



ARM Group LLC

Engineers and Scientists

April 14, 2020

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

Re: NAPL Delineation Completion Report
B6-066-PZ
Area B: Parcel B6
Tradepoint Atlantic
Sparrows Point, MD 21219

Dear Ms. Brown:

In 2017, ARM Group LLC (ARM), on behalf of EnviroAnalytics Group, LLC (EAG), completed a Phase II Investigation of Parcel B6 (the Site) of the Tradepoint Atlantic property located in Sparrows Point, Maryland. In accordance with the approved Phase II Investigation Work Plan for Parcel B6 (Revision 2 dated May 12, 2016) and per agency guidance, observations of non-aqueous phase liquid (NAPL) in the soil cores of a Phase II Investigation soil boring warranted the installation of a temporary NAPL screening piezometer to assess potential NAPL mobility from soil to groundwater. On July 5, 2016, soil boring B6-066-SB was completed in the northwestern portion of Parcel B6 targeting an historical Waste Oil Pit. During the completion of this boring, a strong oil odor and NAPL were observed. Piezometer B6-066-PZ was installed at this location in accordance with the NAPL delineation protocols provided in the Parcel B6 Work Plan. The screening piezometer was installed to 13 feet below ground surface (bgs) with a screen length of 10 feet, using 1-inch diameter PVC screen and riser.

During the 0-hour gauging measurement completed immediately following installation, trace NAPL was observed on the oil-water interface probe upon being withdrawn from the piezometer (**Table 1**). During the 48-hour measurement conducted on July 7, 2016, light NAPL (LNAPL) was detected above the water column with a thickness of 5.04 feet. In an attempt to delineate the extent of the LNAPL observed in B6-066-PZ, an additional 69 NAPL delineation piezometers were installed at surrounding locations during numerous field events between July 12, 2016 and April 26, 2017. The locations of the piezometers, which were installed at varying distances surrounding B6-066-PZ, are provided on **Figure 1** and **Figure 2**.

Each piezometer has been periodically monitored to document the presence of any NAPL and to ensure that significant measurable NAPL has not moved beyond the limits of the delineated area. **Figure 1** displays a summary of NAPL detections over the duration of the project from 2016 to 2020, and **Figure 2** displays a more recent summary using the past 6 months of gauging data. The specific dates of monitoring activities, as well as NAPL thickness measurements and water level measurements, have been included in **Table 1**. This table also includes the installation date of each piezometer, as well as relevant construction details (total depths, screen intervals, etc.). Boring logs documenting soil core observations were completed for all NAPL delineation piezometers installed around B6-066-PZ. Soil boring observation logs and a typical piezometer construction log are provided as **Attachment 1** and **Attachment 2**, respectively.

As provided on **Table 1**, 30 out of the 70 screening piezometers contained measurable LNAPL during at least one gauging event (with four of these locations exhibiting intermittent detections with a maximum of 0.02 feet of LNAPL accumulation), and an additional 11 locations had trace detections of NAPL. Since December 2017, NAPL gauging activities have occurred biweekly at 11 piezometers along the perimeter of the delineation area (B6-066T-PZ, B6-066X-PZ, B6-066LL-PZ, B6-066OO-PZ, B6-066TT-PZ, B6-066BBB-PZ, B6-066DDD-PZ, B6-066FFF-PZ, B6-066JJJ-PZ, B6-066MMM-PZ, and B6-066OOO-PZ) to continue to monitor NAPL mobility. During the first quarter of 2020, quarterly perimeter gauging has been implemented in lieu of biweekly gauging. The perimeter piezometers continue to be free of significant measurable NAPL. Select perimeter locations (most recently B6-066JJJ-PZ) have had intermittent trace detections of NAPL upon withdrawing the oil-water interface probe from the PVC casing. The lack of accumulated measurable NAPL at the edges of the delineation area indicates that it is not highly mobile along the perimeter, and the bulk of the NAPL mass has been delineated.

To date, 21 of the NAPL delineation piezometers have been abandoned or found to be destroyed and unusable in the field, as shown in **Table 1** and symbolized on **Figure 2**. The standard abandonment forms for the 15 piezometers which have been formally abandoned (on November 29, 2017) are provided in **Attachment 3**.

This NAPL Delineation Completion Report is being provided to the MDE and USEPA to present the results of the completed delineation activities. At this time, EAG proposes to abandon the piezometer network (including the original location B6-066-PZ), with the exception of the perimeter locations positioned along the delineation boundary shown in red on **Figure 2**. The perimeter locations will be retained and gauged according to a quarterly schedule in order to continue monitoring the distribution and possible mobility of NAPL beyond the delineation area. The quarterly gauging events for the perimeter piezometers will be reported to the MDE at a minimum frequency of semi-annually.



The interior network piezometers that are proposed to be abandoned will be gauged a final time on the abandonment date (or in the days immediately preceding) using an oil-water interface probe to document the thickness of any NAPL that has accumulated in the casing. Since NAPL is known to be present at many of the interior network locations, a vacuum truck will be used to remove accumulated NAPL from the piezometers prior to abandonment. A brief abandonment letter report will be provided to the MDE following the completion of the proposed abandonments, which shall include the standard abandonment forms and provide the final gauging information.

During future quarterly monitoring events, if NAPL is detected in the perimeter monitoring locations (beyond trace measurements), the MDE will be notified, and any additional required actions will be coordinated as needed. Once the development plan for this area of the property is known, an evaluation of future response actions will be performed. If response actions are required in this area, a separate Work Plan will be submitted under separate cover for agency review and approval.

If you have any questions, or if we can provide any additional information at this time, please do not hesitate to contact ARM Group LLC at 410-290-7775.

Respectfully Submitted,
ARM Group LLC



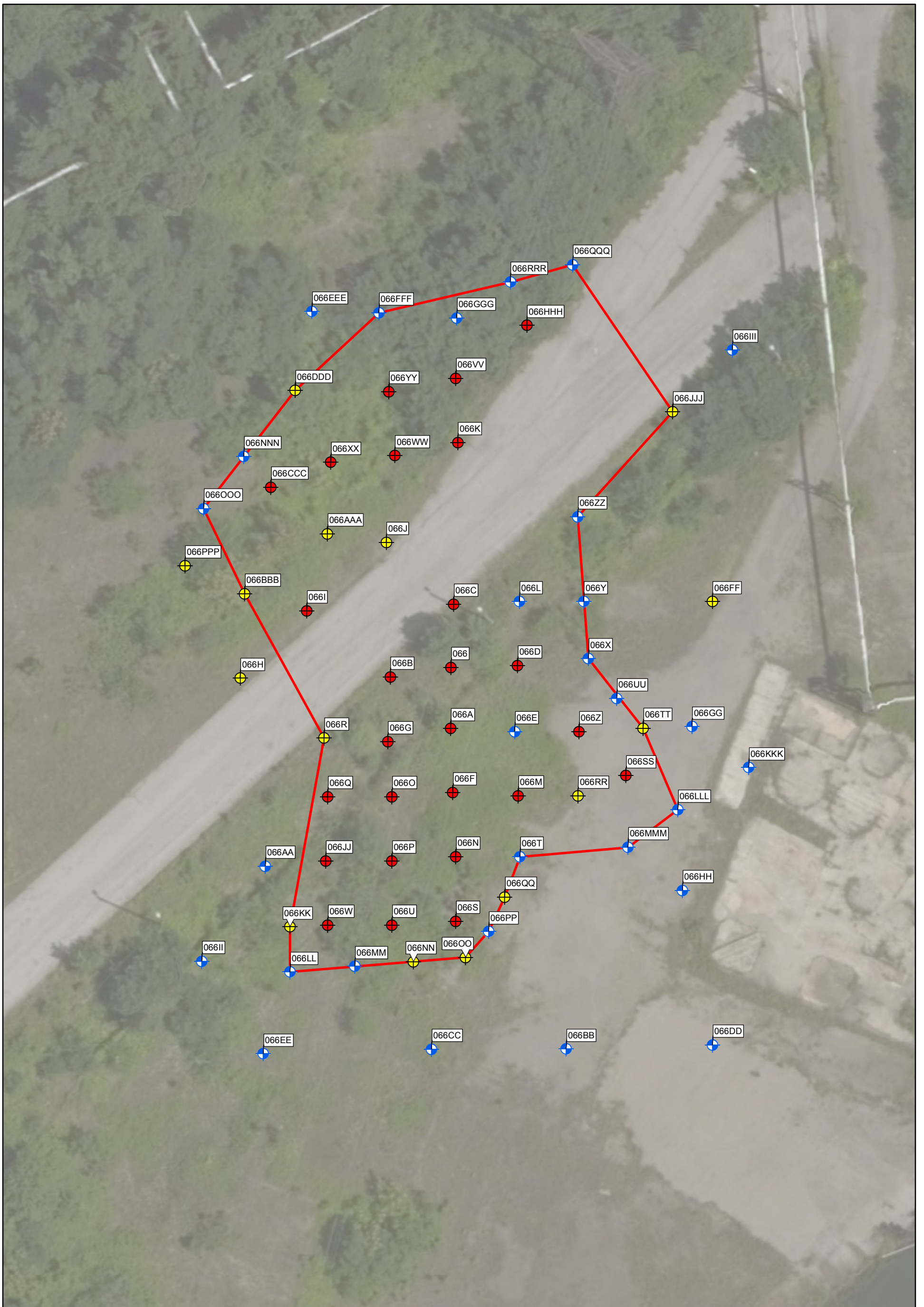
Leandra M. Glumac
Project Geologist



Eric S. Magdar, P.G.
Vice President










FIGURES



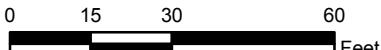


	Piezometer with NAPL Detection
	Piezometer with Insignificant NAPL Detection (Trace/Intermittent)
	Piezometer without NAPL Detection
	Delineation Boundary

Parcel B6: B6-066 NAPL Delineation 2016-2020 NAPL Status April 9, 2020		Figure 1
 ARM Group LLC Engineers and Scientists	Tradepoint Atlantic	
	Baltimore County, MD	
	EnviroAnalytics Group	
	ARM Project 20010206	



-  Abandoned Piezometer
-  Destroyed Piezometer
-  Piezometer with Insignificant NAPL Detection (Trace/Intermittent)
-  Piezometer without NAPL Detection
-  Piezometer Not Gauged (Known Historical Impact)
-  Piezometer Not Gauged
-  Delineation Boundary

Parcel B6: B6-066 NAPL Delineation Piezometer & NAPL Status (past 6 months) April 9, 2020		Figure 2
  ARM Group LLC Engineers and Scientists 	Tradepoint Atlantic	
	Baltimore County, MD	
	EnviroAnalytics Group	
	ARM Project 20010206	

TABLES

Table 1 - B6-066-PZ NAPL Gauging Activities
Tradepoint Atlantic
Sparrows Point, Maryland

Sample ID	Installation Date	Abandonment Date	Well Total Depth (ft. bgs)	Screen Interval (ft. bgs)	Riser Stick-Up (ft.)	1/16/2017			1/17/2017			1/18/2017			1/19/2017			1/26/2017			2/2/2017			2/8/2017			2/16/2017			
						Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	
B6-066-PZ	7/5/2016	NA	13	3-13	2.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	trace	7.02	trace	trace	6.73	trace	-	7.14	-	7.29	7.31	0.02	7.50	7.52	0.02	
B6-066A-PZ	7/12/2016	NA	14	4-14	3.23	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.58	-	-	7.32	-	-	7.71	-	-	-	-	-	-	-	
B6-066B-PZ	7/12/2016	5/24/2017*	13	3-13	2.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.13	-	-	8.83	-	-	9.27	-	-	9.34	-	-	9.64	-	
B6-066C-PZ	7/12/2016	2/8/2017*	14	4-14	3.17	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.49	-	-	9.21	-	-	9.46	-	* Destroyed			-	-	-	
B6-066D-PZ	7/12/2016	NA	14	4-14	3.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	trace	10.94	trace	-	11.00	-	-	11.09	-	trace	11.11	trace	-	-	11.23	-
B6-066E-PZ	7/20/2016	NA	14	4-14	3.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.03	-	-	8.07	-	-	8.33	-	-	8.44	-	-	-	8.33	-
B6-066F-PZ	7/20/2016	NA	15	5-15	3.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	trace	7.93	trace	-	7.64	-	trace	8.05	trace	trace	8.13	trace	trace	8.45	trace	
B6-066G-PZ	7/20/2016	NA	15	5-15	3.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	7.76	7.80	0.04	7.67	7.69	0.02	8.08	8.10	0.02	8.21	8.32	0.11	8.47	8.50	0.03	
B6-066H-PZ	7/20/2016	11/29/2017	14	4-14	3.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.11	-	-	10.00	-	-	10.14	-	-	10.24	-	-	10.29	-	
B6-066I-PZ	7/20/2016	5/14/2018*	13	3-13	1.60	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.90	-	-	8.76	-	-	8.97	-	trace	9.09	trace	trace	9.12	trace	
B6-066J-PZ	7/20/2016	NA	15	5-15	3.50/2.00^	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.65	-	-	9.50	-	-	9.74	-	-	9.88	-	-	9.91	-	
B6-066K-PZ	7/20/2016	NA	14	4-14	3.35	NM	NM	NM	NM	NM	NM	NM	NM	NM	9.35	9.93	0.58	-	9.10	-	-	9.48	-	trace	9.67	trace	trace	9.78	trace	
B6-066L-PZ	7/20/2016	NA	15	5-15	3.20	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.37	-	-	8.33	-	-	8.69	-	-	8.23	-	-	8.54	-	
B6-066M-PZ	7/22/2016	NA	15	5-15	3.29	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.46	11.50	0.04	11.35	11.48	0.13	11.39	11.42	0.03	11.54	12.20	0.66	11.65	11.69	0.04	
B6-066N-PZ	7/22/2016	NA	15	5-15	3.46	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.61	12.95	1.34	11.47	11.58	0.11	11.50	11.65	0.15	11.72	12.94	1.22	11.75	12.64	0.89	
B6-066O-PZ	7/22/2016	NA	13.5	3.5-13.5	3.46	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.63	-	-	7.39	-	-	7.80	-	-	7.93	-	-	8.17	-	
B6-066P-PZ	7/26/2016	NA	15	5-15	3.33	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.98	8.99	0.01	8.86	8.87	0.01	9.08	9.09	0.01	9.17	10.01	0.01	9.45	9.65	0.20	
B6-066Q-PZ	7/26/2016	NA	15	5-15	2.50	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.89	-	-	7.74	-	-	7.98	-	-	8.21	-	-	8.35	-	
B6-066R-PZ	7/26/2016	NA	15	5-15	2.71	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.30	-	-	9.22	-	-	9.25	-	-	9.40	-	-	9.50	-	
B6-066S-PZ	7/25/2016	NA	15	5-15	2.50	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.04	-	-	10.91	-	-	10.93	-	-	11.10	-	-	11.23	-	
B6-066T-PZ	7/26/2016	NA	15	5-15	2.58	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.83	-	-	10.70	-	-	10.73	-	-	10.90	-	-	11.04	-	
B6-066U-PZ	9/20/2016	NA	15	5-15	3.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.56	11.90	0.34	11.44	11.53	0.09	11.55	11.57	0.02	11.78	12.45	0.67	11.92	11.97	0.05	
B6-066W-PZ	9/20/2016	NA	15	5-15	3.70	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.57	8.79	0.22	8.72	8.74	0.02	8.96	8.97	0.01	9.14	9.51	0.37	9.33	9.35	0.02	
B6-066X-PZ	9/20/2016	NA	13	3-13	3.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.93	-	-	10.74	-	-	10.96	-	-	11.22	-	-	11.35	-	
B6-066Y-PZ	9/20/2016	NA	15	5-15	3.50	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.84	-	-	10.53	-	-	10.89	-	-	11.17	-	-	11.38	-	
B6-066Z-PZ	9/19/2016	NA	13.9	3.9-13.9	2.95	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.16	11.18	0.02	trace	11.03	trace	trace	11.09	trace	-	11.25	-	-	11.38	-	
B6-066AA-PZ	9/21/2016	11/29/2017	15	5-15	3.22	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.99	-	-	7.85	-	-	8.08	-	-	8.38	-	-	8.47	-	
B6-066BB-PZ	9/20/2016	11/29/2017	15	5-15	3.45	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.61	-	-	11.56	-	-	11.52	-	-	11.67	-	-	11.75	-	
B6-066CC-PZ	9/20/2016	11/29/2017	15	5-15	3.00	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.60	-	-	10.48	-	-	10.50	-	-	10.66	-	-	10.78	-	
B6-066DD-PZ	9/20/2016	11/29/2017	15	5-15	3.70	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	12.83	-	-	12.76	-	-	12.72	-	-	12.86	-	-	12.95	-	
B6-066EE-PZ	9/20/2016	11/29/2017	15	5-15	3.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.46	-	-	8.32	-	-	8.55	-	-	8.73	-	-	8.91	-	
B6-066FF-PZ	9/21/2016	NA	15	5-15	3.31	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.73	-	-	11.48	-	-	11.71	-	-	11.96	-	-	12.15	-	
B6-066GG-PZ	9/21/2016	NA	15	5-15	3.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.93	-	-	11.91	-	-	11.92	-	-	11.98	-	-	12.12	-	
B6-066HH-PZ	9/21/2016	11/29/2017	15	5-15	2.92	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.94	-	-	11.84	-	-	11.85	-	-	11.66	-	-	12.09	-	
B6-066II-PZ	9/20/2016	11/29/2017	15	5-15	3.36	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.12	-	-	7.98	-	-	8.21	-	-	8.41	-	-	8.59	-	
B6-066JJ-PZ	1/13/2017	NA	15	5-15	3.00	8.35	8.60	0.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.38	9.55	1.17	8.62	9.83	1.21	8.73	9.75	1.02
B6-066KK-PZ	1/13/2017	NA	18	5-18	3.15	-	7.34	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	-	-	8.12	-	-	8.29	-	
B6-066LL-PZ	1/13/2017	NA	15	5-15	3.10	-	8.40	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	-	-	8.66	-	-	8.83	-	
B6-066MM-PZ	1/13/2017	NA	15	5-15	3.26	-	9.81	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	-	-	10.03	-	-	10.31	-	
B6-066NN-PZ	1/13/2017	8/10/18*	15	5-15	3.27	-	11.03	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	-	-	11.19	-	-	11.35	-	
B6-066OO-PZ	1/16/2017	NA	15	5-15	3.05	-	11.31	-	-	11.34	-	-	11.35	-	NM	NM	NM	NM	NM	NM	NM	-	-	-	11.46	-	-	11.62	-	
B6-066PP-PZ	1/16/2017	NA	20	5-20	2.97	-	11.39	-	-	11.41	-	-	11.44	-	NM	NM	NM	NM	NM	NM	NM	-	-	-	11.54	-	-	11.66	-	
B6-066QQ-PZ	1/16/2017	NA	15	5-15	2.67	-	11.04	-	-	11.10	-	-	11.11	-	NM	NM	NM	NM	NM	NM	NM	-	-	-	11.19	-	-	11.33	-	
B6-066RR-PZ	1/16/2017	NA	16	6-16	3.50	-	12.24	-	-	12.05	-	-	12.08	-	NM	NM	NM	NM	NM	NM	NM	-	-	-	12.05	-	-	12.34	-	
B6-066SS-PZ	1/16/2017	NA	16	6-16	3.20	-	12.03	-	12.08	12.10	0.02	12.20	12.70	0.50	NM	NM	NM	NM	NM	NM	NM	12.07	12.38	0.31	12.21	13.50	1.29	12.35	12.70	0.35
B6-066TT-PZ	1/16/2017	NA	16	6-16	3.74	trace	12.55	trace	-	12.60	-	-	12.62	-	NM	NM	NM	NM	NM	NM	NM	-	-	-	12.68	-	-	12.78	-	
B6-066UU-PZ	1/16/2017	NA	15	5-15	3.05	-	11.40	-	-	11.44	-	-	11.45	-	NM	NM	NM	NM	NM	NM	NM	-	-	-	11.58	-	-	11.72	-	
B6-066VV-PZ	1/13/2017	NA	15	5-15	2.95	-	7.60	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	7.70	7.71	0.01	7.80	7.90	0.10	7.90	7.91	0.01
B6-066WW-PZ	1/13/2017	NA	15	5-15	2.97	7.42	7.55	0.13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.50	10.50	2.00	7.51	9.05	1.54	8.80	8.90	0.10
B6-066XX-PZ	1/17/2017	NA	15	5-15	2.43	NA	NA	NA	-	7.05	-	NM	NM	NM	7.05	8.61	1.56	NM	NM	NM	7.10	9.26	2.16	7.39	8.40	1.01	7.35	9.92	2.57	
B6-066YY-PZ	1/17/2017	NA	15	5-15	3.10	NA	NA	NA	-	7.70	-	NM	NM	NM	7.15	8.66	1.51	NM	NM	NM	7.18	8.25	1.07	7.40	9.63	2.23	7.52	8.61	1.09	
B6-066ZZ-PZ	1/17/2017	5/29/2018*	15	5-15	3.05	NA	NA	NA	-	10.06	-	NM	NM	NM	-	9.96</														

Table 1 - B6-066-PZ NAPL Gauging Activities
Tradeport Atlantic
Sparrows Point, Maryland

Sample ID	Installation Date	Abandonment Date	Well Total Depth (ft. bgs)	Screen Interval (ft. bgs)	Riser Stick-Up (ft.)	2/23/2017			3/3/2017			3/9/2017			3/10/2017			3/13/2017			3/16/2017			3/21/2017			3/23/2017		
						Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)
B6-066-PZ	7/5/2016	NA	13	3-13	2.25	7.80	8.10	0.30	7.83	8.01	0.18	NM	NM	NM	NM	NM	NM	NM	NM	NM	trace	7.05	trace	NM	NM	NM	NM	NM	NM
B6-066A-PZ	7/12/2016	NA	14	4-14	3.23	-	8.23	-	-	8.44	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.61	-	NM	NM	NM	NM	NM	NM
B6-066B-PZ	7/12/2016	5/24/2017*	13	3-13	2.29	-	9.72	-	-	9.97	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.14	-	NM	NM	NM	NM	NM	NM
B6-066C-PZ	7/12/2016	2/8/2017*	14	4-14	3.17																								
B6-066D-PZ	7/12/2016	NA	14	4-14	3.04	-	11.18	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.30	-	NM	NM	NM	NM	NM	NM
B6-066E-PZ	7/20/2016	NA	14	4-14	3.30	-	9.33	-	-	8.54	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.87	-	NM	NM	NM	NM	NM	NM
B6-066F-PZ	7/20/2016	NA	15	5-15	3.45	-	8.58	-	-	8.79	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.96	-	NM	NM	NM	NM	NM	NM
B6-066G-PZ	7/20/2016	NA	15	5-15	3.33	8.58	8.62	0.04	8.80	8.82	0.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.97	-	NM	NM	NM	NM	NM	NM
B6-066H-PZ	7/20/2016	11/29/2017	14	4-14	3.05	-	10.29	-	-	10.33	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.05	-	NM	NM	NM	NM	NM	NM
B6-066I-PZ	7/20/2016	5/14/2018*	13	3-13	1.60	trace	9.15	trace	-	9.18	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.82	-	NM	NM	NM	NM	NM	NM
B6-066J-PZ	7/20/2016	NA	15	5-15	3.50/2.00^	-	9.90	-	-	9.93	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.58	-	NM	NM	NM	NM	NM	NM
B6-066K-PZ	7/20/2016	NA	14	4-14	3.35	9.62	9.80	0.18	9.82	9.83	0.01	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.16	-	NM	NM	NM	NM	NM	NM
B6-066L-PZ	7/20/2016	NA	15	5-15	3.20	-	8.59	-	-	9.08	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.81	-	NM	NM	NM	NM	NM	NM
B6-066M-PZ	7/22/2016	NA	15	5-15	3.29	11.69	11.74	0.05	11.85	11.90	0.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.65	11.74	0.09	NM	NM	NM	NM	NM	NM
B6-066N-PZ	7/22/2016	NA	15	5-15	3.46	11.78	12.29	0.51	11.90	12.83	0.93	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.00	11.03	0.03	NM	NM	NM	NM	NM	NM
B6-066O-PZ	7/22/2016	NA	13.5	3.5-13.5	3.46	-	8.29	-	-	8.49	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.67	-	NM	NM	NM	NM	NM	NM
B6-066P-PZ	7/26/2016	NA	15	5-15	3.33	9.45	9.53	0.08	9.63	9.75	0.12	NM	NM	NM	NM	NM	NM	NM	NM	NM	trace	9.21	trace	NM	NM	NM	NM	NM	NM
B6-066Q-PZ	7/26/2016	NA	15	5-15	2.50	-	8.37	-	-	8.44	8.45	0.01	NM	NM	NM	NM	NM	NM	NM	NM	-	8.01	-	NM	NM	NM	NM	NM	NM
B6-066R-PZ	7/26/2016	NA	15	5-15	2.71	-	9.49	-	-	9.59	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.27	-	NM	NM	NM	NM	NM	NM
B6-066S-PZ	7/25/2016	NA	15	5-15	2.50	-	11.23	-	trace	11.35	trace	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.27	-	NM	NM	NM	NM	NM	NM
B6-066T-PZ	7/26/2016	NA	15	5-15	2.58	-	11.02	-	-	11.18	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.01	-	NM	NM	NM	NM	NM	NM
B6-066U-PZ	9/20/2016	NA	15	5-15	3.45	11.80	11.90	0.10	12.13	12.25	0.12	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.89	11.96	0.07	NM	NM	NM	NM	NM	NM
B6-066W-PZ	9/20/2016	NA	15	5-15	3.70	8.40	8.42	0.02	9.43	9.47	0.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	9.00	9.02	0.02	NM	NM	NM	NM	NM	NM
B6-066X-PZ	9/20/2016	NA	13	3-13	3.05	-	11.38	-	-	11.50	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.99	-	NM	NM	NM	NM	NM	NM
B6-066Y-PZ	9/20/2016	NA	15	5-15	3.50	-	11.46	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.59	-	NM	NM	NM	NM	NM	NM
B6-066Z-PZ	9/19/2016	NA	13.9	3.9-13.9	2.95	-	11.40	-	trace	11.54	trace	NM	NM	NM	NM	NM	NM	NM	NM	NM	11.32	11.33	0.01	NM	NM	NM	NM	NM	NM
B6-066AA-PZ	9/21/2016	11/29/2017	15	5-15	3.22	-	8.49	-	-	8.60	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.12	-	NM	NM	NM	NM	NM	NM
B6-066BB-PZ	9/20/2016	11/29/2017	15	5-15	3.45	-	11.68	-	-	11.88	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.85	-	NM	NM	NM	NM	NM	NM
B6-066CC-PZ	9/20/2016	11/29/2017	15	5-15	3.00	-	10.73	-	-	10.93	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	10.83	-	NM	NM	NM	NM	NM	NM
B6-066DD-PZ	9/20/2016	11/29/2017	15	5-15	3.70	-	12.89	-	-	13.10	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	13.05	-	NM	NM	NM	NM	NM	NM
B6-066EE-PZ	9/20/2016	11/29/2017	15	5-15	3.30	-	8.97	-	-	9.02	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.60	-	NM	NM	NM	NM	NM	NM
B6-066FF-PZ	9/21/2016	NA	15	5-15	3.31	-	12.22	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.65	-	NM	NM	NM	NM	NM	NM
B6-066GG-PZ	9/21/2016	NA	15	5-15	3.04	-	12.13	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	12.18	-	NM	NM	NM	NM	NM	NM
B6-066HH-PZ	9/21/2016	11/29/2017	15	5-15	2.92	-	12.06	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	12.17	-	NM	NM	NM	NM	NM	NM
B6-066II-PZ	9/20/2016	11/29/2017	15	5-15	3.36	-	8.62	-	-	8.72	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.27	-	NM	NM	NM	NM	NM	NM
B6-066JJ-PZ	1/13/2017	NA	15	5-15	3.00	8.80	9.70	0.90	9.00	9.82	0.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.31	9.35	1.04	NM	NM	NM	NM	NM	NM
B6-066KK-PZ	1/13/2017	NA	18	5-18	3.15	-	8.36	-	-	8.42	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	7.98	-	NM	NM	NM	NM	NM	NM
B6-066LL-PZ	1/13/2017	NA	15	5-15	3.10	-	8.90	-	-	8.95	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.53	-	NM	NM	NM	NM	NM	NM
B6-066MM-PZ	1/13/2017	NA	15	5-15	3.26	-	10.64	-	-	11.00	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.97	-	NM	NM	NM	NM	NM	NM
B6-066NN-PZ	1/13/2017	8/10/18*	15	5-15	3.27	-	11.34	-	-	11.48	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.37	-	NM	NM	NM	NM	NM	NM
B6-066OO-PZ	1/16/2017	NA	15	5-15	3.05	-	11.60	-	-	11.77	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.64	-	NM	NM	NM	NM	NM	NM
B6-066PP-PZ	1/16/2017	NA	20	5-20	2.97	-	11.67	-	-	11.82	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.70	-	NM	NM	NM	NM	NM	NM
B6-066QQ-PZ	1/16/2017	NA	15	5-15	2.67	-	11.32	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.36	-	NM	NM	NM	NM	NM	NM
B6-066RR-PZ	1/16/2017	NA	16	6-16	3.50	-	12.36	-	-	12.49	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	12.28	-	NM	NM	NM	NM	NM	NM
B6-066SS-PZ	1/16/2017	NA	16	6-16	3.20	12.33	12.45	0.12	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
B6-066TT-PZ	1/16/2017	NA	16	6-16	3.74	-	12.77	-	-	12.93	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	12.88	-	NM	NM	NM	NM	NM	NM
B6-066UU-PZ	1/16/2017	NA	15	5-15	3.05	-	11.75	-	-	11.86	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	11.64	-	NM	NM	NM	NM	NM	NM
B6-066VV-PZ	1/13/2017	NA	15	5-15	2.95	7.70	7.72	0.02	7.79	7.83	0.04	NM	NM	NM	NM	NM	NM	NM	NM	NM	7.47	7.50	0.03	NM	NM	NM	NM	NM	NM
B6-066WW-PZ	1/13/2017	NA	15	5-15	2.97	8.80	9.01	0.21	9.00	9.58	0.58	NM	NM	NM	NM	NM	NM	NM	NM	NM	8.22	8.30	0.08	NM	NM	NM	NM	NM	NM
B6-066XX-PZ	1/17/2017	NA	15	5-15	2.43	7.60	8.02	0.42	7.48	8.02	0.54	NM	NM	NM	NM	NM	NM	NM	NM	NM	6.90	6.92	0.02	NM	NM	NM	NM	NM	NM
B6-066YY-PZ	1/17/2017	NA	15	5-15	3.10	7.50	9.10	1.60	7.58	9.09	1.51	NM	NM	NM	NM	NM	NM	NM	NM	NM	7.11	9.62	2.51	NM	NM	NM	NM	NM	NM
B6-066ZZ-PZ	1/17/2017	5/29/2018*	15	5-15	3.05	-	9.50	-	-	9.93	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	9.58	-	NM	NM	NM	NM	NM	NM
B6-066AAA-PZ	1/17/2017	NA	15	5-15	2.90	-	9.01	-	-	9.05	-	NM	NM	NM	NM	NM	NM	NM	NM	NM	-	8.68	-	NM	NM	NM	NM	NM	NM
B6-066BBB-PZ	3/9/2017	NA	16	6-16	3.72	NA	NA	NA	NA	NA	NA	-	14																

Table 1 - B6-066-PZ NAPL Gauging Activities
Tradeport Atlantic
Sparrows Point, Maryland

Sample ID	Installation Date	Abandonment Date	Well Total Depth (ft. bgs)	Screen Interval (ft. bgs)	Riser Stick-Up (ft.)	3/27/2017			3/29/2017			4/6/2017			4/13/2017			4/21/2017			4/24/2017			4/26/2017			4/28/2017		
						Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)
B6-066-PZ	7/5/2016	NA	13	3-13	2.25	NM	NM	NM	7.06	7.10	0.02	trace	6.26	trace	trace	6.81	trace	trace	7.04	trace	trace	7.16	trace	NM	NM	NM	NM	NM	NM
B6-066A-PZ	7/12/2016	NA	14	4-14	3.23	NM	NM	NM	-	7.70	-	-	6.91	-	-	7.38	-	-	7.61	-	-	7.75	-	NM	NM	NM	NM	NM	NM
B6-066B-PZ	7/12/2016	5/24/2017*	13	3-13	2.29	NM	NM	NM	-	9.24	-	-	8.75	-	-	8.89	-	-	9.15	-	-	9.28	-	NM	NM	NM	NM	NM	NM
B6-066C-PZ	7/12/2016	2/8/2017*	14	4-14	3.17																								
B6-066D-PZ	7/12/2016	NA	14	4-14	3.04	NM	NM	NM	-	11.17	-	trace	10.92	trace	trace	11.03	trace	-	11.15	-	-	11.19	-	NM	NM	NM	NM	NM	NM
B6-066E-PZ	7/20/2016	NA	14	4-14	3.30	NM	NM	NM	-	8.15	-	-	7.44	-	-	8.04	-	-	8.20	-	-	8.32	-	NM	NM	NM	NM	NM	NM
B6-066F-PZ	7/20/2016	NA	15	5-15	3.45	NM	NM	NM	trace	8.06	trace	trace	7.16	trace	trace	7.76	trace	10.96	10.98	0.02	trace	8.08	trace	NM	NM	NM	NM	NM	NM
B6-066G-PZ	7/20/2016	NA	15	5-15	3.33	NM	NM	NM	8.05	8.07	0.02	-	8.05	-	-	7.75	-	7.94	7.99	0.05	trace	8.11	trace	NM	NM	NM	NM	NM	NM
B6-066H-PZ	7/20/2016	11/29/2017	14	4-14	3.05	NM	NM	NM	-	10.11	-	-	9.86	-	-	9.87	-	-	10.01	-	-	10.03	-	NM	NM	NM	NM	NM	NM
B6-066I-PZ	7/20/2016	5/14/2018*	13	3-13	1.60	NM	NM	NM	-	8.92	-	-	8.53	-	-	8.61	-	-	8.83	-	trace	8.87	trace	NM	NM	NM	NM	NM	NM
B6-066J-PZ	7/20/2016	NA	15	5-15	3.50/2.00^	NM	NM	NM	-	9.68	-	-	9.30	-	-	9.35	-	-	9.85	-	-	9.63	-	NM	NM	NM	NM	NM	NM
B6-066K-PZ	7/20/2016	NA	14	4-14	3.35	NM	NM	NM	trace	9.36	trace	trace	8.61	trace	-	8.79	-	9.19	9.20	0.01	9.25	9.27	0.02	NM	NM	NM	NM	NM	NM
B6-066L-PZ	7/20/2016	NA	15	5-15	3.20	NM	NM	NM	-	8.41	-	-	7.47	-	-	8.16	-	-	8.08	-	-	8.23	-	NM	NM	NM	NM	NM	NM
B6-066M-PZ	7/22/2016	NA	15	5-15	3.29	NM	NM	NM	11.53	11.70	0.17	11.08	11.35	0.27	11.25	11.67	0.42	11.48	11.85	0.37	11.62	12.33	0.71	NM	NM	NM	NM	NM	NM
B6-066N-PZ	7/22/2016	NA	15	5-15	3.46	NM	NM	NM	11.67	12.60	0.93	11.10	11.42	0.32	11.29	11.54	0.25	11.61	12.41	0.8	11.69	12.83	1.14	NM	NM	NM	NM	NM	NM
B6-066O-PZ	7/22/2016	NA	13.5	3.5-13.5	3.46	NM	NM	NM	-	7.78	-	-	7.06	-	-	7.44	-	-	7.69	-	-	7.81	-	NM	NM	NM	NM	NM	NM
B6-066P-PZ	7/26/2016	NA	15	5-15	3.33	NM	NM	NM	-	8.99	-	-	8.33	-	8.65	9.17	0.52	8.92	9.88	0.96	8.76	9.23	0.47	NM	NM	NM	NM	NM	NM
B6-066Q-PZ	7/26/2016	NA	15	5-15	2.50	NM	NM	NM	-	7.55	-	-	7.38	-	-	7.44	-	-	7.81	-	-	7.91	-	NM	NM	NM	NM	NM	NM
B6-066R-PZ	7/26/2016	NA	15	5-15	2.71	NM	NM	NM	-	9.27	-	-	9.05	-	-	9.16	-	-	9.22	-	-	9.24	-	NM	NM	NM	NM	NM	NM
B6-066S-PZ	7/25/2016	NA	15	5-15	2.50	NM	NM	NM	-	11.10	-	-	10.56	-	10.84	10.85	0.01	trace	11.07	trace	trace	11.13	trace	NM	NM	NM	NM	NM	NM
B6-066T-PZ	7/26/2016	NA	15	5-15	2.58	NM	NM	NM	-	10.88	-	-	10.36	-	-	10.60	-	-	10.83	-	-	10.89	-	NM	NM	NM	NM	NM	NM
B6-066U-PZ	9/20/2016	NA	15	5-15	3.45	NM	NM	NM	11.64	12.00	0.36	9.94	10.33	0.39	11.21	11.82	0.61	11.56	12.32	0.76	11.65	13.20	1.55	NM	NM	NM	NM	NM	NM
B6-066W-PZ	9/20/2016	NA	15	5-15	3.70	NM	NM	NM	-	8.85	-	-	8.01	-	-	8.43	-	trace	8.80	trace	trace	8.93	trace	NM	NM	NM	NM	NM	NM
B6-066X-PZ	9/20/2016	NA	13	3-13	3.05	NM	NM	NM	-	11.07	-	-	9.78	-	-	10.54	-	-	11.00	-	-	11.11	-	NM	NM	NM	NM	NM	NM
B6-066Y-PZ	9/20/2016	NA	15	5-15	3.50	NM	NM	NM	-	10.86	-	-	9.99	-	-	10.34	-	-	10.81	-	-	10.92	-	NM	NM	NM	NM	NM	NM
B6-066Z-PZ	9/19/2016	NA	13.9	3.9-13.9	2.95	NM	NM	NM	-	11.21	-	-	10.78	-	-	10.93	-	trace	11.19	trace	-	11.24	-	NM	NM	NM	NM	NM	NM
B6-066AA-PZ	9/21/2016	11/29/2017	15	5-15	3.22	NM	NM	NM	-	7.95	-	-	7.39	-	-	7.52	-	-	7.90	-	-	8.03	-	NM	NM	NM	NM	NM	NM
B6-066BB-PZ	9/20/2016	11/29/2017	15	5-15	3.45	NM	NM	NM	-	11.71	-	-	11.52	-	-	11.62	-	-	11.72	-	-	11.73	-	NM	NM	NM	NM	NM	NM
B6-066CC-PZ	9/20/2016	11/29/2017	15	5-15	3.00	NM	NM	NM	-	10.69	-	-	10.32	-	-	10.40	-	-	10.64	-	-	10.68	-	NM	NM	NM	NM	NM	NM
B6-066DD-PZ	9/20/2016	11/29/2017	15	5-15	3.70	NM	NM	NM	-	12.92	-	-	12.73	-	-	12.82	-	-	12.93	-	-	12.94	-	NM	NM	NM	NM	NM	NM
B6-066EE-PZ	9/20/2016	11/29/2017	15	5-15	3.30	NM	NM	NM	-	8.43	-	-	7.90	-	-	8.01	-	-	8.39	-	-	8.50	-	NM	NM	NM	NM	NM	NM
B6-066FF-PZ	9/21/2016	NA	15	5-15	3.31	NM	NM	NM	-	11.70	-	-	11.05	-	-	11.16	-	-	11.66	-	-	11.80	-	NM	NM	NM	NM	NM	NM
B6-066GG-PZ	9/21/2016	NA	15	5-15	3.04	NM	NM	NM	-	11.66	-	-	11.77	-	-	11.87	-	-	11.99	-	-	12.05	-	NM	NM	NM	NM	NM	NM
B6-066HH-PZ	9/21/2016	11/29/2017	15	5-15	2.92	NM	NM	NM	-	12.05	-	-	11.80	-	-	11.91	-	-	12.04	-	-	12.06	-	NM	NM	NM	NM	NM	NM
B6-066II-PZ	9/20/2016	11/29/2017	15	5-15	3.36	NM	NM	NM	-	8.08	-	-	7.54	-	-	7.61	-	-	8.05	-	-	8.17	-	NM	NM	NM	NM	NM	NM
B6-066JJ-PZ	1/13/2017	NA	15	5-15	3.00	NM	NM	NM	trace	8.35	trace	7.48	8.20	0.72	7.96	8.28	0.32	-	8.31	-	8.43	9.38	0.95	NM	NM	NM	NM	NM	NM
B6-066KK-PZ	1/13/2017	NA	18	5-18	3.15	NM	NM	NM	-	7.83	-	-	6.96	-	-	7.39	-	-	7.77	-	-	7.90	-	NM	NM	NM	NM	NM	NM
B6-066LL-PZ	1/13/2017	NA	15	5-15	3.10	NM	NM	NM	-	8.41	-	-	7.58	-	-	8.01	-	-	8.37	-	-	8.48	-	NM	NM	NM	NM	NM	NM
B6-066MM-PZ	1/13/2017	NA	15	5-15	3.26	NM	NM	NM	-	8.90	-	-	9.17	-	-	9.59	-	-	9.82	-	-	9.90	-	NM	NM	NM	NM	NM	NM
B6-066NN-PZ	1/13/2017	8/10/18*	15	5-15	3.27	NM	NM	NM	-	11.20	-	-	10.61	-	-	10.91	-	-	11.16	-	-	11.22	-	NM	NM	NM	NM	NM	NM
B6-066OO-PZ	1/16/2017	NA	15	5-15	3.05	NM	NM	NM	-	11.47	-	-	11.11	-	-	11.20	-	-	11.44	-	-	11.49	-	NM	NM	NM	NM	NM	NM
B6-066PP-PZ	1/16/2017	NA	20	5-20	2.97	NM	NM	NM	-	11.54	-	-	11.17	-	-	11.27	-	-	11.50	-	-	11.56	-	NM	NM	NM	NM	NM	NM
B6-066QQ-PZ	1/16/2017	NA	15	5-15	2.67	NM	NM	NM	-	11.20	-	-	10.80	-	-	10.90	-	-	11.73	-	-	11.19	-	NM	NM	NM	NM	NM	NM
B6-066RR-PZ	1/16/2017	NA	16	6-16	3.50	NM	NM	NM	-	12.18	-	-	11.74	-	-	11.89	-	-	12.13	-	-	12.17	-	NM	NM	NM	NM	NM	NM
B6-066SS-PZ	1/16/2017	NA	16	6-16	3.20	NM	NM	NM	12.30	13.00	0.70	11.85	12.70	0.85	12.08	12.61	0.53	12.24	13.76	1.52	12.22	13.61	1.39	NM	NM	NM	NM	NM	NM
B6-066TT-PZ	1/16/2017	NA	16	6-16	3.74	NM	NM	NM	-	12.74	-	-	12.52	-	-	12.96	-	-	12.75	-	-	12.54	-	NM	NM	NM	NM	NM	NM
B6-066UU-PZ	1/16/2017	NA	15	5-15	3.05	NM	NM	NM	-	11.55	-	-	11.10	-	-	11.23	-	-	11.51	-	-	11.56	-	NM	NM	NM	NM	NM	NM
B6-066VV-PZ	1/13/2017	NA	15	5-15	2.95	NM	NM	NM	7.65	8.20	0.55	6.60	6.70	0.10	6.81	7.80	0.99	7.46	7.82	0.36	7.31	7.44	0.13	NM	NM	NM	NM	NM	NM
B6-066WW-PZ	1/13/2017	NA	15	5-15	2.97	NM	NM	NM	8.45	10.00	1.55	7.64	9.75	2.11	8.03	9.70	1.67	7.43	8.38	0.95	8.11	9.66	1.55	NM	NM	NM	NM	NM	NM
B6-066XX-PZ	1/17/2017	NA	15	5-15	2.43	NM	NM	NM	7.05	8.40	1.35	6.33	8.12	1.79	6.53	9.51	2.98	6.88	8.59	1.71	6.78	8.59	1.81	NM	NM	NM	NM	NM	NM
B6-066YY-PZ	1/17/2017	NA	15	5-15	3.10	NM	NM	NM	7.30	9.20	1.90	6.37	8.39	2.02	6.59	8.90	2.31	7.14	9.76	2.62	6.81	9.12	2.31	NM	NM	NM	NM	NM	NM
B6-066ZZ-PZ	1/17/2017	5/29/2018*	15	5-15	3.05	NM	NM	NM	-	9.29	-	-	8.41	-	-	9.18	-	-	8.94	-	-	9.20	-	NM	NM	NM	NM	NM	

Table 1 - B6-066-PZ NAPL Gauging Activities
Tradeport Atlantic
Sparrows Point, Maryland

Sample ID	Installation Date	Abandonment Date	Well Total Depth (ft. bgs)	Screen Interval (ft. bgs)	Riser Stick-Up (ft.)	5/4/2017			5/24/2017			5/30/2017			6/1/2017			6/8/2017			6/15/2017			6/20/2017			6/26/2017		
						Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)	Depth to NAPL (ft. TOC)	Depth to Water (ft. TOC)	NAPL Thickness (ft.)
B6-066-PZ	7/5/2016	NA	13	3-13	2.25	7.18	7.21	0.03	-	7.12	-	6.55	6.70	0.15	NM	NM	NM	trace	7.06	trace	7.37	7.71	0.34	7.54	7.70	0.16	7.80	8.10	0.30
B6-066A-PZ	7/12/2016	NA	14	4-14	3.23	-	7.78	-	-	7.70	-	-	7.32	-	NM	NM	NM	-	7.66	-	-	7.94	-	-	8.14	-	-	8.36	-
B6-066B-PZ	7/12/2016	5/24/2017*	13	3-13	2.29	-	9.31	-	* Destroyed			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6-066C-PZ	7/12/2016	2/8/2017*	14	4-14	3.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B6-066D-PZ	7/12/2016	NA	14	4-14	3.04	trace	11.24	trace	-	11.25	-	trace	11.03	trace	NM	NM	NM	11.26	11.27	0.01	trace	11.42	trace	-	11.41	-	trace	11.41	trace
B6-066E-PZ	7/20/2016	NA	14	4-14	3.30	-	8.24	-	-	8.20	-	-	8.01	-	NM	NM	NM	-	8.18	-	-	9.17	-	-	8.68	-	-	10.11	-
B6-066F-PZ	7/20/2016	NA	15	5-15	3.45	-	8.15	-	-	8.08	-	trace	7.69	trace	NM	NM	NM	-	8.03	-	8.26	8.29	0.03	8.43	8.48	0.05	-	8.70	-
B6-066G-PZ	7/20/2016	NA	15	5-15	3.33	8.16	8.25	0.09	8.09	8.20	0.11	-	7.71	-	NM	NM	NM	8.01	8.17	0.16	8.28	8.35	0.07	8.50	8.60	0.10	8.72	8.90	0.18
B6-066H-PZ	7/20/2016	11/29/2017	14	4-14	3.05	-	10.06	-	-	10.22	-	trace	9.83	trace	NM	NM	NM	-	10.05	-	-	10.26	-	-	10.31	-	-	10.42	-
B6-066I-PZ	7/20/2016	5/14/2018*	13	3-13	1.60	trace	8.91	trace	-	8.96	-	-	8.60	-	NM	NM	NM	trace	8.91	trace	trace	9.14	trace	trace	9.20	trace	trace	9.31	trace
B6-066J-PZ	7/20/2016	NA	15	5-15	3.50/2.00^	-	9.68	-	-	9.18	-	trace	9.93	trace	NM	NM	NM	-	9.65	-	8.89	8.90	0.01	-	9.36	-	trace	10.05	trace
B6-066K-PZ	7/20/2016	NA	14	4-14	3.35	9.33	9.36	0.03	-	9.44	-	-	8.82	-	NM	NM	NM	9.12	9.14	0.02	9.77	9.78	0.01	trace	9.81	trace	9.95	10.00	0.05
B6-066L-PZ	7/20/2016	NA	15	5-15	3.20	-	8.54	-	-	8.10	-	-	8.25	-	NM	NM	NM	-	8.31	-	-	8.37	-	-	8.53	-	-	8.69	-
B6-066M-PZ	7/22/2016	NA	15	5-15	3.29	11.48	11.58	0.10	-	12.00	-	trace	11.25	trace	NM	NM	NM	11.60	12.35	0.75	11.82	12.16	0.34	11.83	12.08	0.25	11.84	11.95	0.11
B6-066N-PZ	7/22/2016	NA	15	5-15	3.46	11.73	13.36	1.63	-	12.80	-	trace	11.45	trace	NM	NM	NM	11.69	13.01	1.32	11.82	13.54	1.72	11.93	12.86	0.93	11.95	13.80	1.85
B6-066O-PZ	7/22/2016	NA	13.5	3.5-13.5	3.46	-	7.85	-	-	7.80	-	-	7.71	-	NM	NM	NM	-	7.71	-	-	7.98	-	-	8.19	-	-	8.43	-
B6-066P-PZ	7/26/2016	NA	15	5-15	3.33	8.76	9.31	0.55	-	9.10	-	trace	8.70	trace	NM	NM	NM	9.02	9.03	0.01	9.27	10.31	1.04	9.07	9.46	0.39	9.61	11.30	1.69
B6-066Q-PZ	7/26/2016	NA	15	5-15	2.50	-	7.94	-	-	7.98	-	-	7.55	-	NM	NM	NM	-	7.87	-	-	8.22	-	-	8.39	trace	trace	8.53	trace
B6-066R-PZ	7/26/2016	NA	15	5-15	2.71	-	9.25	-	-	9.25	-	-	9.20	-	NM	NM	NM	-	9.22	-	-	9.37	-	-	9.51	-	-	9.59	trace
B6-066S-PZ	7/25/2016	NA	15	5-15	2.50	-	11.19	-	-	11.21	-	trace	10.90	trace	NM	NM	NM	-	11.20	-	trace	11.42	trace	trace	11.43	trace	trace	11.46	trace
B6-066T-PZ	7/26/2016	NA	15	5-15	2.58	-	10.93	-	-	10.99	-	-	10.64	-	NM	NM	NM	-	10.96	-	-	11.13	-	-	11.19	-	-	11.20	-
B6-066U-PZ	9/20/2016	NA	15	5-15	3.45	11.68	13.20	1.52	-	12.81	-	11.10	11.35	0.25	NM	NM	NM	11.72	12.02	0.30	12.01	12.61	0.60	12.08	12.44	0.36	12.16	12.30	0.14
B6-066W-PZ	9/20/2016	NA	15	5-15	3.70	8.96	8.97	0.01	-	9.00	-	-	9.57	-	NM	NM	NM	-	8.88	-	9.21	9.24	0.03	8.35	8.37	0.02	8.49	8.52	0.03
B6-066X-PZ	9/20/2016	NA	13	3-13	3.05	-	11.18	-	-	11.20	-	-	10.71	-	NM	NM	NM	-	11.17	-	-	11.46	-	-	11.50	-	-	11.55	-
B6-066Y-PZ	9/20/2016	NA	15	5-15	3.50	-	10.96	-	-	11.05	-	-	11.50	-	NM	NM	NM	-	11.00	-	-	11.41	-	-	11.55	-	-	11.63	-
B6-066Z-PZ	9/19/2016	NA	13.9	3.9-13.9	2.95	-	11.30	-	-	14.15	-	-	11.00	-	NM	NM	NM	-	11.29	-	-	11.48	-	trace	11.53	trace	trace	11.56	trace
B6-066AA-PZ	9/21/2016	11/29/2017	15	5-15	3.22	-	8.05	-	-	8.10	-	-	7.60	-	NM	NM	NM	-	8.97	-	-	8.33	-	-	8.50	-	-	8.36	-
B6-066BB-PZ	9/20/2016	11/29/2017	15	5-15	3.45	-	11.79	-	-	10.78	-	-	11.62	-	NM	NM	NM	-	11.83	-	-	11.94	-	-	11.95	-	-	11.96	-
B6-066CC-PZ	9/20/2016	11/29/2017	15	5-15	3.00	-	10.74	-	-	10.76	-	-	10.45	-	NM	NM	NM	-	10.75	-	-	10.95	-	-	10.98	-	-	11.01	-
B6-066DD-PZ	9/20/2016	11/29/2017	15	5-15	3.70	-	13.00	-	-	13.05	-	-	12.84	-	NM	NM	NM	-	13.02	-	-	13.24	-	-	12.15	-	-	13.16	-
B6-066EE-PZ	9/20/2016	11/29/2017	15	5-15	3.30	-	8.54	-	-	8.55	-	-	8.10	-	NM	NM	NM	-	8.47	-	-	8.77	-	-	8.93	-	-	9.06	-
B6-066FF-PZ	9/21/2016	NA	15	5-15	3.31	-	11.85	-	-	11.95	-	-	11.41	-	NM	NM	NM	-	11.92	-	-	12.24	-	-	12.34	-	trace	12.40	trace
B6-066GG-PZ	9/21/2016	NA	15	5-15	3.04	-	12.09	-	-	12.00	-	-	11.85	-	NM	NM	NM	-	11.99	-	-	12.11	-	-	12.16	-	-	12.20	-
B6-066HH-PZ	9/21/2016	11/29/2017	15	5-15	2.92	-	12.12	-	-	12.15	-	-	13.90	-	NM	NM	NM	-	12.13	-	-	12.27	-	-	12.27	-	-	12.29	-
B6-066II-PZ	9/20/2016	11/29/2017	15	5-15	3.36	-	8.19	-	-	8.21	-	-	7.73	-	NM	NM	NM	-	8.44	-	-	8.46	-	-	8.61	-	-	8.74	-
B6-066JJ-PZ	1/13/2017	NA	15	5-15	3.00	8.44	8.47	0.03	-	8.45	-	trace	8.00	trace	NM	NM	NM	trace	8.37	trace	8.74	9.30	0.56	8.48	9.78	1.30	8.89	9.76	0.87
B6-066KK-PZ	1/13/2017	NA	18	5-18	3.15	-	7.92	-	-	7.95	-	-	8.50	-	NM	NM	NM	-	7.47	-	-	7.17	-	-	8.29	-	-	8.44	-
B6-066LL-PZ	1/13/2017	NA	15	5-15	3.10	-	8.53	-	-	8.55	-	-	8.11	-	NM	NM	NM	-	8.46	-	-	8.73	-	-	8.87	-	-	8.99	-
B6-066MM-PZ	1/13/2017	NA	15	5-15	3.26	-	9.93	-	-	9.98	-	-	9.69	-	NM	NM	NM	-	9.90	-	-	10.17	-	-	10.41	-	-	10.69	-
B6-066NN-PZ	1/13/2017	8/10/18*	15	5-15	3.27	-	11.29	-	-	11.30	-	trace	10.97	trace	NM	NM	NM	-	11.29	-	-	11.50	-	-	11.53	-	-	11.59	-
B6-066OO-PZ	1/16/2017	NA	15	5-15	3.05	-	11.56	-	-	12.61	-	trace	11.25	trace	NM	NM	NM	-	11.57	-	-	11.99	-	-	11.81	-	-	11.82	-
B6-066PP-PZ	1/16/2017	NA	20	5-20	2.97	-	11.62	-	-	11.67	-	-	11.32	-	NM	NM	NM	-	11.64	-	-	11.81	-	-	11.83	-	-	11.86	-
B6-066QQ-PZ	1/16/2017	NA	15	5-15	2.67	-	11.26	-	-	11.30	-	-	10.96	-	NM	NM	NM	-	11.25	-	-	11.44	-	-	11.48	-	trace	11.51	trace
B6-066RR-PZ	1/16/2017	NA	16	6-16	3.50	-	12.24	-	-	12.30	-	trace	13.95	trace	NM	NM	NM	-	12.25	-	-	12.45	-	-	12.49	-	-	12.52	-
B6-066SS-PZ	1/16/2017	NA	16	6-16	3.20	12.31	13.50	1.04	-	13.24	-	12.15	12.30	0.15	NM	NM	NM	12.37	13.40	1.03	12.50	13.33	0.83	12.51	12.85	0.34	12.54	12.80	0.26
B6-066TT-PZ	1/16/2017	NA	16	6-16	3.74	-	12.81	-	-	12.90	-	trace	12.60	trace	NM	NM	NM	-	12.84	-	-	12.97	-	-	12.99	-	-	13.00	-
B6-066UU-PZ	1/16/2017	NA	15	5-15	3.05	-	11.61	-	-	11.65	-	-	11.31	-	NM	NM	NM	-	11.64	-	-	11.82	-	-	11.89	-	-	11.90	-
B6-066VV-PZ	1/13/2017	NA	15	5-15	2.95	7.52	7.71	0.19	-	7.70	-	6.90	7.00	0.10	NM	NM	NM	7.75	8.01	0.26	8.04	8.42	0.38	7.90	7.91	0.01	7.95	8.00	0.05
B6-066WW-PZ	1/13/2017	NA	15	5-15	2.97	8.46	11.94	3.48	-	8.70	-	8.00	9.75	0.25	NM	NM	NM	8.33	12.54	4.21	9.70	11.26	1.56	7.77	9.11	1.34	8.90	9.11	0.21
B6-066XX-PZ	1/17/2017	NA	15	5-15	2.43	7.20	9.91	2.71	-	10.40	-	6.60	7.65	0.05	NM	NM	NM	7.10	8.74	1.64	7.39	8.85	1.46	7.47	7.59	0.12	7.60	7.91	0.31
B6-066YY-PZ	1/17/2017	NA	15	5-15	3.10	6.73	10.77	4.04																					

ATTACHMENT 1



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Replogle, E.I.T.
 Drilling Company : Green Services, Inc.
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/5/16
 Weather : 80s, Sunny

Northing (US ft) : 571512.31
 Easting (US ft) : 1459800.72

Boring ID: B6-066-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		2.2	B6-066-SB-1	(0-0.7') ORGANIC CLAY, soft, brown, moist, low plasticity, cohesive	OL	Grass and small roots present
				(0.7-1') CLAY with SAND, soft, brown, moist, low plasticity, cohesive	CL	
		5.7		(1-1.2') BRICK GRAVEL, loose, yellow, dry, non plastic, non cohesive	-	
	94	82.6		(1.2-4.5') SILT with GRAVEL and SAND, soft, brown grading to dark brown, dry grading to moist, non plastic, non cohesive	ML	
		40.0				
		510.8	B6-066-SB-5	(4.5-5') SILT with SAND, soft, black, very moist to wet, non plastic, non cohesive	ML	Strong oil odor, trace product
5		20.7		(5-6.5') SANDY GRAVEL, loose, black, wet, non plastic, non cohesive	GP/SP	Wet at 5' bgs Product present throughout sleeve and in clay
		7.1		(6.5-9.5') CLAY, very soft, olive green and black, wet, high plasticity, cohesive		
	100	-			CL	Strong odor and slightly viscous with sheen
		-				
		-		(9.5-10') SANDY GRAVEL, loose, black, wet, non plastic, non cohesive	GP/SP	
10		-		(10-13') CLAY with some SLAG GRAVEL, very soft, dark gray to black, wet, high plasticity, cohesive		
	100	-			CL	Strong odor
		-				
End of Boring						

Total Borehole Depth: 13' bgs.

Boring terminated due to water and piezometer installation at 13' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/12/16
 Weather : 80s, Sunny

Northing (US ft) : 571485.67
 Easting (US ft) : 1459801.19

Boring ID: B6-066A-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2') SANDY SILT, firm, brown, dry, cohesive, low plasticity	ML	Wet at 9' bgs
	80	9.2	None	(2-9') SANDY SILT with GRAVEL, medium dense, brown, moist, non plastic, non cohesive	ML	
		2.3				
		9.3				
5		2.9				
	50	-				
		-				
		93.3		(9-10.5') SILTY SAND, medium dense, very dark brown, wet, non plastic, non cohesive	SM	
		383.1		(10.5-14') SANDY SILT, firm, dark brown, dry, non plastic, non cohesive	ML	
		7.31		(14-15') SANDY SILT, soft, black, wet, non plastic, non cohesive	ML	
10		-				
	100	-				
		-				
		-				
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/12/16
 Weather : 80s, Sunny
 Northing (US ft) : 571505.64
 Easting (US ft) : 1459777.72

Boring ID: B6-066B-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		61.6	None	(0-1.5') ORGANIC SILT with trace SAND, soft, brown, dry, non plastic, non cohesive	OL	Wet at 9' bgs Product present, amber sheen, strong odor
	60	19.8		(1.5-3') SILT, hard, brown and reddish yellow, dry, non plastic, non cohesive	ML	
		30.6		(3-4') SILT with SLAG GRAVEL, soft, black, dry, non plastic, non cohesive	ML	
		181.0		(4-7') SAND and SLAG GRAVEL, loose, black and yellow, dry, non plastic, non cohesive	SP/GP	
5		934.1				
		-				
	50	540.1		(7-9') CLAYEY SILT, soft, very dark gray, low plasticity, cohesive	ML	
		260.8		(9-10') SANDY CLAY, very soft, black, wet, high plasticity, cohesive	CH	
10		100.2	(10-13') CLAYEY GRAVEL, loose, black, wet, non plastic, non cohesive	GW-GC	Product present, amber sheen, strong odor	
		-				
	70	29.1	(13-15') CLAY, very soft, very dark gray and greenish gray, very moist to wet, high plasticity, cohesive	CH		
		9.0				
		6.5				
15	End of Boring					

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/12/16
 Weather : 80s, Sunny

Northing (US ft) : 571733.95
 Easting (US ft) : 1459802.35

Boring ID: B6-066C-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-	None	(0-3') SILT, hard, yellowish brown, dry, cohesive, low plasticity	ML	Wet at 4' bgs	
	70	2.4					
		6.1					
		1.3		(3-5') SAND and GRAVEL with SILT, loose, dark gray and brown, dry, non plastic, non cohesive	GP/SP		
		2.0					
5		-		(5-8') SANDY SILT with BRICK GRAVEL, soft, very dark gray and yellow, dry, non plastic, non cohesive	ML		
	70	180.6					
		9.6					
		0.4		(8-9') SANDY GRAVEL with SILT, loose, dusky red, very moist to wet, non plastic, non cohesive	GP/SP		
		2.6		(9-15') SILTY CLAY, very soft, black, wet, cohesive, medium plasticity			
10		1.0			CL		
		2.2					
	100	3.4					
		0.2					
		0.1					
15	End of Boring						

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/12/16
 Weather : 80s, Sunny

Northing (US ft) : 571510.01
 Easting (US ft) : 1459827.19

Boring ID: B6-066D-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2') SILT with GRAVEL, soft, brown, dry, non plastic, non cohesive	ML	
	70	0.1	None	(2-3') SANDY SILT, very firm, brown, dry, cohesive, low plasticity	ML	
		0.6		(3-5') SANDY SILT with SLAG GRAVEL, soft, brown, non plastic, non cohesive	ML	
		4.0				
		4.7				
5		-		(5-8') SANDY SILT with SLAG GRAVEL, firm, dark gray, cohesive, low plasticity	ML	
	70	161.0				
		525.7		(8-10') SANDY CLAY with GRAVEL, soft to very soft, black, wet, cohesive, medium plasticity	CL	Wet at 8.5' bgs Moderate odor
		244.9				
		266.6		(10-13') CLAY with GRAVEL and SAND, very soft, black, wet, cohesive, medium plasticity	CL	Strong odor
10		-				
	70	-		(13-15') SAND and GRAVELLY SILT, soft, gray and dark gray, wet, cohesive, low plasticity	ML	Product present 14-15' bgs
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : N. Kurtz
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571487.33
 Easting (US ft) : 1459825.46

Boring ID: B6-066E-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-5') SLAG GRAVEL with coarse SAND, gray and black		
	60	0.5 5.0 4.8 232.2	None			
5		-		(5-11.5') CLAY, trace GRAVEL throughout, wet, high plasticity, cohesive		Wet at 5' bgs
	80	-			CH	
10		-		(11.5-12.5') SAND and GRAVEL, wet	SW/GW	
	90	-		(12.5-13.5') CLAY, trace GRAVEL throughout, wet, high plasticity, cohesive	CH	
		-		(13.5-15') SLAG GRAVEL and coarse SAND, wet	GW	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : N. Kurtz
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571463.60
 Easting (US ft) : 1459801.43

Boring ID: B6-066F-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	None	(0-1.5') FILL with brown SILT and GRAVEL	GM	Wet at 5' bgs Product at 8.5' bgs Product at 9.5-10' bgs Product with sheen
	80	0.0		(1.5-3') SILTY CLAY, firm, gray and reddish yellow, cohesive, medium plasticity	CL	
		0.0		(3-5') SAND and SLAG GRAVEL, coarse grained, brown, moist, non plastic, non cohesive	SW	
5		2.3		(5-6.5') SAND and SLAG GRAVEL, coarse grained, gray, moist, non plastic, non cohesive	SW	
	60	-		(6.5-10') SAND and SLAG GRAVEL, coarse grained, black, moist, non plastic, non cohesive	SP/GP	
		-		(10-15') SLAG GRAVEL and coarse SAND with trace CLAY, wet	GP/SP	
10		-				
	40	-				
		-				
15		-				
End of Boring						

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : N. Kurtz
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571483.43
 Easting (US ft) : 1459776.15

Boring ID: B6-066G-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-11') SLAG GRAVEL with coarse SAND and som SILT and GRAVEL, loose, black and gray, non plastic, non cohesive		
	70	0.0	None			
		0.2				
		41.0				
		0.3				
5		-			GW	Wet at 5' bgs
		-				
	80	-				
		-				
		-				
10		-		(11-12') SAND, coarse grained, gray, wet	SP	
		-				
	70	-		(12-14') SLAG GRAVEL with coarse SAND, some SILT, some GRAVEL, loose, black and gray, non plastic, non cohesive	GW	
		-				
		-				
		-		(14-15') SILTY CLAY, sticky, black, wet, cohesive, medium plasticity	CL	Trace NAPL with strong odor 14-15' bgs
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571508.10
 Easting (US ft) : 1459718.79

Boring ID: B6-066H-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2.5') SILT with trace SAND and GRAVEL, soft, pale brown, dry, non plastic, non cohesive	ML	
	80	0.2	None	(2.5-3') SILT, hard, yellowish brown, dry, non plastic, non cohesive	ML	
		0.2		(3-5') SILT with SAND and small GRAVEL, soft, brown, dry, non plastic, non cohesive	ML	
		0.3				
		0.4				
5		-		(5-8') SILT, hard, greenish brown, dry, non plastic, non cohesive	ML	
	50	1.3				
		3.6		(8-9.5') SANDY SILT, soft, brown, dry, non plastic, non cohesive	ML	
		1.6		(9.5-10') SILT with SAND, soft, black, wet, cohesive, low plasticity	ML	Wet at 9.5' bgs
10		-		(10-12') CLAY with SAND, very soft, black, wet, cohesive, high plasticity	CL	
	70	-		(12-13.7') SANDY GRAVEL, loose, very dark brown, wet, non plastic, non cohesive	GP/SP	
		-		(13.7-15') CLAY with SAND, very soft, black, very moist to wet, medium plasticity, cohesive	CL	Moderate odor
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571534.24
 Easting (US ft) : 1459744.66

Boring ID: B6-066I-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-2') SILT with SAND, soft, brown, dry, non plastic, non cohesive	ML	Moderate odor, trace product Wet at 9' bgs Strong odor, trace product Piezometer installed to 13'
1.9	80	0.3		(2-3.5') CLAY, very firm, yellowish brown, dry, medium plasticity, cohesive	CL	
1.5		0.7		(3.5-4.5') SANDY SILT, soft, dark brown, dry, non plastic, non cohesive	ML	
5		-		(4.5-7.5') SILT with SLAG GRAVEL and trace BRICK, soft, dark brown, dry, non plastic, non cohesive	ML	
70		1.6				
		1.9		(7.5-8.5') GRAVELLY SILT, soft, black, moist, low plasticity, cohesive	ML	
		0.7		(8.5-12.5') SANDY GRAVEL with SILT, loose, black, very moist then wet, non plastic, non cohesive	GP/SP	
10		-				
		0.2				
	80	0.4		(12.5-15') CLAY with trace SAND, very soft, black, wet, medium plasticity, cohesive	CL	
		0.5				
		0.4		(15-19') CLAY with trace SAND, very soft, very pale brown, very moist to wet, medium plasticity, cohesive	CL	
15		-				
	80	0.1				
		0.2				
		0.4	(19-19.5') SANDY CLAY, firm, reddish yellow, moist, medium plasticity, cohesive	CL		
		0.4		CL		
20			(19.5-20') CLAY with trace SAND, very soft, very pale brown, very moist to wet, medium plasticity, cohesive			
			End of Boring			

Total Borehole Depth: 20' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : N. Kurtz
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571560.94
 Easting (US ft) : 1459775.55

Boring ID: B6-066J-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.8	None	(0-2') SAND, CLAY, and GRAVEL FILL, various colors	SW/GC	
		0.3		(2-3') SILTY CLAY, firm, light gray, non plastic, non cohesive	CL	
	80	0.0		(3-5') SILT with SAND and GRAVEL, gray	ML	
		0.4				
		0.6				
5		1.1		(5-10') SLAG, GRAVEL and SAND sized, black	GW	Wet at 8' bgs Product at 8.5' bgs, black and sticky; slight petroleum odor
	80	8.8				
		-				
10		-		(10-14') SILTY CLAY, very soft, black	CL	Strong odor from 10-14' bgs
	70	-				
		-				
		-		(14-15') SAND, coarse, gray	SW	
15			End of Boring			

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : N. Kurtz
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571599.61
 Easting (US ft) : 1459803.34

Boring ID: B6-066K-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	None	(0-0.5') ASPHALT/FILL	N/A	Wet at 8' bgs Strong odor
		0.0		(0.5-4') SILTY CLAY, beige, medium plasticity, cohesive	CL	
	80	0.0				
		0.0				
		2.6		(4-11') SLAG GRAVEL with coarse SAND, black	GW	
5		0.0				
	80	1.0				
		-				
10		-		(11-13') SANDY CLAY, black, high plasticity, cohesive	CL	
	80	-		(13-14') SAND, coarse, olive green	SW	
		-		(14-15') CLAY, firm, olive green, medium plasticity, cohesive	CL	
15			End of Boring			

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : N. Kurtz
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/20/16
 Weather : 80s, Sunny

Northing (US ft) : 571537.81
 Easting (US ft) : 1459827.29

Boring ID: B6-066L-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0		(0.1') CLAY, gray and reddish yellow, medium plasticity, cohesive	CL	Petroleum odor throughout 4-15' bgs
		16.5		(1-3.5') SLAG GRAVEL with coarse SAND and trace SILT, black	GW	
	90	12.1	None			
		4.9		(3.5-4') CONCRETE	N/A	
		10.1		(4-5') SLAG GRAVEL with coarse SAND and trace SILT, black	GW	
5		-		(5-15') SILTY CLAY, soft, black, wet, medium plasticity, cohesive		Wet at 8' bgs
		-				
	50	1.0				
		1.0				
		0.8				
10		-			CL	
		-				
	100	-				
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/22/16
 Weather : 90s, Sunny
 Northing (US ft) : 571462.37
 Easting (US ft) : 1459826.82

Boring ID: B6-066M-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.5') ORGANIC SILT, soft, brown, dry, non plastic, non cohesive	OL	Small roots
	80	1.3	None	(0.5-3') SANDY SILT, soft, dark brown, dry, non plastic, non cohesive	ML	
		7.5		(3-3.1') SILT, hard, dark brown, dry, non plastic, non cohesive	ML	
		121.0		(3.1-5') SANDY SILT, soft, dark brown, dry, non plastic, non cohesive	ML	
5		-		(5-8.5') SILTY CLAY with SAND, soft, light yellowish brown, moist, low plasticity, cohesive	CL	Wet at 8.5' bgs
	50	37.8				
		981.2		(8.5-11.5) BRICK and SLAG GRAVEL with SILT, loose, black and red, wet, non plastic, non cohesive	GP	
10		-				
	80	193.6		(11.5-13.5') CLAY with SAND, soft, very moist to wet, cohesive, high plasticity	CH	
		34.6		(13.5-14.5') SANDY CLAY with GRAVEL, firm, gray, moist, cohesive, medium plasticity	CL	
		128.1		(14.5-15') SLAG GRAVEL with CLAY, GRAVEL, loose, gray, wet, non plastic, non cohesive	GP	
15		62.3		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/22/16
 Weather : 90s, Sunny

Northing (US ft) : 571438.63
 Easting (US ft) : 1459802.53

Boring ID: B6-066N-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.5') SANDY SILT with GRAVEL, soft, brown, non plastic, non cohesive	ML	Organics present Moderate to strong odor Wet at 8.5' bgs
		14.9		(1.5-1.7') SILT, soft, yellowish brown, moist, low plasticity, cohesive	ML	
	76	6.7	None	(1.7-4.2') SILTY SAND with SLAG GRAVEL and BRICK, fine to coarse grained, loose, brown, gray and dark red, dry, non plastic, non cohesive	SW	
		1,293				
		679.1		(4.2-5') CLAY, soft, greenish gray, very moist, medium plasticity, cohesive	CL	
5		-		(5-8.5') CLAY, soft, greenish gray grading to grayish green, intermittent areas of black sand, wet, medium plasticity, cohesive	CL	
	80	62.3				
		>15,000		(8.5-10') SILTY SAND with SLAG GRAVEL, fine to coarse grained, loose, black and greenish gray, wet, non plastic, non cohesive	SW	
		>15,000				
10		-		(10-13') SANDY GRAVEL with CLAY, loose, black, pale yellow and dusky red, wet, non plastic, non cohesive	GP/SP	
	90	-		(13-15') CLAY, very soft, greenish gray, very moist, medium plasticity, cohesive	CL	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/22/16
 Weather : 90s, Sunny

Northing (US ft) : 571462.09
 Easting (US ft) : 1459777.75

Boring ID: B6-066O-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-2.3') SAND, very fine grained, loose, brown, dry, non plastic, non cohesive	SP	Small roots
	50	131.7		(2.3-4.5') SANDY SILT, firm, brown, moist, non plastic, non cohesive	ML	
		105.2				
		19.3		(4.5-4.7') SAND, medium to coarse grained, loose, very pale brown, non plastic, non cohesive	SW ML	Wet at 6.5' bgs
5		-		(4.7-5') SANDY SILT, soft, brown, moist, non plastic, non cohesive	ML	
		2.6		(5-7') SANDY SILT, soft, brown, moist to wet, low plasticity, cohesive		
	80	14.5		(7-8') SILTY SAND, very fine to fine grained, medium dense, brown, wet, non plastic, non cohesive	SM	
		9.5		(8-10') CLAYEY SILT with SAND, soft then very firm, grayish brown grading to yellowish brown with trace oxidation, moist, low plasticity, cohesive	ML	
		262.5		(10-12.5') CLAYEY SAND, very soft, brown, wet, non plastic, non cohesive	SW	
10		-		(12.5-13') SANDY CLAY, soft, brown, very moist, low plasticity, cohesive	CL	Moderate odor
	70	196.6		(13-13.5') CLAY with SAND, firm, brown and reddish yellow mottling, moist, low plasticity, cohesive	CL	
		16.0		(13.5-14') SLAG, SAND sized, loose, light gray, dry, non plastic, non cohesive	SP	Trace organics and product
		56.4		(14-15') CLAY with SAND, very soft, black, very moist to wet, medium plasticity, cohesive	CL	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/26/16
 Weather : 100s, Sunny

Northing (US ft) : 571437.09
 Easting (US ft) : 1459777.75

Boring ID: B6-066P-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.5') ASPHALT, loose, gray, dry, non plastic, non cohesive	N/A	
		-		(0.5-5') SILTY SAND with SLAG GRAVEL and BRICK, soft, red, dark brown and brown, dry, non plastic, non cohesive		
60	36.7		None		SM	
		89.3				
		201.8				
5		-		(5-10') SANDY GRAVEL with SILT, loose, very dark brown, wet, non plastic, non cohesive		
		-				
40		-			GP/SP	Wet at 8' bgs
		83.2				Moderate odor
		39.0				A minor amount of product present throughout (amber-brown in color)
10		-		(10-15') No Recovery, wet		
		-				
		-				
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/26/16
 Weather : 100s, Sunny

Northing (US ft) : 571462.09
 Easting (US ft) : 1459752.75

Boring ID: B6-066Q-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-2.9') SILT, very firm, brownish yellow, dry, non plastic, non cohesive	ML	Crumbly
	50	0.7		(2.9-3.9') SILT with SAND and GRAVEL, soft, light gray and dark brown, dry, non plastic, non cohesive	ML	
		11.1		(3.9-4.5') CONCRETE, SAND sized with some GRAVEL, loose, white, non plastic, non cohesive	N/A	Metallic specs
		47.3		(4.5-5') SAND with SILT, fine grained, loose, dark brown, non plastic, non cohesive	SP	
5		-		(5-8') SILT, soft, brown, dry, non plastic, non cohesive	ML	
	60	20.3				Wet at 8' bgs
		3.7		(8-9') CLAY with SAND, very soft, grayish olive, very moist to wet, medium plasticity, cohesive	CL	
		8.7		(9-10') SILTY GRAVEL with SAND, loose, black, wet, non plastic, non cohesive	GW/GM	Strong odor
10		-		(10-15') CLAY, soft, grayish green, very moist to wet, medium plasticity, cohesive		
	80	0.4				CL
		0.7				
		0.1				
		0.2				
15	End of Boring					

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 07/26/16
 Weather : 100s, Sunny

Northing (US ft) : 571484.85
 Easting (US ft) : 1459751.39

Boring ID: B6-066R-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-3') SILT, hard, light gray and yellowish brown, dry, cohesive, low plasticity	ML	Wet at 8' bgs Strong odor
0.1						
0.6	86					
0.4				(3-4') SANDY SILT, soft, brown, dry, non plastic, non cohesive	ML	
0.1				(4-4.5') CLAYEY SILT, very firm, reddish yellow, moist, low plasticity, cohesive	ML	
5				(4.5-5') SANDY SILT, soft, brown, dry, non plastic, non cohesive	ML	
-				(5-6') CLAY, hard, brown and reddish yellow, dry, low plasticity, cohesive	CL	
6.1				(6-8') SILT with SAND, soft, pale brown, dry, non plastic, non cohesive	ML	
4.5	90					
18.9				(8-8.2') CLAY, very soft, black, very moist to wet, medium plasticity, cohesive	CL	
				(8.2-9') CLAYEY GRAVEL with SAND, loose, black, wet, non plastic, non cohesive	GP/GC	
1.4				(9-10') CLAY, very soft, black, very moist to wet, medium plasticity, cohesive	CL	
10				(10-15') CLAY, very soft, black, wet, medium plasticity, cohesive	CL	
1.1	90					
6.3						
1.4						
0.5						
15			End of Boring			

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 07/25/16
 Weather : 100s, Sunny

Northing (US ft) : 571413.63
 Easting (US ft) : 1459802.53

Boring ID: B6-066S-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-2.5') SILTY SAND with trace GRAVEL, loose, pale brown, dry, non plastic, non cohesive	SP	Strong odor, trace product Wet at 9.8' bgs
	60	2.1		(2.5-3.5') SILT, hard, black, dry, non plastic, non cohesive	ML	
		52.9		(3.5-6') BRICK, SILT and SAND sized, loose, red, dry, non plastic, non cohesive	N/A	
5		17.4		(6-10') SANDY GRAVEL and BRICK, loose, dark brown and red, wet at 9.8' bgs	GP/SP	
	20	-		(10-15') GRAVELLY SAND and BRICK, loose, yellow and very dark brown, wet, non plastic, non cohesive	SW/GW	
		100.6				
10		-				
	60	60.2				
		45.6				
		9.3				
15			End of Boring			

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 07/26/16
 Weather : 100s, Sunny

Northing (US ft) : 571438.63
 Easting (US ft) : 1459827.53

Boring ID: B6-066T-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') ASPHALT, loose, gray, dry, non plastic, non cohesive	N/A	Moderate odor
				(0.5-2.4') SAND, fine to medium grained, loose, pale brown, dry, non plastic, non cohesive	SW	
	70	0.3	None	(2.4-4') SILTY SAND with some BRICK GRAVEL, medium dense, dark brown, dry, non plastic, non cohesive	SM	
		0.5				
		0.3		(4-4.3') BRICK, SILT sized, firm, red, moist, cohesive, low plasticity	N/A	
5				(4.3-5') SANDY GRAVEL, loose, pale brown and gray, dry, non plastic, non cohesive	GP/SP	
				(5-8') BRICK GRAVEL and SAND, loose, yellow, dry, non plastic, non cohesive	N/A	
	50	0.8				
		9.4		(8-14') SANDY CLAY, very soft, grayish brown, very moist to wet, cohesive, low plasticity		
10		2.3				
					CL	
	60	6.2				
		5.9				
		2.8		(14-15') SANDY GRAVEL with CLAY, loose, brown, wet, non plastic, non cohesive	GP/SP	Wet at 14' bgs
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571412.09
 Easting (US ft) : 1459777.75

Boring ID: B6-066U-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-		(0-0.9') SAND, fine to medium grained, medium dense, brown 2-2.2', then very pale brown 2.2-2.4', dry, non plastic, non cohesive	SW	Light odor from 3-5' bgs	
		-		(0.9-2') SLAG SAND and GRAVEL, medium dense, gray, dry, non plastic, non cohesive	SW/GW		
	60	15.5	None	(2-2.9') SILT, medium dense, very dark brown, dry, non plastic, non cohesive	ML		
		134.8		(2.9-4.6') SLAG SAND and GRAVEL, loose to medium dense, gray and reddish brown, dry, non plastic, non cohesive	SW/GW		
		29.2					
5		-		(4.6-8') SILT, very dense, very dark brown, dry, low plasticity, cohesive	ML		
	50	27.8					
		9.9		(8-14.2') SLAG with SILT, SAND and GRAVEL, medium dense, gray and dark gray, dry, non plastic, non cohesive	SW/GW		Visible product from 9.9-10' bgs
		23.9					Moderate odor from 9.9-14.2' bgs
10		-					
	60	72.1					
		75.4					Wet at 14.2' bgs due to very saturated clay
		1.1		(14.2-15') CLAY with trace SAND, very soft, greenish gray, very moist to wet, medium plasticity, cohesive	CL		
15	End of Boring						

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571412.09
 Easting (US ft) : 1459752.75

Boring ID: B6-066W-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.8') SANDY SILT, loose, pale brown 0-0.2', then brown 0.2-1.8', dry, non plastic, non cohesive	ML	
	60	177.7	None	(1.8-6') SLAG and SAND, medium dense, brown, dry, non plastic, non cohesive	SW/GW	
		14.1				
		62.4				
5		-		(6-8.5') SLAG, SILT to SAND sized, with trace GRAVEL, soft to loose, brown and reddish brown, dry, non-plastic, non-cohesive	ML/SW	
	60	38.0				
		132.6		(8.5-9.6') SLAG, SAND and GRAVEL, medium dense, black, wet	SW/GW	Wet at 8.5' bgs with strong odor and sheen
		6.2				
10		-		(9.6-10') CLAY, hard, grayish green, dry, medium plasticity, cohesive	CL	
		-				
	60	-		(12-15') SLAG, SAND grading to GRAVEL-sized, medium dense, black, wet, non-plastic, non-cohesive	SW/GW	
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571515.74
 Easting (US ft) : 1459854.12

Boring ID: B6-066X-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.6') ORGANIC SILT, soft, moist	OL	
		-		(0.6-1.7') SLAG, SAND and GRAVEL, loose, gray, dry, non-plastic, non-cohesive	SW/GW	
70	15.1	15.1	None	(1.7-3') SANDY SILT, with SLAG GRAVEL, medium dense, black and gray, dry, non-plastic, non-cohesive	ML	
		7.6		(3-4') SILT, very dense, dark grayish, brown, dry, non-plastic, non-cohesive	ML	
5		2.1		(4-12.5') SLAG and BRICK, SILT to SAND-sized, red and dark brown, dry, non-plastic, non-cohesive	ML/SW	Moderate odor 9-10' bgs, minimum to moderate product with greasy feel, amber
70	13.5	115.5				
		207.2				
10		2.2				Wet at 12.5' bgs
100	8.5	8.5				Trace wood fragments at 12.5'-13' bgs
		5.5		(12.5-13') SANDY CLAY, very soft, black, wet, medium plasticity, cohesive	CL	
End of Boring						

Total Borehole Depth: 13' bgs.

Boring terminated due to refusal, water, and installation of piezometer.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/19/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571537.81
 Easting (US ft) : 1459852.29

Boring ID: B6-066Y-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.6') SILT, trace ORGANICS, medium dense, brown, dry, non-plastic, non-cohesive	ML	
	50	2.0	None	(0.6-4.5') SLAG and BRICK, SAND and GRAVEL, medium dense, red, gray, and pale brown, dry, non plastic, non cohesive	SW/GW	
		1.7				
		5.0				
5		-		(4.5-7') CLAY, hard, reddish yellow and pale brown, dry, low plasticity, cohesive	CL	
		-				
	20	-		(7-15') CLAY with SAND, no SAND (13-15'), with WOOD fragments (13-13.2') very soft, dark brownish gray, then grayish green (13-15'), wet, medium plasticity, cohesive		
		-				
		2.7				Wet at 9' bgs due to very saturated clay
10		-				
		7.2			CL	Moderate odor 9-13' bgs
	80	2.2				
		8.3				
		0.3				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/19/16
 Weather : 80s, Rainy
 Northing (US ft) : 571487.33
 Easting (US ft) : 1459850.46

Boring ID: B6-066Z-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2.5') SLAG SAND and GRAVEL, medium dense, grayish brown, dry, non-plastic, non-cohesive	SW/GW	Moderate sweet odor
	84	10.4	None	(2.5-3.5') SILT, soft, very dark brown, dry, non-plastic, non-cohesive	ML	
		38.1		(3.5-4') CLAYEY SILT, soft, very dark brown, moist, low plasticity, cohesive	ML	
		5.6		(4-5') SLAG, SAND sized, medium dense, gray-brown, yellow and red, dry, non-plastic, non-cohesive	SW	
5		-		(5-8.8') SANDY CLAY, soft, brown and red grading to yellowish brown, very moist, medium plasticity, cohesive	CL	Wet at 9' bgs, sheen, slippery (9-10')
	70	1.3				
		1.6				
10		111.1		(8.8-10') SLAG and BRICK, SILT to GRAVEL sized, wet, non-plastic, non-cohesive	ML/GW	
		45.9		(10-15') No recovery due to jammed liner sleeve		
	0	-			CL	
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/21/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571435.08
 Easting (US ft) : 1459728.53

Boring ID: B6-066AA-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.9') SANDY SILT, soft, yellowish brown, dry, non plastic, non cohesive	ML	Organic matter
		3.4		(0.9-2') SILT with SAND and GRAVEL SLAG, brown and black, soft, dry, non plastic, non cohesive	ML	
	50	17.6	None	(2-3.9') SLAG SAND with some GRAVEL, brown, yellow and dark gray, dry, non plastic, non cohesive	SW	
		71.4				
		-		(3.9-5') SAND, fine to medium, loose, brown, dry, non plastic, non cohesive	SW	
5		-		(5-7.2') SANDY SILT, medium to firm, brown, dry, non plastic, non cohesive	ML	
	36	-		(7.2-12') SILTY SLAG, SAND and GRAVEL sized, medium dense, black, wet, non plastic, non cohesive	SW-SM	
		6.3				
10		-				Wet at 8.8' bgs
		-				
	6	2.3		(12-15') CLAY, very soft, very moist to wet, very dark gray, medium plasticity, cohesive	CL	
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571363.98
 Easting (US ft) : 1459845.45

Boring ID: B6-066BB-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2') SILT with SLAG GRAVEL, soft, grayish brown, dry, non-plastic, non-cohesive	ML	
	72	0.0	None	(2-7') SLAG, SAND and GRAVEL, medium dense, light gray and light brown, dry, non-plastic, non-cohesive	SW/GW	Light odor (3-5')
5		0.0				
		0.0				
	20	0.0		(7-9.8') SLAG, SILT and GRAVEL-sized, medium dense, light gray, dry, non-plastic, non-cohesive	ML/GW	
10		-				
		-				
	100	3.4		(9.8-10') SLAG, SILT to GRAVEL-sized, medium dense, very moist, dark brown, non-plastic, non-cohesive	SW/GW	Wet at 10' bgs
		0.0		(10-14') SLAG, SAND and GRAVEL, more SILT from 11-14', medium dense, very dark brown, wet, non-plastic, non-cohesive	SW/GW	Strong odor (10-15'), strong sheen throughout and moderate odor
		0.0				
		0.9		(14-15') GRAVEL SLAG, loose, very dark brown, wet, non-plastic, non-cohesive	SW/GW	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571363.95
 Easting (US ft) : 1459793.11

Boring ID: B6-066CC-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-3.2') CLAY wih trace SAND, soft, pale brown, moist, medium cohesive	CL	
40		-				
		1.3	None	(3.2-9') SLAG and BRICK (SAND and GRAVEL with SILT), medium dense, light grayish, yellow, red, and very dark brown, dry (3.2-10') but very moist (4.5-4.7'), non-plastic, non-cohesive	SW/GW	
5		0.1				
		-				
46		-				
		0.0				
10		0.0		(9-12.5') SANDY CLAY, firm, pale brown, dry to moist, low plasticity, cohesive	CL	
		-				
30		-		(12.5-15') SLAG and BRICK (SAND and GRAVEL with SILT), medium dense, light grayish, yellow, red, and very dark brown, wet, non-plastic, non-cohesive	SW/GW	Wet at 13.5'
		0.0				
15		0.0				
End of Boring						

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571365.62
 Easting (US ft) : 1459902.37

Boring ID: B6-066DD-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-6.5') SLAG GRAVEL, SAND and GRAVEL, with SILT, medium dense, light gray, dry, non-plastic, non-cohesive		
20		-	None		SW/GW	
5		0.0				
		-				
50		-		(6.5-8.2') SANDY SILT, dense, grayish brown and brown, moist to dry, non-plastic, non-cohesive	ML	
		0.0		(8.2-8.4') CLAYEY SILT, firm, grayish brown, moist, low plasticity, cohesive	ML	
10		0.0		(8.4-12') SILT grading to SANDY SILT, firm, dry, non-plastic, non-cohesive	ML	
		-				
30		-		(12-15') SLAG, SILT to GRAVEL sized, dense, dark brown, and weak red, wet, non-plastic, non-cohesive		
		0.0			SW/GW	Wet at 13.5' bgs
		0.0				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571362.09
 Easting (US ft) : 1459727.75

Boring ID: B6-066EE-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2.5') SLAG GRAVEL to SILT-sized, medium dense, light brown, dry, non plastic, non cohesive	ML/GW	
	80	1.9	None	(2.5-2.7') ASPHALT, dense, gray, dry, non plastic, non cohesive	N/A	
		1.9		(2.7-9') SLAG, GRAVEL to SILT-sized, medium dense, gray, brown, and yellow, dry, non plastic, non cohesive		
		2.2				
		4.4				
5		-			ML/GW	
		-				
	40	4.0				
		1.4				
		-		(9-10') SILTY SLAG GRAVEL, medium dense, brown, wet, non plastic, non cohesive	GW-GM	Wet at 9.5' bgs
10		-		(10-15') No Recovery		
		-				
	0	-				
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/21/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571537.81
 Easting (US ft) : 1459902.29

Boring ID: B6-066FF-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.5') ASPHALT, dense, gray, dry, non plastic non cohesive	N/A	No water encountered
	60	0.0	None	(0.5-2.9') SLAG, SAND and GRAVEL, gray and pale brown, dry, non-plastic, non-cohesive	SW/GW	
		0.0		(2.9-6.8') SILTY SAND with SLAG SAND and GRAVEL, medium dense, brown and dark gray, dry, non plastic, non cohesive		
5		-			SM/SW	
		0.0				
	64	0.0		(6.8-7.1') CLAY with trace SAND, soft, light brownish gray, moist to very moist, medium plasticity, cohesive	CL	
		0.0		(7.1-9.2') SANDY SILT with SLAG GRAVEL, dense, brown, moist, non plastic, non cohesive	ML	
		-			CL	
10		-		(9.2-9.3') CLAY with SAND, very firm, reddish yellow and very pale brown with trace red, moist low plasticity, cohesive	ML	
		-		(9.3-10') SANDY SILT with SLAG GRAVEL, dense, brown, moist, non plastic, non cohesive		
	0	-		(10-15') No recovery		
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to installation of piezometer.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/21/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571489.19
 Easting (US ft) : 1459894.39

Boring ID: B6-066GG-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.6') SILTY SAND, loose, brown, moist, non-plastic, non-cohesive	SM	Wet at 8.8' bgs
		-		(0.6-1.6') ASPHALT, loose, gray, dry, non-plastic, non-cohesive	N/A	
	60	7.3	None	(1.6-3.1') SILTY fine to medium SAND, medium dense, brown, dry, non-plastic, non-cohesive	SW	
		3.9		(3.1-4.4') SLAG SAND with some GRAVEL, dark brown, brown, and gray, non-plastic, non-cohesive	SW	
5		1.5		(4.4-6') CLAY, firm, reddish yellow, and very pale brown mottling, dry, low plasticity, cohesive	CL	
		-		(6-8.3') GRAVELLY CLAY with SAND, soft to medium dense, moist, low plasticity, cohesive	CL	
	60	0.5		(8.3-8.8') SLAG, SAND and GRAVEL, medium dense, very dark brown and brown, moist, non-plastic, non-cohesive	SW/GW	
		1.9		(8.8-13.2') GRAVELLY CLAY with SAND, GRAVEL increases with depth, soft to medium dense, very moist to wet, low plasticity, cohesive	CL	
10		0.0				
		-			CL	
	56	0.6		(13.2-13.8') SLAG, SILT sized to coarse SAND, white, wet, non-plastic, non-cohesive		
		2.9		(13.8-14.2') SLAG and BRICK SAND and GRAVEL, medium dense, yellow and light gray, wet, non-plastic, non-cohesive		
		2.3		(14.2-15') GRAVELLY CLAY, trace SAND, soft to medium dense, reddish yellow, light gray, and black, very moist, low plasticity, cohesive	CL	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/21/16
 Weather : 80s, Cloudy

Northing (US ft) : 571425.65
 Easting (US ft) : 1459890.65

Boring ID: B6-066HH-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.8') ORGANIC SILT, firm, brown, dry, non plastic, non cohesive	OL	Organic matter
		14.8		(0.8-3.7') SLAG SAND with some GRAVEL, medium dense, dark brown and gray, dry, non plastic, non cohesive	SW/GW	
	60	62.0	None			
		1.5		(3.7-4') SILT, hard, dark brown, dry, low plasticity, cohesive	ML	
		-		(4-5') SAND with SLAG GRAVEL, medium dense, brown, and gray, dry, non plastic, non cohesive	SW	
5		-		(5-9.5') SLAG, SAND and GRAVEL, medium dense, brown, dry, non plastic, non cohesive		
		0.5				
	70	1.9			SW/GW	
		5.4				
		35.1		(9.5-11') SILTY CLAY, soft, brownish gray, very moist, low plasticity, cohesive	CL	
10		-				
		8.7		(11-11.6') BRICK, SAND-sized, dense, red, dry, non plastic, non cohesive	N/A	Wet at 11.6' bgs
	76	2.1		(11.6-13.5') CLAY with some SLAG GRAVEL, soft, very moist to wet, medium plasticity, cohesive	CL	
		1.0		(13.5-13.9') SLAG GRAVEL, loose, gray, wet, non plastic, non cohesive	SW/GW	
		1.1		(13.9-14.7') CLAY with some SLAG GRAVEL, soft, very moist to wet, medium plasticity, cohesive	CL	
15				(14.7-15') SLAG, SAND-sized, brown, wet, non plastic, non cohesive	SW	
				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 09/20/16
 Weather : 80s, Cloudy
 Northing (US ft) : 571398.06
 Easting (US ft) : 1459703.84

Boring ID: B6-066II-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2.3') SILT, trace ORGANICS, very stiff, grayish brown, dry, non-plastic, non-cohesive	ML	
	56	4.3	None	(2.3-8.7') SLAG and BRICK, SAND and GRAVEL, medium dense, yellow brown and gray, dry, then wet at 8' bgs, non-plastic, non-cohesive	SW/GW	
		5.6				
5		-				
		0.0				
	60	0.0				Wet at 8' bgs
		0.0				
		-		(8.7-10') CLAY, soft, dark gray and strong brown, very moist to wet, medium plasticity, cohesive	CL	
10		-		(10-15') CLAY, soft, gray and dark gray, moist to very moist, medium plasticity, cohesive		
		0.0				
	86	0.0			CL	
		0.0				
		0.0				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 01/13/17
 Weather : 40s, Sunny
 Northing (US ft) : 571437.08
 Easting (US ft) : 1459752.03

Boring ID: B6-066JJ-PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.5') GRAVELLY SAND with SILT, medium dense to dense, light brown, moist, non plastic, non cohesive	SW/GW	Wet at 8.1' bgs
	60	195.6	None	(1.5-6') SAND, fine to coarse, medium dense, brown with trace yellow, dry, non plastic, non cohesive	SW	
		328.1				
5		-		(6-9.2') SANDY SILT with trace GRAVEL, soft, strong brown and black, wet, low plasticity, cohesive	ML	
	38	398.4				
		410.2				
10		-		(9.2-15') SLAG GRAVEL, medium dense, very dark gray to black, wet, non plastic, non cohesive	GW	
	24	-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Terminated due to water and installation of piezometer.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 01/13/17
 Weather : 40s, Sunny

Northing (US ft) : 571411.51
 Easting (US ft) : 1459738.15

Boring ID: B6-066KK-PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-	None	(0-6') SAND with SILT and GRAVEL, medium dense, brown and yellow, dry, non plastic, non cohesive	SW-SM	Wet at 7.2' bgs	
	76	18.4					
		74.9					
		56.4					
		12.1					
5		-					
		8.4			(6-8.5') SILTY SLAG GRAVEL, medium dense, dark brown and black, wet, non plastic, non cohesive		GW
	76	2.1					
		1.9			(8.5-9') SANDY SILT, soft, very dark gray, wet, low plasticity, cohesive		ML
		-			(9-10') SILTY SLAG GRAVEL, medium dense, dark brown and black, wet, non plastic, non cohesive		GW
10		-					
		-					
	60	-		(12-18') SLAG GRAVEL with SILT, medium dense, gray and black, wet, non plastic, non cohesive	GW		
		-					
15		-					
		-					
	70	-					
		-		(18-20') CLAY, firm, gray, very moist, medium plasticity, cohesive	CL		
20				End of Boring			

Total Borehole Depth: 20' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 01/13/17
 Weather : 50s, Sunny

Northing (US ft) : 571393.89
 Easting (US ft) : 1459738.18

Boring ID: B6-066LL-PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.4') ORGANIC SILT, soft, brown, low plasticity, cohesive	OL	Wet at 8' bgs
				(0.4-5.5') SLAG SAND and GRAVEL, medium dense, light brown, light brownish gray, yellowish red, dry, non plastic, non cohesive		
	60	3.6	None		SW/GW	
		6.5				
		0.1				
5		-				
		-		(5.5-9.7') SLAG SAND AND GRAVEL, medium dense, brown and yellow, dry then wet at 8', non plastic, non cohesive	SW/GW	
	62	-				
		-				
10		-		(9.7-15') SLAG, SILTY SAND AND GRAVEL, medium dense, very dark gray to black	SW/GM	
	60	-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Terminated due to water and installation of piezometer.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 01/13/17
 Weather : 50s, Sunny

Northing (US ft) : 571396.13
 Easting (US ft) : 1459763.31

Boring ID: B6-066MM-PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1') SANDY SILT, firm, pale brown, moist, low plasticity, cohesive	ML	Wet at 9' bgs
	90	3.8	None	(1-5') SAND with SILT and SLAG GRAVEL, medium dense, brown, yellowish brown and gray, moist then dry at 1.6', non plastic, non cohesive	SW-SM	
		71.4				
		279.8				
5		34.5				
		-				
	70	-		(6.5-7.3') SANDY SILT, dense, brown, dry, non plastic, non cohesive	ML	
		-		(7.3-9') SAND, fine to coarse with SLAG GRAVEL and BRICK GRAVEL, medium dense to dense, brown and yellow, dry, non plastic, non cohesive	SW	
10		-		(9-12.4') SLAG GRAVEL with SAND and SILT, medium dense, very dark gray, wet, non plastic, non cohesive	GW	
		-				
	80	-		(12.4-15') CLAY, soft, dark grayish brown, high plasticity, cohesive	CH	
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 01/13/17
 Weather : 50s, Sunny

Northing (US ft) : 571398.00
 Easting (US ft) : 1459786.15

Boring ID: B6-066NN-PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.5') SAND, medium to coarse, loose, yellow, wet, non plastic, non cohesive	SW	Trace wood fragments with odor at 2' and 13' bgs
		1.2		(0.5-2.1') SAND with very small GRAVEL, fine to coarse, moist, non plastic, non cohesive	SW	
	76	46.7	None	(2.1-5.5') SLAG and BRICK SAND and GRAVEL, medium dense, red, gray, very pale brown, and brown, dry, non plastic, non cohesive	SW/GW	
		81.3				
		18.4				
5		-		(5.5-7.5') SANDY SILT, very soft, brown, wet, non plastic, non cohesive	ML	
	80	-		(7.5-11') SAND and SLAG GRAVEL, dense, brown, gray, and strong brown with trace white, moist, non plastic, non cohesive	SW/GW	
10		-		(11-14.5') SAND and SLAG GRAVEL, dense, brown, gray, and strong brown with trace white, wet, non plastic, non cohesive	SW/GW	Wet at 12' bgs
	60	-				
		-				
15		-		(14.5-15') SILTY CLAY, soft, dark gray, very moist, MP, cohesive	CL	
				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/16/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571399.66
 Easting (US ft) : 1459806.39

Boring ID: B6-066OO-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.4') SAND, fine to coarse, loose to medium dense, brown with trace yellow, dry, non plastic, non cohesive	SW	Trace organic matter
		2.6		(0.4-6') SLAG and BRICK GRAVEL and SAND, medium dense, yellow, brown and grayish brown, dry grading to moist, non plastic, non cohesive		
50		9.7	None		SW/GW	
		10.3				
5		-				
		-				
46		0.4		(6-15') BRICK and SLAG SAND and GRAVEL with SILT, medium dense to dense, dark brown, yellow and red, moist then wet at 9', non plastic, non cohesive		Wet at 9' bgs
		-				
10		-			SW/GM	
		-				
60		-				
		-				
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/16/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571409.63
 Easting (US ft) : 1459815.33

Boring ID: B6-066PP-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-1') SILTY SAND, medium dense, yellowish brown, moist, non plastic, non cohesive	SM	Moderate amount of product 9.5-10' Half metallic luster grains; trace silt lenses Wet at 14' bgs
	40	58.2		(1-3') ASPHALT, dense, dark gray, dry, non plastic, non cohesive	N/A	
		16.0		(3-9.5') SLAG and BRICK SAND and GRAVEL, medium dense, red, brown, gray and yellow, dry, non plastic, non cohesive	SW/GW	
		7.9				
5		-		(9.5-10') GRAVELLY SAND, medium dense, black, non plastic, non cohesive	SW	
	40	-				
		5.2				
		11.0		(12.5-14') SAND, fine to medium dense, dark gray, moist, non plastic, non cohesive	SW	
10		-				
	50	-	(14-16') SILTY SAND with GRAVEL, wet, dark brown, low plasticity, cohesive	SM/GW		
		-				
		-	(16-20') GRAVELLY SAND with SILT, fine to coarse, dense, dark gray and dark brown, wet, non plastic, non cohesive	SW/GM		
	56	-				
		-				
20		-				
End of Boring						

Total Borehole Depth: 20' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/16/17
 Weather : 40s, Cloudy

Northing (US ft) : 571423.07
 Easting (US ft) : 1459821.65

Boring ID: B6-066QQ-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.2') SILTY SAND, dense, yellowish brown, moist, non plastic, non cohesive	SM	
		23.1		(1.2-2.6') ASPHALT, dense, black and gray, dry, non plastic, non cohesive	N/A	
	62	68.1	None	(2.6-9.5') SLAG and BRICK SAND and GRAVEL, medium dense, red, brown with trace yellow, dry then wet at 8.5', non plastic, non cohesive		
		74.6				
		12.7				
5		-			SW/GW	
		-				
	48	2.1				
		-				
		-		(9.5-11.5') CLAYEY SILT, firm, gray and brown, moist, low plasticity, cohesive	ML	
10		-				
		-		(11.5-13') SANDY GRAVEL with SILT, medium dense, very dark gray, wet, non plastic, non cohesive	SW/GW	
	50	-				
		-		(13-15') CLAYEY SILT with some GRAVEL, firm, gray and brown, moist, low plasticity, cohesive	ML	
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/16/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571462.34
 Easting (US ft) : 1459850.05

Boring ID: B6-066RR-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.2') SANDY SILT, firm, yellowish brown, moist, non plastic, non cohesive	ML	
		26.3		(1.2-1.8') ASPHALT, dense, black and gray, dry, non plastic, non cohesive	N/A	
	74	127.7	None	(1.8-9.5') BRICK and SLAG SAND and GRAVEL, medium dense to loose, red, light gray, black, brown and yellow, dry, non plastic, non cohesive		
		56.2				
5		-				
		-			SW/GW	
	40	7.3				
		-				
		-				
10		-		(9.5-16') SILTY CLAY with SAND, firm, moist, yellowish brown and gray, low plasticity, cohesive		
		-				
	40	-			CL	
		-				
		-				
15		-				
	10	-				
End of Boring						

Total Borehole Depth: 16' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/16/17
 Weather : 40s, Cloudy

Northing (US ft) : 571470.22
 Easting (US ft) : 1459868.69

Boring ID: B6-066SS-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.8') SAND, fine to coarse, medium dense, brown grading to black and gray, dry, non plastic, non cohesive	SW	
	76	50.2	None	(1.8-2.2') ASPHALT, dense, black and gray, dry, non plastic, non cohesive	N/A	
		84.2		(2.2-2.6') SLAG, SAND sized with GRAVEL, greenish gray, dry, non plastic, non cohesive	SW/GW SM	
		84.0		(2.6-2.8') SILTY SAND, medium dense to loose, black, dry, non plastic, non cohesive	SW	
		39.5		(2.8-4') BRICK with SLAG, SAND sized with GRAVEL	ML	
5		-		(4-4.3') SILT, dense, yellowish brown and gray with trace reddish yellow mottling, dry, low plasticity, cohesive		
	50	-		(4.3-9.5') BRICK with SLAG, SAND sized with GRAVEL, dry then wet at 9.2'	SW	
10		-		(9.5-12.5') SANDY SILT, yellowish brown, very firm, moist, low plasticity, cohesive	ML	Wet at 9.2' bgs Light amber product 9.2-9.5' bgs
	40	-		(12.5-14') GRAVELLY SAND with SILT, dense, dark brown, wet, non plastic, non cohesive	SW/GW	
15		-		(14-16') SANDY GRAVEL, medium dense, dark brown, wet, non plastic, non cohesive	GW	
	70	-		End of Boring		

Total Borehole Depth: 16' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/16/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571488.63
 Easting (US ft) : 1459875.43

Boring ID: B6-066TT-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.6') SAND with SILT and trace SLAG GRAVEL, loose, brown, dry, non plastic, non cohesive	SW-SM	
	78	387.5	None	(1.6-2.1') ASPHALT, dense, gray and black, dry, non plastic, non cohesive	N/A	
		88.5		(2.1-2.5') SILTY SAND, medium dense, black, dry, non plastic non cohesive	SM	
		181.5		(2.5-9.8') BRICK and SLAG, SAND-sized with some GRAVEL, medium dense to dense, red, dark gray and yellow, dry then wet at 9.5', non plastic, non cohesive		
5		68.5			SW	
	40	-				
		-				
		-				
10		-		(9.8-13') CLAYEY SILT, dense, moist, yellowish brown and gray mottling, low plasticity, cohesive	ML	Wet at 9.5' bgs
		-				
	50	-		(13-14.2') SANDY SILT, soft, yellowish brown with trace reddish yellow, wet, low plasticity, cohesive	ML	
		-		(14.2-15.7') SILTY CLAY, firm, grayish brown with yellowish brown mottling, very moist, low plasticity, cohesive	CL	
15		-		(15.7-16') SLAG and BRICK, SAND and GRAVEL with SILT, medium dense, dark brown and red, wet, non plastic, non cohesive	SW/GM	Trace sheen 15.5-16' bgs
	50	-		End of Boring		

Total Borehole Depth: 16' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/16/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571500.20
 Easting (US ft) : 1459865.10

Boring ID: B6-066UU-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.5') ASPHALT, dark gray, loose, non plastic, non cohesive	N/A	
		17.9		(0.5-12.2') BRICK and SLAG, SAND and GRAVEL, medium dense, red, yellow, brown, white and gray, dry, non plastic, non cohesive		
	70	106.5	None			
		73.4				
5		-				
		-			SW/GW	
	50	-				Wet at 8.5' bgs
		-				Light petroleum odor 9.5-10' bgs
10		-				
		-				
	72	-		(12.2-12.4') CLAYEY SILT, very firm, yellowish brown and gray, moist, low plasticity, cohesive	ML	
		-		(12.4-14.4') BRICK and SLAG, SAND and GRAVEL, medium dense, red, dark brown, wet, non plastic, non cohesive	SW/GW	
		-				
15		-		(14.4-15') SILTY CLAY, dense, gray, moist, low plasticity, cohesive	CL	
				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 01/13/17
 Weather : 40s, Sunny

Northing (US ft) : 571624.59
 Easting (US ft) : 1459802.59

Boring ID: B6-066VV-PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.9') SILTY SAND, trace GRAVEL, dense, pale brown, moist, non plastic, non cohesive	SM	Strong organic odor 8-13' bgs Wet at 8.5' bgs
	46	7.9	None	(1.9-4.5') SLAG, SAND and GRAVEL, medium dense, brownish gray to gray, dry, non plastic, non cohesive	SW/GW	
		2.2				
		-		(4.5-4.8') SAND, medium to very coarse, dense, yellow, moist, non plastic, non cohesive	SW	
5		-		(4.8-5') SLAG, SAND and GRAVEL, medium dense, brownish gray to gray, dry, non plastic, non cohesive	SW/GW	
		1.8				
	60	11.5		(7-8.5') SILTY CLAY, firm to soft, grayish brown, very moist, medium plasticity, cohesive	CL	
		5.0		(8.5-13') CLAY, soft, very dark gray, saturated, medium plasticity, cohesive		
10		-			CL	
		5.0				
	64	1.6				
		0.4		(13-15') CLAY, very firm, very pale brown with reddish yellow mottling, moist, medium plasticity, cohesive	CL	
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 01/13/17
 Weather : 40s, Sunny

Northing (US ft) : 571594.56
 Easting (US ft) : 1459778.86

Boring ID: B6-066WW-PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2.5') SILTY SAND with some MARBLE GRAVEL, fine to coarse, dense, very pale brown, dry, non plastic, non cohesive	SM	
	76	31.1	None			
		4.5		(2.5-4.5') SAND with some BRICK GRAVEL, medium dense, brown and yellow, dry, non plastic, non cohesive	SW	
		80.6				
		12.2		(4.5-5') SILTY CLAY, dense, light gray and brown, medium plasticity, cohesive	CL	
5		-				
		35.3				
	56	1.9		(7.2-9.5') SLAG GRAVEL with SAND, dense, brown, dry then wet at 8', non plastic, non cohesive	GW	Wet at 8' bgs
		2.5				
		-		(9.5-13.5') SANDY SILT, very soft, brown, wet, low plasticity, cohesive		Strong organic odor 9.5-13.5' bgs
10		-				
		166.2			ML	
	90	0.3				
		0.4				
		2.9		(13.5-15') CLAY, firm, very pale brown and reddish yellow mottling, medium plasticity, cohesive	CL	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/17/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571591.95
 Easting (US ft) : 1459753.99

Boring ID: B6-066XX-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-4.8') SLAG and BRICK, SAND and GRAVEL, medium dense, yellow, red, dark brown, dry, non plastic, non cohesive		
		35.4				
60		11.8	None		SW/GW	
		0.0				
5		-		(4.8-9.1') SANDY GRAVEL, medium dense, black, wet, non plastic, non cohesive		
		-				Wet at 4.8' bgs
50		-			GW	Wood fragments at 4.8-5' bgs
		-				Moderate to heavy product with strong organic odor 4.8-9.1' bgs
10		-		(9.1-10') CLAY with SAND, soft, very dark gray, wet, medium plasticity, cohesive	CL	
		-				
80		-		(11-12') SANDY CLAY, firm, greenish brown, moist, medium plasticity, cohesive	CL	
		-				
		-		(12-15') SANDY SILT, very firm, reddish yellow, moist, low plasticity, cohesive		
		-			ML	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/17/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571619.46
 Easting (US ft) : 1459776.61

Boring ID: B6-066YY-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2.9') SILTY SAND, medium dense, brown, moist, non plastic, non cohesive	SM	Organic matter
	46	53.2	None			
		24.2		(2.9-7.5') SLAG and BRICK, medium dense, yellow, brown, purple and gray, dry then wet at 4.5', non plastic, non cohesive		Purple brick gravel 2.9-3' bgs
		0.5				
5		-			SW/GW	Wet at 4.5' bgs
		-				
	58	-		(7.5-8.9') CLAYEY SILT, very soft, black, wet, low plasticity, cohesive	ML	Strong organic odor with moderate amount NAPL, black, 7.5-10' bgs
		-		(8.9-9.6') SANDY CLAY with some GRAVEL, soft, black, very moist, low plasticity, cohesive	CL	
10		-		(9.6-11') SILTY CLAY, soft, greenish brown, very moist, medium plasticity, cohesive	CL	
		-				
	84	-		(11-15') CLAYEY SILT, firm, reddish yellow and very pale brown mottling, moist, low plasticity, cohesive	ML	
		-				
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : KP
 Drilling Equipment : Geoprobe 7822DT

Date : 01/17/17
 Weather : 40s, Cloudy

Northing (US ft) : 571570.84
 Easting (US ft) : 1459850.02

Boring ID: B6-066ZZ-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.4') SILTY SAND, medium dense, yellowish brown, moist, non plastic, non cohesive	SM	Large wood fragments 1.2-1.4' bgs
	80	762.7	None	(1.4-6.5') SLAG and BRICK, medium dense, red, yellow, dark brown, dry, non plastic, non cohesive	SW/GW	
		73.1				Wet at 7.5' bgs Strong organic odor 7.5-15' bgs
		35.5				
5		4.1				
	80	-		(6.5-9') SANDY SILT, very soft, brownish green, very moist, low plasticity, cohesive	ML	
		-		(9-9.8') WOOD fragment, wet, non plastic, non cohesive	N/A	Light product 9.8-15' bgs
10		-		(9.8-15') CLAYEY SILT, very soft, brownish green and black, very moist, low plasticity, cohesive	CL	
	80	-				
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Kevin Pumphrey
 Drilling Equipment : Geoprobe 7822DT

Date : 01/17/17
 Weather : 40s, Cloudy
 Northing (US ft) : 571564.20
 Easting (US ft) : 1459752.67

Boring ID: B6-066AAA-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1.9') SILTY SAND with SLAG GRAVEL, trace ORGANICS, medium dense, yellowish brown, dry, non-plastic, non-cohesive	SM	
	74	3.6	None	(1.9-4.2') SANDY SILT, firm, yellowish brown, dry, low plasticity, cohesive	ML	
		1.8		(4.2-5') SLAG and BRICK SAND and GRAVEL, medium dense, dark brown, gray, and yellow, moist, non-plastic, non-cohesive	SW/GW	
5		2.5		(7-8') SANDY SILT, firm, yellowish brown, moist, low plasticity, cohesive	ML	Wet at 8' bgs
	60	1.2		(8-9.7') SLAG and BRICK SAND and GRAVEL, medium dense, dark brown, gray, and yellow, wet, non-plastic, non-cohesive	SW/GW	
10		-		(9.7-15') SANDY GRAVEL, loose, very dark brown to black, wet, non-plastic, non-cohesive	GW	Light product (9.7-15'), sheen in water
	10	-				
		-				
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/9/17
 Weather : 50s, Sunny
 Northing (US ft) : 571540.86
 Easting (US ft) : 1459720.55

Boring ID: B6-066BBB-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-	None	(0-3') SILT with ORGANICS, soft, brown, dry, low plasticity, cohesive	ML	Wet at 9' bgs	
60	43.7	0.6		(3-4') SANDY SILT with CLAY, fine grained, soft, brown, dry, med plasticity, cohesive	ML		
5		2.5		(4-6') SILT with SAND, fine grained, soft, dark brown, dry, no plasticity, no cohesion	ML		
		-		(6-7.5') CLAY, soft, gray to light brown, dry, high plasticity, cohesive	CL		
60	1131	-		(7.5-11') SAND, medium to coarse grained, dark brown to black, dry 7.5-8.5', moist 8.5-9', then wet 9-10', no plasticity, no cohesion	SW		
10		-					
		-					
		-		(11-15') SAND with some SILT, fine grained, loose, black, wet, no plasticity, no cohesion	SP	Strong odor from 12-15' bgs	
60		-					
		-		(15-16') CLAY, stiff, black, wet, high plasticity, cohesive	CH		
15	100	-					
End of Boring							

Total Borehole Depth: 16' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/9/17
 Weather : 50s, Sunny
 Northing (US ft) : 571582.34
 Easting (US ft) : 1459730.65

Boring ID: B6-066CCC-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-2.5') SILT, soft, dark brown, dry, no plasticity, no cohesion	ML	Sewage odor 5-12.5' bgs Wet at 8' bgs
50	43.7	(2.5-4') GRAVEL and CONCRETE, very loose, gray, dry, no plasticity, no cohesion		SP/GP		
	0.6	(4-5') SAND with some SILT, loose, dark brown, dry, no plasticity, no cohesion		SP		
5	2.5	(5-7') SAND and GRAVEL, very loose, gray to black, dry, no plasticity, no cohesion		SP/GP		
	-	(7-8') SILT and CLAY, stiff, black, moist, low plasticity, cohesive		ML/CL		
90	1131	(8-9.5') SAND with some SILT, very loose, black, wet, no plasticity, no cohesion		SW		
	-	(9.5-10') CLAY, hard, black grading to reddish yellow, moist, high plasticity, cohesive		CH		
10	-	(10-12.5') SAND with GRAVEL and some SILT, coarse grained, very loose, black, wet, no plasticity, no cohesion		SP/GP		
	96	(12.5-15') CLAY, stiff, black grading to reddish yellow, moist to dry, high plasticity, cohesive	CH			
15			End of Boring			

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/9/17
 Weather : 50s, Sunny
 Northing (US ft) : 571619.92
 Easting (US ft) : 1459740.13

Boring ID: B6-066DDD-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-3') SILT, soft, dark brown, dry, low plasticity, cohesive	ML	Wet at 16.5' bgs
40	43.7	-		(3-4') SLAG and CONCRETE GRAVEL, very loose, gray to green, dry, no plasticity, no cohesion	GW	
		1.5		(4-5') SILT with SAND, very loose, dark brown, dry, low plasticity, cohesive	ML/ SP	
5		16.3		(5-12') CLAY, stiff but medium stiff 8-8.5', reddish yellow, dry, high plasticity, cohesive	CH	
		0.0				
		0.2				
100		0.0			CH	
		0.0				
10		-			CH	
		-		(12-13') CLAY with some SAND, stiff, reddish yellow, moist, high plasticity, cohesive		
100		-	(13-16.5') CLAY, medium stiff, reddish yellow, moist, high plasticity, cohesive	CH		
15		-	(16.5-19.3') SILT with some fine grained SAND, very soft, gray, wet, no plasticity, no cohesion	ML		
		-	(19.3-22') SAND, coarse grained, loose, reddish yellow, wet, no plasticity, no cohesion	SP		
20		-	(22-25') CLAY, soft then stiff 23-25', gray, moist, high plasticity, cohesive	CH		
		-				
25		-				
End of Boring						

Total Borehole Depth: 25' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/9/17
 Weather : 60s, Sunny

Northing (US ft) : 571650.49
 Easting (US ft) : 1459746.60

Boring ID: B6-066EEE-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-	None	(0-3') SAND with SILT, fine to coarse grained, loose, dark brown, dry, no plasticity, no cohesion	SW-SM	Product 7-10' bgs Wet at 7.5' bgs	
40		-		(3-4.5') GRAVEL and CONCRETE, coarse grained, gray, dry, no plasticity, no cohesion	GP		
		4.0					
		47.6					
5		-		(4.5-6') SAND with SILT, fine to coarse grained, loose, red, dry, no plasticity, no cohesion	SW-SM		
		-					
		-		(6-10.5') SLAG with trace coarse grained SAND, very coarse to cobble-sized, loose, black, wet, no plasticity, no cohesion	GW		
40		1057					
10		-	(10.5-11.5') SAND, coarse grained, black, wet, no plasticity, no cohesion	SP			
		-					
		-	(11.5-12') SAND with SILT and GRAVEL, loose, wet, no plasticity, no cohesion	SM/GP			
80		-	(12-15') CLAY, medium stiff, gray and reddish yellow, dry, high plasticity, cohesive	CH			
		-					
15		-					
End of Boring							

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/9/17
 Weather : 60s, Sunny
 Northing (US ft) : 571650.09
 Easting (US ft) : 1459772.71

Boring ID: B6-066FFF-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2') SILT with fine grained SAND, soft, dark brown, dry, no plasticity, no cohesion	ML	
	50	79.7	None	(2-3.5') SLAG GRAVEL, loose, gray, dry, no plasticity, no cohesion	GP	
		51.3		(3.5-4.5') SILT with fine grained SAND, soft, dark brown, dry, no plasticity, no cohesion	ML	
		1235		(4.5-5.3') SILT, stiff, pale brown to dark brown, dry, no plasticity, no cohesion	ML	Wet at 5.5' bgs
5		-		(5.3-6') SAND with GRAVEL, coarse grained, loose, black, wet, no plasticity, no cohesion	SP/GP	Heavy sheen with strong odor 5.5-6' bgs
		-		(6-6.5') CLAY, soft, gray, wet, high plasticity, cohesive	CH	
	86	-		(6.5-10') CLAY, hard, reddish yellow and gray, dry, high plasticity, cohesive	CH	
10		-		(10-12.5') SAND, medium grained, and GRAVEL, medium grained sand, loose, black, wet, no plasticity, no cohesion	SP/GP	Product and strong odor 10-12.5' bgs
	100	-		(12.5-15') CLAY, stiff grading to soft, moist grading to dry, gray to light brown, high plasticity, cohesive	CH	
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/9/17
 Weather : 60s, Sunny
 Northing (US ft) : 571648.06
 Easting (US ft) : 1459802.95

Boring ID: B6-066GGG-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-	None	(0-3') SILT with fine grained SAND, soft, dark brown, dry, no plasticity, no cohesion	ML	Organics	
54	74.1	68.8		(3-4') SLAG GRAVEL to COBBLE-sized, loose, gray, dry, no plasticity, no cohesion	GP		
5	5.0	5.0		(4-5.5') SAND with some SILT, fine grained, loose, pale brown to dark brown, dry, no plasticity, no cohesion	SP		
60	3.8	8.1		(5.5-15') CLAY, very soft grading to hard, black, reddish yellow, and pale brown, moist grading to dry, high plasticity, cohesive	CL		
10	3.7	-					
100	-	-					
15	-	-		(15-19') CLAY grading to CLAY with SAND, very soft, gray, moist then wet at 18', high plasticity, cohesive	CL		Wet at 18' bgs
20	-	-		(19-21.5') SAND, coarse grained, loose to medium dense, wet, no plasticity, no cohesion	SP		
100	-	-		(21.5-25') CLAY, very soft, gray, moist, high plasticity, cohesive	CL		
25	-	-		End of Boring			

Total Borehole Depth: 25' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/9/17
 Weather : 60s, Sunny
 Northing (US ft) : 571645.14
 Easting (US ft) : 1459830.17

Boring ID: B6-066HHH-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-3.5') SILT and SAND, medium grained, soft and very loose, dark brown, dry, no plasticity, no cohesion	ML/SP	Sewage-like odor 5-10' and 15-20' bgs Wet at 12' bgs
40		-				
		20.2				
5		66.5		(3.5-6') SLAG GRAVEL, coarse grained, very loose, gray, dry, no plasticity, no cohesion	GP	
		-				
60		27.3		(6-9') SAND and GRAVEL, coarse grained, loose, black, dry, no plasticity, no cohesion	SP/GP	
		29.2				
		21.5		(9-11') CLAY, very soft, black, moist, high plasticity, cohesive	CL	
10		-				
		-				
40		-	(11-14') SAND grading to SANDY CLAY, loose to soft, black, wet, no plasticity, no cohesion grading to low plasticity, cohesive	SP/CL		
		-				
15		-	(14-15') CLAY, hard, gray, dry, high plasticity, cohesive	CL		
		-	(15-16') SILT with SAND, very soft, black, wet, no plasticity, no cohesion	ML		
		-	(16-20') CLAY, soft grading to hard, black grading to very pale brown, moist grading to dry, high plasticity, cohesive	CL		
90		-				
		-				
20		-				
End of Boring						

Total Borehole Depth: 20' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/10/17
 Weather : 40s, Rainy
 Northing (US ft) : 571635.63
 Easting (US ft) : 1459910.06

Boring ID: B6-066III-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2.5') SANDY SILT, dense, brown and yellowish brown, dry, no plasticity, no cohesion	ML	
	72	0.3	None	(2.5-6.5') Non-native SAND and some GRAVEL with SLAG 2.7-3.3', medium dense to dense; brownish gray, brown, and dark brown; dry, no plasticity, no cohesion	SW/GP	
5		0.3				
		0.2				
		0.1				
	36	-		(6.5-9') SLAG and BRICK GRAVEL with SAND, medium dense, yellow and very dark brown, wet, no plasticity, no cohesion	GW/SW	Wet at 8.2' bgs
		-				
		-				
10		0.2		(9-12') SILT, very soft, black with trace brown, wet, low plasticity, cohesive	ML	Strong odor 8-15' bgs
		-				
	4	-		(12-15') SILTY GRAVEL, loose, black, wet, no plasticity, no cohesion	GM	
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/10/17
 Weather : 40s, Rainy
 Northing (US ft) : 571611.63
 Easting (US ft) : 1459886.83

Boring ID: B6-066JJJ-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-1.5') SILT with SAND, dense, light brown, dry, low plasticity, cohesive	ML	Light organic matter Wet at 7' bgs Trace product 8.5-14' bgs Moderate odor 7-19' bgs
	78	1.2		(1.5-7') Non-native SAND with some GRAVEL grading to non-native SAND with SILT and some GRAVEL, medium dense, brown, no plasticity, no cohesion	SW/SM	
		17.0				
		19.4				
		46.8				
5		-				
		16.8				
	76	1.7		(7-14') SILT with trace GRAVEL, very soft, black and brown, dry then wet at 7', low plasticity, cohesive		
		3.1				
		3.0				
10		-		ML		
		-				
	60	2.8				
		2.9				
		2.1		(14-15') SANDY SILT, medium dense, grayish brown, wet, low plasticity, cohesive	ML	
15		-		(15-17.2') SILT with trace GRAVEL, very soft, black and brown, wet, low plasticity, cohesive	ML	
		-				
	100	-		(17.2-19') SANDY SILT, medium dense, grayish brown, wet, low plasticity, cohesive	ML	
		-				
		-		(19-20') CLAY, hard, reddish yellow and pale brown, moist, medium plasticity, cohesive	CL	
20				End of Boring		

Total Borehole Depth: 20' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/10/17
 Weather : 30s, Rainy/Snow

Northing (US ft) : 571473.35
 Easting (US ft) : 1459916.46

Boring ID: B6-066KKK-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-2') CONCRETE, loose, white, dry, no plasticity, no cohesion	N/A	Wet at 10.5' bgs Slight odor 10-17' bgs
	66	7.1		(2-2.6') SILT with SAND, dense, brown, moist, low plasticity, cohesive	ML	
		42.1		(2.6-6') Non-native SAND with SLAG and BRICK GRAVEL, brown, yellow, and light gray, dry then moist 4.7-5', no plasticity, no cohesion	SW/GW	
		30.6				
5		-				
		5.0		(6-8.7') SILT, soft, dark brownish gray, very moist, low plasticity, cohesive	ML	
	70	9.2				
		4.6				
		8.2		(8.7-15') Non-native SAND with SLAG and BRICK GRAVEL, brown, yellow, and light gray, moist then wet at 10.5', no plasticity, no cohesion	SW/GW	
10		1.1				
		1.2				
	90	-				
		227.9				
		538.3				
15		-		(15-17') SILTY GRAVEL, loose, very dark brown, wet, no plasticity, no cohesion	GM	
	100	-				
End of Boring						

Total Borehole Depth: 17' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/10/17
 Weather : 30s, Rainy/Snow

Northing (US ft) : 571456.91
 Easting (US ft) : 1459888.89

Boring ID: B6-066LLL-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-2.5') Non-native SAND with SLAG and BRICK GRAVEL, medium dense, brown, black, and gray, dry, no plasticity, no cohesion	SW/GW	Wet at 13.3' bgs
	54	35.2		(2.5-3.5') SANDY SILT, dense, black, dry, no plasticity, no cohesion	ML	
		9.0		(3.5-15') Non-native SAND with SLAG and BRICK GRAVEL, medium dense; brown, black, and gray with trace yellow; dry then wet at 13.3', no plasticity, no cohesion	SW/GW	
		0.0				
5		-				
	46	25.1				
		2.9				
		4.0				
10		-				
	34	-				
		0.1				
		0.7	(15-16.5') SILTY CLAY with GRAVEL, soft, dark gray, very moist, low plasticity, cohesive	CL		
15		-				
	70	1.2				
		0.6	(16.5-19') SILTY CLAY with SAND and GRAVEL, soft, dark gray, very moist to wet, low plasticity, cohesive	CL		
		0.3				
End of Boring						
20						

Total Borehole Depth: 19' bgs.

Boring terminated due to water, refusal, and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/10/17
 Weather : 30s, Rainy/Snow/Sleet

Northing (US ft) : 571442.35
 Easting (US ft) : 1459869.54

Boring ID: B6-066MMM-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-7.2') Non-native SAND with SLAG and BRICK GRAVEL, medium dense, light brown, yellow, and gray, dry, no plasticity, no cohesion	SW/GW	
	64	4.4	None			
		15.2				
5		242.8				
		-		(7.2-7.4') SILTY SAND, dense, strong brown and brown, dry, no plasticity, no cohesion	SM	
	56	1.8				
		0.4				
10		0.1		(7.4-15') Non-native SANDY GRAVEL, dense to medium dense, light brown, gray, and yellow, wet, no plasticity, no cohesion	SW/GW	Wet at 11' bgs
		-				
	80	-				
		-				
15		-		End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/21/17
 Weather : 50s, Cloudy

Northing (US ft) : 571573.96
 Easting (US ft) : 1459704.56

Boring ID: B6-066000-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-4') SLAG GRAVEL with SAND, dense, light gray and brown, dry, no plasticity, no cohesion	GW/SW	Moderate oxidation 4-5' bgs
	60	4.2		(4-5.5') SILT, hard, light brown and brown with moderate yellowish red staining on outside, dry, no plasticity, no cohesion	ML	
		1.3		(5-5.8') SLAG GRAVEL with SAND, dense, light gray and brown with trace yellowish red staining, dry, no plasticity, no cohesion	GW/SW	Wet at 8' bgs
5		2.3		(8-9.4') SILT, very soft to soft, very dark brown to black, wet, low plasticity, cohesive	ML	
	64	1.1		(9.4-11.5') CLAY, firm, very pale brown with reddish yellow mottling, moist, low plasticity to medium plasticity, cohesive	CL	
		0.1		(11.5-14.5') SILT with some GRAVEL, very soft to soft, very dark brown to black, wet, low plasticity, cohesive	ML	
10		0.4		(14.5-15') CLAY, firm, very pale brown with reddish yellow mottling, moist, medium plasticity, cohesive	CL	Strong organic odor 8-14' bgs
	40	-		End of Boring		
15		-				

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader, P.G., CPSS
 Drilling Company : Allied
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 03/21/17
 Weather : 50s, Cloudy
 Northing (US ft) : 571551.82
 Easting (US ft) : 1459697.28

Boring ID: B6-066PPP-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-2') SANDY SILT, soft, brown, moist, low plasticity, cohesive	ML	Light organic matter
	62	0.5	None	(2-3.8') SILTY SAND, fine to medium grained, medium dense, red, wet, no plasticity, no cohesion	SM	
		1.0				
		0.3		(3.8-6') Non-native SAND with some GRAVEL, dense, brown, very moist, no plasticity, no cohesion	SW/GW	
5		-				
		-		(6-9.1') SILT, soft, very dark greenish brown, wet, low plasticity, cohesive	ML	Wet at 7.2' bgs
	56	4.3				
		1.5				
		0.2		(9.1-13') SANDY SILT, soft, greenish brown, wet, low plasticity, cohesive	ML	Strong organic odor 7-9' bgs
10		-			ML	
	60	-				
		-		(13-15') CLAY, soft, very pale brown with trace reddish yellow mottling, moist, low plasticity, cohesive	CL	
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Replogle, E.I.T.
 Drilling Company : Allied Well Drilling
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 04/26/17
 Weather : 50s, Drizzle

Northing (US ft) : 571668.68
 Easting (US ft) : 1459848.01

Boring ID: B6-066QQQ-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	None	(0-0.5') SAND with trace SILT, coarse, loose, brown, moist, no plasticity, no cohesion	SW	Wet at 13' bgs Sheen and light product from 13-15' bgs and 18-20' bgs
	50	0.2		(0.5-4') GRAVEL, coarse, loose, gray, moist, no plasticity, no cohesion	GW	
		1.0				
		10.1		(4-5.5') SAND, medium to fine, brown grading to yellow, moist, no plasticity, no cohesion	SW	
5		-				
	50	5.9		(5.5-11') SLAG GRAVEL, loose, gray and black, moist, no plasticity, no cohesion	GW	
		2.5				
		6.2				
10		-				
	70	-		(11-12.6') SAND, fine, dense, gray to brown, moist, no plasticity, no cohesion	SP	
		-		(12.6-13') SLAG GRAVEL, loose, gray and black, moist, no plasticity, no cohesion	GW	
		-		(13-19.5') SLAG, loose, black, wet, no plasticity, no cohesion	GW	
15		-				
	60	-				
		-				
		-				
20		-		(19.5-20') CLAY, very soft, black and gray, wet, medium plasticity, cohesive	CL	
				End of boring		

Total Borehole Depth: 20' bgs.

Boring terminated due to water and piezometer installation.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-5-3
 Project Description : Sparrows Point - Parcel B6
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Replogle, E.I.T.
 Drilling Company : Allied Well Drilling
 Driller : Rick Miller
 Drilling Equipment : Geoprobe 7822DT

Date : 04/26/17
 Weather : 50s, Overcast

Northing (US ft) : 571662.00
 Easting (US ft) : 1459823.79

Boring ID: B6-066RRR-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.5') SANDY SILT with GRAVEL, coarse, loose, dark brown, dry, no plasticity, no cohesion	SM	
		-		(0.5-1.5') SLAG, GRAVEL and SAND - sized, loose, gray, moist, no plasticity, no cohesion	GW	
	50	0.3	None	(1.5-4.5') SAND with GRAVEL, coarse, loose, reddish brown, moist, no plasticity, no cohesion	GW	
		15.3				
		0.9				
5		-		(4.5-6') SAND, very coarse, loose, gray and light brown, moist, no plasticity, no cohesion	SW	
		-				
	60	0.0		(6-11') SLAG, coarse then fine at 10' bgs, medium then very dense from 8.5-9' bgs, black, wet, no plasticity, no cohesion	GW	Wet at 7' bgs
		0.0				
		0.0				
10		-				
		-		(11-15') CLAY, very hard then soft at 13' bgs, light gray and reddish yellow, moist, medium plasticity, cohesive		Heavy sheen and strong odor 11-15' bgs
	100	-			CL	
		-				
		-				
15				End of boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation.

ATTACHMENT 2



TYPICAL LOG OF TEMPORARY NAPL DELINEATION PIEZOMETER

Installed in the Vicinity of B6-066-PZ

Client: EnviroAnalytics Group
Site: Sparrows Point - Area B Parcel B6
Sparrows Point, MD
ARM Project No.: 150300M-5
Page 1 of 1

Depth in Feet	Surf. Elev.	DESCRIPTION	
0		Riser Type: PVC Riser Diameter: 1" Riser Stickup: 3' Riser Amount: 5'	<p>Bentonite seal</p> <p>1" PVC Riser</p> <p>Sand Pack</p> <p>1" PVC Screen</p>
1			
2			
3		Screen Type: PVC Screen Diameter: 1" Screen Amount: 10' Slot Size: 0.010"	
4			
5			
6		Sand Pack: Top: 3' bgs Bottom: 15' bgs Grain Size: WG #2	
7			
8			
9			
10		Bentonite Seal: Top: 0' (surface) Bottom: 3' bgs Grain Size: 3/8" chips/granular (30-50 mesh)	
11			
12			
13			
14			
15			

Total Depth: 15'
Borehole Diameter: 2.25"
Driller: Allied Drilling Co.
Drilling Method: 7822DT Geoprobe

ATTACHMENT 3

Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066H-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/28/17 and 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC — Pulled / Split / Perforated / Left-In-Place
2. Abandoned — Grout / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 16.96'	Depth to Water (TOC): 10.32'
Measured: 16.23'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



ARM Group LLC
Engineers and Scientists
9175 Guilford Road - Suite 310
Columbia, Maryland 21046
(410) 290-7775 FAX: (410) 290-7775

Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066AA-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC — Pulled / Split / Perforated / Left-In-Place
2. Abandoned — Grout / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 17.88'	Depth to Water (TOC): 8.40'
Measured: 17.32'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



ARM Group LLC
Engineers and Scientists
9175 Guilford Road - Suite 310
Columbia, Maryland 21046
(410) 290-7775 FAX: (410) 290-7775

Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066BB-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC → **Pulled** / Split / Perforated / Left-In-Place
2. Abandoned → **Grout** Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 18.22'	Depth to Water (TOC): 11.84'
Measured: 17.25'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



ARM Group LLC
Engineers and Scientists
9175 Guilford Road - Suite 310
Columbia, Maryland 21046
(410) 290-7775 FAX: (410) 290-7775

Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066CC-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC → **Pulled** / Split / Perforated / Left-In-Place
2. Abandoned → **Grout** / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 17.61'	Depth to Water (TOC): 10.85'
Measured: 17.53'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Engineers and Scientists
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(410) 290-7775 FAX: (410) 290-7775

Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066DD-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC → Pulled / Split / Perforated / Left-In-Place
2. Abandoned → Grout Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 17.98'	Depth to Water (TOC): 13.01'
Measured: 17.96'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066EE-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC → **Pulled** / Split / Perforated / Left-In-Place
2. Abandoned → **Grout** / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 18.10'	Depth to Water (TOC): 8.88'
Measured: 17.45'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066GG-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

- 1. PVC → Pulled / Split / Perforated / Left-In-Place
- 2. Abandoned → Grout / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 17.90'	Depth to Water (TOC): 12.04'
Measured: 17.91'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066HH-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC — **Pulled** Split / Perforated / Left-In-Place
2. Abandoned — **Grout** Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 17.08'	Depth to Water (TOC): 12.14'
Measured: 17.03'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066II-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC → **Pulled** / Split / Perforated / Left-In-Place
2. Abandoned → **Grout** / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 18.25'	Depth to Water (TOC): 8.55'
Measured: 17.90'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066EEE-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC — Pulled / Split / Perforated / Left-In-Place
2. Abandoned — Grout / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 17.01'	Depth to Water (TOC): 7.37'
Measured: 17.04'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066III-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

- 1. PVC → Pulled / Split / Perforated / Left-In-Place
- 2. Abandoned → Grout Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 19.21'	Depth to Water (TOC): 8.77'
Measured: 18.19'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):

Large pallets blocking access

Left in place per approval by E. Magdar



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066KKK-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC → **Pulled** / Split / Perforated / Left-In-Place
2. Abandoned → **Grout** / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 20.05'	Depth to Water (TOC): 13.60'
Measured: 18.86'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066LLL-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC → **Pulled** / Split / Perforated / Left-In-Place
2. Abandoned → **Grout** / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 21.73'	Depth to Water (TOC): 12.73'
Measured: 21.43'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066PPP-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

1. PVC — Pulled / Split / Perforated / Left-In-Place
2. Abandoned — Grout / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 18.13'	Depth to Water (TOC): 7.10'
Measured: 7.06'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

Please Note: If NAPL is identified in a piezometer, the Project Manager should be notified and the piezometer may not be abandoned unless the presence of NAPL is already known and a decision has been made to abandon the NAPL monitoring network.

Additional Comments (if any):



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Well/Piezometer Abandonment Form

Well/Piezometer ID: B6-066RRR-PZ

General Project Information:

Client: EAG

Site Location: Sparrows Point, MD

Parcel ID: B6

Abandonment Date: 11/29/17

Abandonment Contractor: Allied

Abandonment Method (circle appropriate):

- 1. PVC — Pulled / Split / Perforated / Left-In-Place
- 2. Abandoned — Grout / Bentonite Chips

Field Equipment: Geoprobe/Grout machine (95% Portland/5% Bentonite)

ARM Representative(s): L. Perrin

Well Diameter: 1"

Depth to Bottom (TOC)	Final Gauging Prior to Abandonment:
Reported (historical/log): 17.21'	Depth to Water (TOC): 8.03'
Measured: 16.72'	Depth to NAPL (TOC): No DNAPL/LNAPL

Please note if this abandonment is for a known NAPL delineation/monitoring area or individual NAPL screening piezometer and identify the name of the delineation area (e.g., B6-066 NAPL Area or B5-144 Screening Piezometer): B6-066 NAPL

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Additional Comments (if any):



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