	08/25/22		08/26/22 19:10		
Surrogate: Phenol-d5			24-113	96 %	08/25/22		08/26/22 19:10		
Surrogate: Nitrobenzene-d5			23-120	74 %	08/25/22		08/26/22 19:10		
Surrogate: 2,4,6-Tribromophenol			19-122	89 %	08/25/22		08/26/22 19:10		
Surrogate: 2-Fluorobiphenyl			30-115	98 %	08/25/22		08/26/22 19:10		
Surrogate: Terphenyl-d14			18-137	99 %	08/25/22		08/26/22 19:10		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	96		%			1	08/24/22	08/25/22 08:59	EA



Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

V-2-A11-2

2082429-02 (Soil)
Sample Date: 08/24/22

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	2950	1180	200	08/26/22	08/26/22 17:34	LL
Surrogate: 1,2-Dichloroethane-d4		70-130		80 %	08/26/22		08/26/22 17:34		
Surrogate: Toluene-d8		75-120		97 %	08/26/22		08/26/22 17:34		
Surrogate: 4-Bromofluorobenzene		70-120		99 %	08/26/22		08/26/22 17:34		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	129000		ug/kg dry	25800	10300	25	08/25/22	08/26/22 19:30	EH
Naphthalene	171000		ug/kg dry	25800	10300	25	08/25/22	08/26/22 19:30	EH
Surrogate: 2-Fluorophenol		23-121		%	08/25/22		08/26/22 19:30		S-01
Surrogate: Phenol-d5		24-113		%	08/25/22		08/26/22 19:30		S-01
Surrogate: Nitrobenzene-d5		23-120		%	08/25/22		08/26/22 19:30		S-01
Surrogate: 2,4,6-Tribromophenol		19-122		%	08/25/22		08/26/22 19:30		S-01
Surrogate: 2-Fluorobiphenyl		30-115		%	08/25/22		08/26/22 19:30		S-01
Surrogate: Terphenyl-d14		18-137		%	08/25/22		08/26/22 19:30		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	97		%			1	08/24/22	08/25/22 08:59	EA



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: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

V-3-A11-2

2082429-03 (Soil)
Sample Date: 08/24/22

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	8.3		ug/kg dry	5.1	2.0	1	08/26/22	08/26/22 17:59	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	90 %	08/26/22		08/26/22 17:59		
<i>Surrogate: Toluene-d8</i>			75-120	99 %	08/26/22		08/26/22 17:59		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	92 %	08/26/22		08/26/22 17:59		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	4730		ug/kg dry	408	163	2	08/25/22	08/26/22 19:51	EH
Naphthalene	996		ug/kg dry	408	163	2	08/25/22	08/26/22 19:51	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	92 %	08/25/22		08/26/22 19:51		
<i>Surrogate: Phenol-d5</i>			24-113	98 %	08/25/22		08/26/22 19:51		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	87 %	08/25/22		08/26/22 19:51		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	99 %	08/25/22		08/26/22 19:51		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	99 %	08/25/22		08/26/22 19:51		
<i>Surrogate: Terphenyl-d14</i>			18-137	103 %	08/25/22		08/26/22 19:51		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	98		%			1	08/24/22	08/25/22 08:59	EA

Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

V-4-A11-2

2082429-04 (Soil)
Sample Date: 08/24/22

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	5.6	2.2	1	08/26/22	08/26/22 18:24	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	90 %	08/26/22		08/26/22 18:24		
Surrogate: Toluene-d8			75-120	98 %	08/26/22		08/26/22 18:24		
Surrogate: 4-Bromofluorobenzene			70-120	97 %	08/26/22		08/26/22 18:24		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	3950		ug/kg dry	400	160	2	08/25/22	08/26/22 20:12	EH
Naphthalene	301	J	ug/kg dry	400	160	2	08/25/22	08/26/22 20:12	EH
Surrogate: 2-Fluorophenol			23-121	94 %	08/25/22		08/26/22 20:12		
Surrogate: Phenol-d5			24-113	96 %	08/25/22		08/26/22 20:12		
Surrogate: Nitrobenzene-d5			23-120	83 %	08/25/22		08/26/22 20:12		
Surrogate: 2,4,6-Tribromophenol			19-122	99 %	08/25/22		08/26/22 20:12		
Surrogate: 2-Fluorobiphenyl			30-115	95 %	08/25/22		08/26/22 20:12		
Surrogate: Terphenyl-d14			18-137	98 %	08/25/22		08/26/22 20:12		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	99		%			1	08/24/22	08/25/22 08:59	EA



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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

S-1-A11-2

2082429-05 (Soil)
Sample Date: 08/24/22

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	253	J	ug/kg dry	543	217	50	08/26/22	08/26/22 18:49	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	81 %	08/26/22		08/26/22 18:49		
<i>Surrogate: Toluene-d8</i>			75-120	96 %	08/26/22		08/26/22 18:49		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	98 %	08/26/22		08/26/22 18:49		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	4350		ug/kg dry	816	327	4	08/25/22	08/26/22 20:32	EH
Naphthalene	5410		ug/kg dry	816	327	4	08/25/22	08/26/22 20:32	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	93 %	08/25/22		08/26/22 20:32		
<i>Surrogate: Phenol-d5</i>			24-113	98 %	08/25/22		08/26/22 20:32		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	84 %	08/25/22		08/26/22 20:32		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	95 %	08/25/22		08/26/22 20:32		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	98 %	08/25/22		08/26/22 20:32		
<i>Surrogate: Terphenyl-d14</i>			18-137	104 %	08/25/22		08/26/22 20:32		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	98		%			1	08/24/22	08/25/22 08:59	EA



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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

S-2-A11-2

2082429-06 (Soil)
Sample Date: 08/24/22

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	48.9		ug/kg dry	8.5	3.4	1	08/26/22	08/26/22 19:13	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	85 %	08/26/22		08/26/22 19:13		
<i>Surrogate: Toluene-d8</i>			75-120	97 %	08/26/22		08/26/22 19:13		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	96 %	08/26/22		08/26/22 19:13		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	1170		ug/kg dry	328	131	1	08/25/22	08/26/22 20:53	EH
Naphthalene	622		ug/kg dry	328	131	1	08/25/22	08/26/22 20:53	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	76 %	08/25/22		08/26/22 20:53		
<i>Surrogate: Phenol-d5</i>			24-113	80 %	08/25/22		08/26/22 20:53		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	69 %	08/25/22		08/26/22 20:53		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	90 %	08/25/22		08/26/22 20:53		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	81 %	08/25/22		08/26/22 20:53		
<i>Surrogate: Terphenyl-d14</i>			18-137	86 %	08/25/22		08/26/22 20:53		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	61		%			1	08/24/22	08/25/22 08:59	EA



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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

S-3-A11-2

2082429-07 (Soil)
Sample Date: 08/24/22

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	513	J	ug/kg dry	573	229	50	08/26/22	08/26/22 19:38	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	78 %	08/26/22		08/26/22 19:38		
<i>Surrogate: Toluene-d8</i>			75-120	100 %	08/26/22		08/26/22 19:38		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	100 %	08/26/22		08/26/22 19:38		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	6630		ug/kg dry	825	330	4	08/25/22	08/26/22 21:14	EH
Naphthalene	4650		ug/kg dry	825	330	4	08/25/22	08/26/22 21:14	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	93 %	08/25/22		08/26/22 21:14		
<i>Surrogate: Phenol-d5</i>			24-113	95 %	08/25/22		08/26/22 21:14		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	82 %	08/25/22		08/26/22 21:14		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	100 %	08/25/22		08/26/22 21:14		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	96 %	08/25/22		08/26/22 21:14		
<i>Surrogate: Terphenyl-d14</i>			18-137	104 %	08/25/22		08/26/22 21:14		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	97		%			1	08/24/22	08/25/22 08:59	EA



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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

S-4-A11-2

2082429-08 (Soil)
Sample Date: 08/24/22

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	939		ug/kg dry	619	247	50	08/26/22	08/26/22 20:03	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	81 %	08/26/22		08/26/22 20:03		
<i>Surrogate: Toluene-d8</i>			75-120	95 %	08/26/22		08/26/22 20:03		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	100 %	08/26/22		08/26/22 20:03		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	17200		ug/kg dry	4260	1700	4	08/25/22	08/26/22 21:34	EH
Naphthalene	20400		ug/kg dry	4260	1700	4	08/25/22	08/26/22 21:34	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	%	08/25/22		08/26/22 21:34		S-01
<i>Surrogate: Phenol-d5</i>			24-113	%	08/25/22		08/26/22 21:34		S-01
<i>Surrogate: Nitrobenzene-d5</i>			23-120	%	08/25/22		08/26/22 21:34		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	%	08/25/22		08/26/22 21:34		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	%	08/25/22		08/26/22 21:34		S-01
<i>Surrogate: Terphenyl-d14</i>			18-137	%	08/25/22		08/26/22 21:34		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	94		%			1	08/24/22	08/25/22 08:59	EA

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

O-1-A11-2

2082429-09 (Soil)
Sample Date: 08/24/22

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									IS-07
Benzene	130		ug/kg dry	6.3	2.5	1	08/26/22	08/26/22 20:27	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>		70-130		92 %	08/26/22		08/26/22 20:27		
<i>Surrogate: Toluene-d8</i>		75-120		101 %	08/26/22		08/26/22 20:27		
<i>Surrogate: 4-Bromofluorobenzene</i>		70-120		90 %	08/26/22		08/26/22 20:27		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	236000		ug/kg dry	85100	34000	40	08/25/22	08/26/22 21:55	EH
Naphthalene	200000		ug/kg dry	85100	34000	40	08/25/22	08/26/22 21:55	EH
<i>Surrogate: 2-Fluorophenol</i>		23-121		%	08/25/22		08/26/22 21:55		S-01
<i>Surrogate: Phenol-d5</i>		24-113		%	08/25/22		08/26/22 21:55		S-01
<i>Surrogate: Nitrobenzene-d5</i>		23-120		%	08/25/22		08/26/22 21:55		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		%	08/25/22		08/26/22 21:55		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		%	08/25/22		08/26/22 21:55		S-01
<i>Surrogate: Terphenyl-d14</i>		18-137		%	08/25/22		08/26/22 21:55		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	94		%			1	08/24/22	08/25/22 08:59	EA



Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

O-2-A11-2

2082429-10 (Soil)
Sample Date: 08/24/22

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	390	J	ug/kg dry	521	208	50	08/26/22	08/26/22 20:52	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	80 %	08/26/22		08/26/22 20:52		
<i>Surrogate: Toluene-d8</i>			75-120	96 %	08/26/22		08/26/22 20:52		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	99 %	08/26/22		08/26/22 20:52		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	45300		ug/kg dry	10200	4080	10	08/25/22	08/26/22 22:16	EH
Naphthalene	26900		ug/kg dry	10200	4080	10	08/25/22	08/26/22 22:16	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	%	08/25/22		08/26/22 22:16		S-01
<i>Surrogate: Phenol-d5</i>			24-113	%	08/25/22		08/26/22 22:16		S-01
<i>Surrogate: Nitrobenzene-d5</i>			23-120	%	08/25/22		08/26/22 22:16		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	%	08/25/22		08/26/22 22:16		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	%	08/25/22		08/26/22 22:16		S-01
<i>Surrogate: Terphenyl-d14</i>			18-137	%	08/25/22		08/26/22 22:16		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	98		%			1	08/24/22	08/25/22 08:59	EA

Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

O-3-A11-2

2082429-11 (Soil)
Sample Date: 08/24/22

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	762		ug/kg dry	555	222	50	08/26/22	08/26/22 21:17	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	80 %	08/26/22		08/26/22 21:17		
<i>Surrogate: Toluene-d8</i>			75-120	97 %	08/26/22		08/26/22 21:17		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	101 %	08/26/22		08/26/22 21:17		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	11200		ug/kg dry	2040	816	2	08/25/22	08/26/22 22:36	EH
Naphthalene	12500		ug/kg dry	2040	816	2	08/25/22	08/26/22 22:36	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	84 %	08/25/22		08/26/22 22:36		
<i>Surrogate: Phenol-d5</i>			24-113	88 %	08/25/22		08/26/22 22:36		
<i>Surrogate: Nitrobenzene-d5</i>			23-120	72 %	08/25/22		08/26/22 22:36		
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	86 %	08/25/22		08/26/22 22:36		
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	90 %	08/25/22		08/26/22 22:36		
<i>Surrogate: Terphenyl-d14</i>			18-137	93 %	08/25/22		08/26/22 22:36		
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	98		%			1	08/24/22	08/25/22 08:59	EA

Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

O-4-A11-2

2082429-12 (Soil)
Sample Date: 08/24/22

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	2430		ug/kg dry	313	125	50	08/29/22	08/29/22 20:34	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	116 %	08/29/22		08/29/22 20:34		
<i>Surrogate: Toluene-d8</i>			75-120	104 %	08/29/22		08/29/22 20:34		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	104 %	08/29/22		08/29/22 20:34		
Semivolatile Organics by EPA 3540/8270D (GC/MS) Prepared by 3540-GCMS(Soxhlet)									
Benzo[a]pyrene	16100	J	ug/kg dry	21100	8420	20	08/25/22	08/26/22 22:57	EH
Naphthalene	348000		ug/kg dry	21100	8420	20	08/25/22	08/26/22 22:57	EH
<i>Surrogate: 2-Fluorophenol</i>			23-121	%	08/25/22		08/26/22 22:57		S-01
<i>Surrogate: Phenol-d5</i>			24-113	%	08/25/22		08/26/22 22:57		S-01
<i>Surrogate: Nitrobenzene-d5</i>			23-120	%	08/25/22		08/26/22 22:57		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>			19-122	%	08/25/22		08/26/22 22:57		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>			30-115	%	08/25/22		08/26/22 22:57		S-01
<i>Surrogate: Terphenyl-d14</i>			18-137	%	08/25/22		08/26/22 22:57		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	95		%			1	08/24/22	08/25/22 08:59	EA

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

TB-1

2082429-13 (Nonpotable Water)
Sample Date: 08/24/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 8260B (GC/MS) Prepared by GCMS-WATER-VOLATILES									
Benzene	ND		ug/L	2.0	1.0	1	08/29/22	08/29/22 16:34	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	103 %	08/29/22		08/29/22 16:34		
Surrogate: Toluene-d8			75-120	100 %	08/29/22		08/29/22 16:34		
Surrogate: 4-Bromofluorobenzene			75-120	95 %	08/29/22		08/29/22 16:34		

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/01/22 11:15

TB-2

2082429-14 (Nonpotable Water)
Sample Date: 08/24/22

Analyte	Result	Notes	Units	Reporting Limit (MRL)	Detection Limit (LOD)	Dilution	Prepared	Analyzed	Analyst
Volatile Organics by EPA 8260B (GC/MS) Prepared by GCMS-WATER-VOLATILES									
Benzene	ND		ug/L	2.0	1.0	1	08/29/22	08/29/22 16:59	LL
Surrogate: 1,2-Dichloroethane-d4			70-130	104 %	08/29/22		08/29/22 16:59		
Surrogate: Toluene-d8			75-120	98 %	08/29/22		08/29/22 16:59		
Surrogate: 4-Bromofluorobenzene			75-120	95 %	08/29/22		08/29/22 16:59		

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: 22471A
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.
- J Detected but below the reporting limit; therefore, result is an estimated concentration (CLP J-Flag).
- IS-07 Internal standard area outside control limits due to sample matrix effect.
- 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.



Will Brewington, President

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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		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): <i>Lower Parker LEP</i>		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 8280						Preservative	Field Notes	MSS Lab ID
V-1-A11-2	08/24/22	0900			X		5	X	X	X						1 method 2 NMS 2 in preservative		2082429-01
V-2-A11-2	08/24/22	1145			X		5	X	X	X								-02
V-3-A11-2	08/24/22	1200			X		5	X	X	X								-03
V-4-A11-2	08/24/22	1205			X		5	X	X	X								-04
S-1-A11-2	08/24/22	1210			X		5	X	X	X								-05
S-2-A11-2	08/24/22	1215			X		5	X	X	X								-06
S-3-A11-2	08/24/22	1225			X		5	X	X	X								-07
S-4-A11-2	08/24/22	1235			X		5	X	X	X								-08
O-1-A11-2	08/24/22	1245			X		5	X	X	X								-09
O-2-A11-2	08/24/22	1255			X		5	X	X	X								-10
Relinquished by: (Signature) <i>[Signature]</i>		Date/Time		Received by: (Signature)			Relinquished by: (Signature)			Date/Time			Received by: (Signature)					
(Printed) <i>Lower Parker</i>				(Printed)			(Printed)						(Printed)					
Relinquished by: (Signature) <i>[Signature]</i>		Date/Time		Received by Lab: (Signature)			Turn Around Time:			Lab Use:								
(Printed)		15:42		(Printed) <i>[Signature]</i>			<input checked="" 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 <input checked="" type="checkbox"/> Received on ice <input checked="" type="checkbox"/> Received same day								
Delivery Method: <input checked="" type="checkbox"/> Courier <input 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 checked="" type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for _____ days						

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		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): <i>Lower Parker LEP</i>		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 8290						Preservative	Field Notes	MSS Lab ID
O-3-A11-2	08/24/22	1305			X		5	X	X	X						1 Methanol 2 Na2S2O8 2 Na2SO4		2082429-11
O-4-A11-2	08/24/22	1315			X		5	X	X	X						1 Methanol 2 Na2S2O8 2 Na2SO4		-12
TB-1	08/24/22	—		X			2	X								HCl	Tip Blank	-13
TB-2	08/24/22	—		X			2	X								HCl	Tip Blank	-14
Relinquished by: (Signature) <i>L.P.</i>		Date/Time	Received by: (Signature)		Relinquished by: (Signature)		Date/Time	Received by: (Signature)										
(Printed) Lower Parker			(Printed)		(Printed)			(Printed)										
Relinquished by: (Signature)		Date/Time	Received by Lab: (Signature)		Turn Around Time:		Lab Use:											
(Printed)		15:42 8-24-22	<i>Lori Foster</i> (Printed) Lori Foster		<input checked="" 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 <i>5.8</i> <input checked="" type="checkbox"/> Received on Ice <input checked="" type="checkbox"/> Received same day											
Delivery Method: <input checked="" type="checkbox"/> Courier <input 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 checked="" type="checkbox"/> Disposal by lab <input type="checkbox"/> Archive for _____ days								

23 September 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 09/22/22 15:34.

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

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

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/23/22 14:13

Client Sample ID	Alternate Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
01-N2		2092217-01	Soil	09/22/22 08:20	09/22/22 15:34



Will Brewington, President

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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/23/22 14:13

01-N2

2092217-01 (Soil)
Sample Date: 09/22/22

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	122000		ug/kg dry	19200	7660	50	09/22/22	09/23/22 12:41	EH
Naphthalene	26800		ug/kg dry	19200	7660	50	09/22/22	09/23/22 12:41	EH
<i>Surrogate: 2-Fluorophenol</i>		23-121		%	09/22/22		09/23/22 12:41		S-01
<i>Surrogate: Phenol-d5</i>		24-113		%	09/22/22		09/23/22 12:41		S-01
<i>Surrogate: Nitrobenzene-d5</i>		23-120		%	09/22/22		09/23/22 12:41		S-01
<i>Surrogate: 2,4,6-Tribromophenol</i>		19-122		%	09/22/22		09/23/22 12:41		S-01
<i>Surrogate: 2-Fluorobiphenyl</i>		30-115		%	09/22/22		09/23/22 12:41		S-01
<i>Surrogate: Terphenyl-d14</i>		18-137		%	09/22/22		09/23/22 12:41		S-01
PERCENT SOLIDS BY ASTM D2216-05 Prepared by Percent Solids									
Percent Solids	87		%			1	09/22/22	09/23/22 09:08	MB



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Analytical Results

Project: A11-2

Project Number: 22471A
Project Manager: Keith Progin

Reported:
09/23/22 14:13

01-N2

2092217-01RE1 (Soil)
Sample Date: 09/22/22

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	425		ug/kg dry	257	103	50	09/23/22	09/23/22 11:59	LL
<i>Surrogate: 1,2-Dichloroethane-d4</i>			70-130	103 %	09/23/22		09/23/22 11:59		
<i>Surrogate: Toluene-d8</i>			75-120	101 %	09/23/22		09/23/22 11:59		
<i>Surrogate: 4-Bromofluorobenzene</i>			70-120	99 %	09/23/22		09/23/22 11:59		



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