



# ARM Group Inc.

Engineers and Scientists

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February 6, 2019

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

Re: Parcel B6 Phase II Investigation Report  
(Revision 2)  
Response to MDE Comment  
Area B: Parcel B6  
Sparrows Point, MD 21219

Dear Ms. Brown:

On behalf of EnviroAnalytics Group, LLC (EAG), ARM Group Inc. (ARM) is pleased to provide the following response to a comment received from the Maryland Department of the Environment (MDE) via email on December 17, 2018. The MDE provided a comment regarding the previously submitted Phase II Investigation Report (Revision 2 dated March 16, 2018) for Parcel B6 (the Site) of the Tradepoint Atlantic property located in Sparrows Point, Maryland. The response to the MDE's comment is detailed below; the original comment is included in italics with the response following.

- 1. I noted that the boring log for B6-075-SB notes a sample collected at 1' and 5', however I cannot find a lab report or data in the tables that provide results for the 5' sample depth. There are also several results and associated sample ID's/depths provided in the tables that are not noted in the boring logs, including: B6-023-SB4, B6-023-SB10, B6-024-SB5, B6-026-SB4, B6-080-SB6, B6-081-SB5 Could ARM submit revised boring logs for replacement in the accepted Rev. 2 of the Phase II Report? Also, look into whether a sample was in fact collected from B6-075-SB at the 5' depth.*

Revised boring logs showing corrected sample depths are included with this letter. ARM reviewed the Parcel B6 Phase II Investigation analytical data to confirm the recorded sample depths at each location. In some instances, samples were collected from the 9 to 10 foot depth interval but were held by the laboratory pending the analysis of the overlying intermediate samples and were only analyzed if Project Action Limit (PAL) exceedances were identified in the intermediate samples. Samples collected from the 9 to 10 foot depth interval that were not analyzed are not shown on the boring logs.

No sample was collected from the 4 to 5 foot depth interval at location B6-075-SB because large diameter slag aggregate was encountered in the specified sample interval. The 5-foot sample was improperly displayed and has been removed. The observation of the large-diameter slag aggregate is noted on the revised B6-075-SB boring log. Large diameter aggregate cannot be sampled under ARM's standard soil sampling procedures.

Based on the comprehensive review of the analytical data and boring logs, sample depths were corrected for the following locations: B6-002-SB, B6-014-SB, B6-023-SB, B6-024-SB, B6-026-SB, B6-041-SB, B6-043-SB, B6-055-SB, B6-059-SB, B6-063-SB, B6-075-SB, B6-080-SB, B6-081-SB, B6-084-SB, and B6-090-SB. The revised boring log set replaces **Appendix B** of the Parcel B6 Phase II Investigation Report (Revision 2 dated March 16, 2018). Analytical data tables included with the previous Phase II Investigation Report showed the correct sample depths and did not need to be revised. The enclosed CD provides a compiled PDF of the entire Phase II Investigation Report containing the replacement boring logs.

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

Respectfully submitted,  
ARM Group Inc.



Ryan Clancy  
Staff Engineer



T. Neil Peters, P.E.  
Senior Vice President



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## APPENDIX B

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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 : 06/15/2016  
 Weather : 80s, Sunny

Northing (US ft) : 570846.35  
 Easting (US ft) : 1463282.66

**Boring ID: B6-001-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-001-SB-1	(0-3') SILT with GRAVEL, soft, light gray, dry, non plastic, non cohesive	ML	Small roots and grass at surface
		-				
50		1.9				
		11.5		(3-3.3') SILTY SAND with GRAVEL. loose, brown, moist, non plastic, non cohesive	SM	
		0.80		(3.3-7') SLAG GRAVEL, loose, brown grading to gray, wet, non plastic, non cohesive	GW	
5		0.7				
		1.1				
100		3.5		(7-8.5') SILT, firm, light gray and reddish yellow mottled, dry, cohesive	ML	
		6.2	B6-001-SB-9	(8.5-9') SILT, soft, light gray and reddish yellow mottled, wet, cohesive	ML	Wet at 8.6' bgs
End of Boring						
10						

Total Borehole Depth: 9' bgs.

Boring terminated at 9' bgs due to water.



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 ARM Representative : L. Perrin  
 Checked by : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 570873.04  
 Easting (US ft) : 1463331.70

**Boring ID: B6-002-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-002-SB-1	(0-1') CONCRETE, loose, white, dry	-	Wet at 4.5' bgs
		-		(1-3.5') SILTY SAND with GRAVEL, loose, brown, dry, non plastic, non cohesive	SP	
	70	0.0				
		0.0	B6-002-SB-4.5	(3.5-4.5') CLAY, soft, very pale brown, moist, cohesive, high plasticity	CL	
		0.0		(4.5-5') SLAG GRAVEL, loose, brown, wet, non plastic, non cohesive	GW	
5		-		(5-7.5') CLAY, very soft to soft, light grayish olive, wet, cohesive, high plasticity	CL	
		0.0				Boring terminated at 10' bgs due to water
	90	0.0		(7.5-10') CLAY, hard, reddish yellow and very pale brown mottling, dry, cohesive, high plasticity	CL	
		0.0				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated at 10' bgs due to water



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 Site Location : Sparrows Point, MD  
 ARM Representative : L. Perrin  
 Checked by : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571840.31  
 Easting (US ft) : 1459967.10

**Boring ID: B6-003-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-003-SB-1	(0-1') ASPHALT, loose, black, dry, non plastic, non cohesive	NA	Wet at 10.5' bgs
	80	10.5		(1-4.5') SANDY SILT with SLAG GRAVEL and metallic speckled rock, soft, brown and gray, dry, non plastic, non cohesive	ML	
		20.6				
		18.1				
5		35.2	B6-003-SB-5	(4.5-6') SILTY SAND with SLAG GRAVEL, yellowish brown, very moist, non plastic, non cohesive	SM	
		3.9				
		8.8		(6-10') CLAYEY SILT, very firm, very pale brown and reddish yellow, dry, low plasticity, cohesive		
	100	8.5			ML	
		9.5				
		3.5	B6-003-SB-10			
10		11.2		(10-10.5') SANDY CLAY, soft, pale brown, very moist, medium plasticity, cohesive	CL	
				(10.5-11') SAND with CLAY, medium dense, strong brown, wet, non plastic, no cohesion	SP	
		20.7			CL	
				(11-11.5') SANDY CLAY, soft, strong brown, wet, low plasticity, cohesive		
	100	22.3		(11.5-15) CLAY with trace SAND, very firm, strong brown and light gray, moist, medium plasticity, cohesive	CL	
		19.2				
		7.1				
15	End of boring					

Total Borehole Depth: 15' bgs.

Boring terminated at 15' bgs due to water.



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 Site Location : Sparrows Point, MD  
 ARM Representative : L. Perrin  
 Checked by : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571847.79  
 Easting (US ft) : 1460034.40

**Boring ID: B6-004-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-004-SB-1	(0-1') ASPHALT, loose, gray, dry, non plastic, non cohesive	-	
		4.8		(1-1.5') SLAG GRAVEL, loose, light gray and brown, dry, non plastic, non cohesive	GP	
	85	31.8		(1.5-4.5') SAND and SLAG GRAVEL, loose, gray and brown, dry, non plastic, non cohesive	GP/SP	
		25.6	B6-004-SB-4			
		1.8		(4.5-5') SAND, fine to coarse grained, loose, yellowish brown, dry, non plastic, non cohesive	SW	
5				End of Boring		
10						

Total Borehole Depth: 5' bgs.

Boring terminate at 5' bgs due to water



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 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 : 01/09/2017  
 Weather : 20s, Cloudy

Northing (US ft) : 570396.04  
 Easting (US ft) : 1462573.22

**Boring ID: B6-005-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1') CONCRETE, medium dense, gray, dry, no plasticity, no cohesion	NA	
	70	-	B6-005-SB-2	(1-4') SLAG GRAVEL and SAND, medium dense, grayish brown	SW/GW	
		55.9				
		5.2		(4-4.1') CONCRETE, medium dense, gray, dry, no plasticity, no cohesion	NA	
5		-		(4.1-7.5') GRAVELLY SAND, fine to coarse, medium dense, strong brown, gray, and reddish yellow, dry, no plasticity, no cohesion	SW/GW	
		3.2				
	90	16.1	B6-005-SB-8	(7.5-8') SAND, fine to coarse, trace GLASS, medium dense, red, yellow, and strong brown, dry, no plasticity, no cohesion	SW	
		0.0		(8-11.8') CLAY, very firm, but soft 9-9.5', brownish yellow, dry to moist, high plasticity, cohesive		
		0.0	B6-005-SB-10		CL	
		-				
	64	0.1		(11.8-12.4') SANDY GRAVEL, medium dense, brown, wet, no plasticity, no cohesion	SW/GW	Wet at 11.8' bgs
		0.1		(12.4-15') CLAY with SAND grading to SANDY CLAY, with some GRAVEL, dense, pale brown, moist to very moist, high plasticity, cohesive	CL	
		0.1				
15				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated at 15' bgs due to water





Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy  
 Northing (US ft) : 570352.74  
 Easting (US ft) : 1462577.67

**Boring ID: B6-006-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-006-SB-1	(0-1') CONCRETE, loose, dry	-	Refusal at 2' on first 2 attempts
		-		(1-8') SILTY SAND and GRAVEL, fine to coarse, loose, gray and brown, dry, angular, non plastic, non cohesive, some SLAG throughout		
47		2.2				
		204.2	B6-006-SB-5		SM/GW	
5		-				
30		<0.3				
End of Boring						
10						

Total Borehole Depth: 8' bgs.

Boring terminated at 8' bgs due to water.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Sunny

Northing (US ft) : 570639.05  
 Easting (US ft) : 1462700.34

**Boring ID: B6-007-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-007-SB-1	(0-9.5') GRAVEL and SAND with some SILT and CLAY and SLAG, fine to coarse, loose, dark gray to blue gray to dark brown, dry to wet, non plastic, non cohesive	GW/SW	Fill (non native) ~30% slag 0-9.5' bgs
	65	158.9				
		68.8	B6-007-SB-4			
		14.2				
5		-		(9.5-10') SILTY CLAY, soft, gray-green, wet, cohesive, medium plasticity	SM/GW	Wet at 5' bgs
	75	66.4				
		21.2				
		7.0				
		6.2				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated at 10' bgs due to water.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Sunny

Northing (US ft) : 570624.00  
 Easting (US ft) : 1462702.34

**Boring ID: B6-008-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-008-SB-1	(0-7') GRAVEL and SAND with some SLAG, fine to coarse, angular, loose, dark gray to blue gray to dark brown, dry to wet, non plastic, non cohesive	GW/SW	Fill (non native) ~30% slag
		0.5				
80		3.7				
		49.6	B6-008-SB-4			
		2.0		(7-8') SILTY CLAY, soft, gray-green, wet, cohesive, medium plasticity	CL	Wet at 5' bgs
5		0.8				
100		1.0				
		0.5				Boring refusal at 8' bgs
End of Boring						
10						

Total Borehole Depth: 8' bgs.

Boring terminated at 8' bgs due to water.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 60s, Sunny

Northing (US ft) : 571151.65  
 Easting (US ft) : 1462392.91

**Boring ID: B6-009-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-1') CONCRETE, hard, dry	-	1st attempt refusal at 4' bgs
		-		(1-3') VOID	-	Driller reports void Initial near surface sample not collected due to excessive slag gravel.
40		-		(3-8') GRAVEL, loose, gray, angular, coarse, dry to moist, grading to SAND and CLAY, non plastic, non cohesive		
		0.1				
		0.0				
5		0.2			GW	
		9.7	B6-009-SB-7			
		3.8				
93		0.1		(8-9') SAND with trace SILT, loose, tan, wet, cohesive	SP	Wet at 8' bgs
		0.1		(9-10') CLAY with trace fine SAND, soft, gray green, wet, cohesive, medium plasticity	CL	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated at 10' bgs due to water.



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 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 60s, Mostly Sunny

Northing (US ft) : 571131.85  
 Easting (US ft) : 1462419.22

**Boring ID: B6-010-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-010-SB-1	(0-1') CONCRETE, hard, dry	-	1st attempt refusal at 1' bgs
		-		(1-7') SAND and GRAVEL with some SLAG, fine to coarse, angular, loose, dark gray to dark brown to blue gray to tan, dry to wet, non plastic, non cohesive	SW/GW	
50		3.9				
		14.8	B6-010-SB-5			
5		2.0				
		24.3				Wet at 6.5' bgs
100		13.3		(7-10') CLAY, soft, gray-green, wet, cohesive, high plasticity	CL	
		7.5				
		1.7				
10	End of Boring					

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



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 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 60s, Mostly Cloudy  
 Northing (US ft) : 568630.10  
 Easting (US ft) : 1462452.78

**Boring ID: B6-011-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-011-SB-1	(0-10') SILTY SAND and GRAVEL, fine to coarse grained, angular to subangular, medium dense, light brown to dark brown, dry to 8'	SM/GW	Wet at 8' bgs Viscous liquid, black with sheen 8-10' bgs
	83	0.5				
		21.2				
		14.6				
		7.6				
5		0.4				
	90	4.3	B6-011-SB-8			
		12.9				
10		-		(10-15') No recovery due to loose GRAVEL		
	0	-				
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and lack of recovery at 15' bgs



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 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 80s, Sunny

Northing (US ft) : 568583.80  
 Easting (US ft) : 1462476.49

**Boring ID: B6-012-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-012-SB-1	(0-1') CONCRETE, hard, dry	-	
	87	17.1		(1-3.5') SAND and GRAVEL, fine to small, loose, tan and gray, dry, non plastic, non cohesive	SW/GW	
		48.7				
		105.1	B6-012-SB-4	(3.5-4.5') CLAY, soft, tan and light brown, dry, cohesive, medium plasticity	CL	
		38.2		(4.5-8.5') SILTY SAND, fine to medium grained, medium dense, light tan and yellow, moist, cohesive		
5		-				
	80	5.0			SM	
		17.1				
		0.3		(8.5-10') CLAY, very soft, light gray to dark gray, wet, cohesive, high plasticity		Wet at 8.5' bgs
		15.8			CL	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



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 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 568538.40  
 Easting (US ft) : 1462430.65

**Boring ID: B6-013-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-013-SB-1	(0-3') SILTY SAND with trace SLAG, fine to medium grained, medium dense, dark gray to dark brown, dry, non plastic, non cohesive	SM	
	82	1.1				
		2.8				
		0.8		(3-5') SAND, fine grained, medium dense, tan-green to tan and reddish yellow, moist, non cohesive, non plastic	SP	
		0.6				
5		2.3		(5-8.5') CLAY with trace SAND, medium stiff, tan matrix with reddish yellow and brown mottling, moist, cohesive, medium plasticity	CL	
		8.0	B6-013-SB-7			
	100	7.0				
		0.8		(8.5-15') CLAY, soft, tan with some reddish yellow and brown mottling, wet, high plasticity, cohesive		Wet at 8.5' bgs
		2.1				Boring terminated due to water at 15' bgs
10		-				
		<0.1			CL	
	80	<0.1				
		<0.2				
		<0.2				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.





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 Drilling Company : Green Services, Inc  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 570155.91  
 Easting (US ft) : 1462695.73

**Boring ID: B6-014-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-014-SB-1	(0-1') CONCRETE, hard, dry	-	
	60	11.2		(1-15') SILTY SAND and GRAVEL with trace SILT and SLAG, fine to coarse grained, loose, dark gray to dark brown, dry to 12' bgs, wet at 12' bgs, non plastic, non cohesive	SM/GM	Wet at 12' bgs
		189.7	B6-014-SB-4			
		66.3				
5		-				
		-				
	50	-				
		4.8				
		8.0	B6-014-SB-10			
		-				
	50	33.2				
		16.8				
		1.9				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



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 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Sunny

Northing (US ft) : 570192.00  
 Easting (US ft) : 1462798.63

**Boring ID: B6-015-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-015-SB-1	(0-7') SILTY SAND and GRAVEL with trace SLAG, fine to coarse, loose, dark gray, dry, angular, non plastic, non cohesive	SM/GW	
	87	6.3				
		0.3				
		0.4				
5		0.8	B6-015-SB-5	(7-9') SAND and GRAVEL, coarse, loose, light tan to white, dry to 8.0' bgs then wet, cohesive	SW/GW	Wet at 8' bgs
	62	-				
		6.4				
		8.1				
End of Boring						
10						

Total Borehole Depth: 9' bgs.

Boring terminated due to refusal and water at 9' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Sunny

Northing (US ft) : 570116.99  
 Easting (US ft) : 1462807.99

**Boring ID: B6-016-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-016-SB-1	(0-10') SAND and GRAVEL with trace SILT and SLAG, loose, gray green, dark brown, and light brown, dry to 9' bgs, then wet, non plastic, non cohesive	SM/GW	
	77	0.3				
		0.3				
		1.1				
		<0.2	B6-016-SB-5			
5		-				
	80	0.6				
		0.7				
		0.6				
		0.4				Wet at 9' bgs
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/06/2016  
 Weather : 80s, Sunny

Northing (US ft) : 569433.06  
 Easting (US ft) : 1462864.36

**Boring ID: B6-017-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-017-SB-1	0-0.5') CONCRETE, loose, white, dry, non plastic, non cohesive	-	
		-		(0.5-2.5') SAND, fine to medium grained, loose, brown, dry, non plastic, non cohesive	SP	
70		5.7		(2.5-3.5') SLAG, GRAVEL and SAND sized, loose, pale brown and gray, dry, non plastic, non cohesive	GP/SP	
		3.5		(3.5-4.1') SAND, loose, brown, dry, non plastic, non cohesive	SP	
		8.4		(4.1-10') SLAG, SAND and GRAVEL sized, loose, brown and light gray, dry grading to moist, non plastic, non cohesive		
5		62.4	B6-017-SB-6			
		12.3			GP/SP	
100		17.0				
		18.3				
		4.2				Blue tinted slag
10		-		(10-13') SLAG, GRAVEL and SAND sized, with SILT, loose, brown and light gray, non plastic, non cohesive		
		0.5			GP/SP	
80		0.4				
		0.4		(13-13.3') SILT, soft, gray, moist, cohesive, low plasticity	ML	
		0.4		(13.3-13.7') SLAG, GRAVEL and SAND sized, loose, gray, wet, non plastic, non cohesive	GP/SP	
		0.1		(13.7-14.7') SILT, soft, gray, moist, cohesive, low plasticity	ML	
15				(14.7-15') SLAG, GRAVEL and SAND sized, loose, gray, wet, non plastic, non cohesive	GP/SP	
				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/20/2016  
 Weather : 80s, Sunny

Northing (US ft) : 569501.90  
 Easting (US ft) : 1462855.49

**Boring ID: B6-018-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-018-SB-1	(0-1') CONCRETE, hard, dry	-	
		-		(1-7') SAND with trace SILT and coarse GRAVEL, fine to coarse, loose, light gray to brown, dry, non plastic, non cohesive	SW	
57	9.2					
		7.9	B6-018-SB-4			
		1.4				
5		-				
		5.8				
		6.8		(7-8.5') SILT, stiff, reddish yellow and tan, dry, non plastic, non cohesive	ML	
83		4.7		(8.5-10') CLAY with trace SAND and GRAVEL, soft, reddish yellow and tan, wet, cohesive, high plasticity	CL	Wet at 8.5' bgs
		16.7				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 571473.33  
 Easting (US ft) : 1462346.63

**Boring ID: B6-019-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B6-019-SB-1	(0-3.8') SANDY SILT with small SLAG GRAVEL, soft, brown, dry, non plastic, non cohesive		
					ML	
60		3.9				
			B6-019-SB-4			
		18.5		(3.8-4.2') CLAY, soft, very pale brown, moist, cohesive, low plasticity	CL	
				(4.2-5') SANDY GRAVEL, loose, brown and gray, dry, non plastic, non cohesive	GW	
5		13.7				
				(5-7.5') SAND AND GRAVEL SIZED fill, loose, yellow and dark brown, dry grading to moist, non plastic, non cohesive		
		0.3			-	
80		0.2				
				(7.5-10') BRICK and SLAG GRAVEL, loose, yellow and dark brown and light gray, wet, non plastic, non cohesive		Wet at 7.5' bgs
		0.0			-	
		0.0				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Sunny

Northing (US ft) : 571462.69  
 Easting (US ft) : 1462341.28

**Boring ID: B6-020-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-020-SB-1	(0-3.8') SILT with SLAG GRAVEL and SAND, soft, dark brown, dry, non plastic, non cohesive	ML	
	70	8.6				
		11.8	B6-020-SB-4			
		4.2		(3.8-4.3') CLAY, hard, very pale brown, dry, cohesive, low plasticity	CL	
5				(4.3-5') SLAG, GRAVEL and SAND sized, loose, gray and brown, moist, non plastic, non cohesive	GP/SP	
		-		(5-7') SAND and SLAG GRAVEL, loose, brown, dry, non plastic, non cohesive	SP/GP	
		0.1				
	70	0.7		(7-7.5') SANDY CLAY, soft, brown and pale brown, moist, cohesive, medium plasticity	CL	
		0.6		(7.5-10') SLAG and FILL, GRAVEL and SAND sized, loose, yellow gray and black, non plastic, non cohesive	SP/GP	Wet at 7.5' bgs
		0.2				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



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

Date : 06/13/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569397.76  
 Easting (US ft) : 1463015.88

**Boring ID: B6-021-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.6	B6-021-SB-1	(0-2') SANDY GRAVEL with SILT, loose, gray, dry, non plastic, non cohesive	SW/GW	
		0.6				
	90	0.1		(2-4') SANDY GRAVEL with SILT, loose, tan to gray, dry, non plastic, non cohesive	SW/GW	
		4.3	B6-021-SB-4			
		0.1		(4-4.8') Fine grained SAND, light brown, wet, non plastic, non cohesive	SC	
5		0.3		(4.8-5') CLAYEY SAND, light brown, fine grained, moist, cohesive, low plasticity	SP-SC	
		0.0		(5-10') CLAY with some SAND, stiff, gray, reddish yellow, and brown, slightly moist, cohesive, high plasticity		
	100	0.0			CL	
		0.0				
		0.0	B6-021-SB-10			
10		-		(10-13') CLAY, soft, gray, very moist, cohesive, high plasticity	CL	
		-				
	100	-				
		-				
		-		(13-15') SANDY CLAY, stiff, gray, reddish yellow, and brown, with coarse SAND at 13' bgs, cohesive, medium plasticity	CL	Wet at 13' bgs
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.





Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/14/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569531.35  
 Easting (US ft) : 1463003.51

**Boring ID: B6-022-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-022-SB-1	(0-2') SLAG GRAVEL with SAND, loose, black to dark gray, non plastic, non cohesive	SW/GW	Wet at 4' bgs
	84	2.6		(2-3') GRAVELLY SAND, loose, tan to brown, dry, non plastic, non cohesive	GW/SW	
		2.2		(3-3.5') CINDERS, black, very moist	-	
		0.0		(3.5-4.5') SANDY GRAVEL, loose, gray, dry, non plastic, non cohesive	SW/GW	
5		0.0		(4.5-6') GRAVEL with SAND, loose, black, wet, non plastic, non cohesive	GW	
	100	4.9		(6-7.5') SANDY CLAY, soft, olive gray, wet, cohesive, medium plasticity	CL	
		0.0		(7.5-10') SANDY CLAY, SAND content increasing with depth, stiff, brown and reddish yellow to gray, very moist to wet, cohesive, medium plasticity	CL	
10		0.0		End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/14/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569471.81  
 Easting (US ft) : 1463043.63

**Boring ID: B6-023-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		1.4	B6-023-SB-1	(0-4.5') GRAVELLY SAND with SILT, black to light gray, loose, dry to moist, some SLAG, non plastic, non cohesive	GW/SW	Odor at 4' bgs
		2.9				
100		6.2				
		105.8	B6-023-SB-4			
5		0.0		(4.5-5') SANDY CLAY, stiff, light gray, slightly moist, cohesive, low plasticity	CL	Wet at 10' bgs
		-		(5-10') SANDY CLAY, stiff to very stiff (9.2'), light gray to reddish yellow to brown, slightly moist, cohesive, high plasticity	CL	
70		11.1				
		10.7				
10		2.5	B6-023-SB-10	(10-14') SAND, fine grained, loose, dark gray, wet, cohesive, non plastic	SP	
		-				
		-				
		-		(14-15') CLAY, soft, gray, wet, cohesive, high plasticity	CL	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



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

Date : 06/13/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569381.73  
 Easting (US ft) : 1462960.48

**Boring ID: B6-024-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.4	B6-024-SB-1	(0-3') GRAVELLY SAND, loose, light brown to tan, dry, non plastic, non cohesive	GW/SW	Product odor at 3' bgs
		0.6				
100		29.7		(3-3.5') GRAVELLY SAND, black, wet, strong odor, non plastic, non cohesive	GW/SW	
		1.3		(3.5-4.5') SAND, fine grained, tan, moist, non plastic, non cohesive	SP	
		0.1	B6-023-SB-5	(4.5-5.0') SANDY CLAY, reddish yellow, moist, cohesive, medium plasticity	CL	
5		0.0		(5-10') CLAY with SAND, stiff, tan to light gray, cohesive, medium to high plasticity	CH/CL	
		0.0				
	100	0.0				
		0.0				
		0.1	B6-023-SB-10			
10		-		(10-14') CLAY, soft, tan to light gray with reddish yellow mottling, cohesive, high plasticity	CL	
		-				
	100	-				
		-				
		-		(14-15') CLAY, very soft, tan with reddish yellow mottling, wet, cohesive, high plasticity	CL	Wet at 14' bgs
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/14/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569538.68  
 Easting (US ft) : 1462942.67

**Boring ID: B6-025-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-025-SB-1	(0-3') SANDY GRAVEL with SILT, loose, dark brown, non plastic, non cohesive	GW-GM	Clay spot at 2.8' bgs
	86	0.3				
		1.5				
		0.5		(3-4.5') SLAG GRAVEL with SAND, black, dry, non plastic, non cohesive		
		0.0	B6-025-SB-5	(4.5-5') Fine grained SAND, dark tan, very moist, non plastic, non cohesive	SP	
5		-		(5-9.5') Fine grained SAND, light brown to light gray, very moist to wet, non plastic, non cohesive	SP	Wet at 8' bgs
	70	0.4				
		0.7				
		0.1				
		0.1				
10				(9.5-10') CLAY with some SAND, stiff, tan to light gray, high plasticity, cohesive	CL	
End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/13/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569447.73  
 Easting (US ft) : 1462953.28

**Boring ID: B6-026-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		20.8	B6-026-SB-1	(0-2') SANDY GRAVEL, loose, dark gray to light gray, slightly moist, non plastic, non cohesive	SW/GW	Strong odor 2-2.5' bgs
		53.2				
	94	250.2		(2-2.5') GRAVEL, black, wet, non plastic, non cohesive	GW	
		141.8		(2.5-4.0') SANDY CLAY, very stiff, gray to reddish yellow and brown, cohesive, medium plasticity	CL	
		37.8	B6-026-SB-5	(4-5') SAND, gray to reddish yellow and brown, very moist, non plastic, non cohesive, odor	SW	
5		-		(5-10') Fine grained SAND, light gray, very moist, non plastic, non cohesive		
		-				
	24	-				
		4.8				
		14.6				Wet at 10' bgs
10	End of Boring					

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/14/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569494.30  
 Easting (US ft) : 1462964.25

**Boring ID: B6-027-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		2.9	B6-027-SB-1	(0-2') GRAVELLY SAND, loose, brown to dark brown, dry, non plastic, non cohesive	SW/GW	Wet at 8.5' bgs
		4.6				
	100	35.2		(2-2.2') CLAY with some SAND, very stiff, dark tan, cohesive, medium plasticity	CL	
		18.31	B6-027-SB-4	(2.2-4.5') GRAVELLY SAND with CONCRETE GRAVEL, loose, brown to dark brown, dry, non plastic, non cohesive	SW/GW	
		29.1		(4.5-5') SAND, fine grained, dense, light gray, slightly moist, low plasticity, cohesive	CL	
5		1.0		(5-8.5') SAND, fine grained, dense, light gray, slightly moist, non plastic, cohesive		
		206			SP	
	100	14.4				
		0.4		(8.5-10') SAND, fine grained, loose, light gray to reddish yellow, wet, non plastic, cohesive	SP	
		0.1				
10		-		(10-14') SAND, fine grained, light brown, saturated with free water, non plastic, cohesive		
		-			SP	
	50	-				
		-				
		-		(14-15') SANDY CLAY, gray to light brown, wet, cohesive, medium plasticity, cohesive	CL	
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



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

Date : 06/13/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569408.31  
 Easting (US ft) : 1462974.22

**Boring ID: B6-028-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	-	-	B6-028-SB-1	(0-2.5') SANDY GRAVEL, loose, dark gray, dry, non plastic, non cohesive	SW/GW	
100	-	-		(2.5-4') SANDY GRAVEL, loose, tan to light gray, dry, non plastic, non cohesive	SW/GW	
5	-	-		(4-5') Fine grained SAND, stiff to loose, slightly loose, non plastic, non cohesive	SP	
50	-	-		(5-9.5') Fine grained SAND, tan to dark brown to reddish yellow and brown, moist, non plastic, non cohesive	SP	
		31.9	B6-028-SB-9			
		12.1	B6-028-SB-10			
10	-	-		(9.5-10') SANDY CLAY, gray to reddish yellow and brown, moist, medium plasticity, cohesive	CL	
90	-	-		(10-15') CLAY with some SAND, soft, tan to reddish yellow and brown, very moist, high plasticity, cohesive	CL	
15	-	-		End of Boring		Wet at 14' bgs

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/13/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569450.25  
 Easting (US ft) : 1462967.15

**Boring ID: B6-029-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-029-SB-1	(0-1.5') SLAG GRAVEL, loose, black, dry, non plastic, non cohesive	GW	
		0.9		(1.5-2.0') SANDY GRAVEL, loose, light tan, dry, non plastic, non cohesive	SW/GW	
	80	2.4		(2-3') SANDY GRAVEL, loose, dark gray, dry, non plastic, non cohesive	SW/GW	
		7.2		(3-5') SANDY GRAVEL with some SLAG, light gray, non plastic, non cohesive	SW/GW	
		22.3	B6-029-SB-5			
5		-		(5-7.5') SANDY CLAY, very stiff, gray, slightly moist, cohesive, medium plasticity	CL	Odor 2-8' bgs
	60	3.7		(7.5-10') SAND, fine grained, slightly dense, dark gray to reddish yellow and brown, very moist to wet, non plastic, cohesive	SP	Wet at 9' bgs
		4.4				
		0.0				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Rainy

Northing (US ft) : 570837.57  
 Easting (US ft) : 1463568.84

**Boring ID: B6-030-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-030-SB-1	(0-2') SILT with GRAVEL and SAND, soft, brown grading to dark brown, non plastic, non cohesive	ML	Moderate sweet odor
	90	0.0		(2-3') CLAY, soft, very dark gray, moist, high plasticity, cohesive	CL	
		0.0		(3-5') CLAY, firm to hard, gray grading to pale brown to reddish yellow, moist, grades to SANDY CLAY at depth, medium plasticity, cohesive	CL	
5		0.0	B6-030-SB-5			
	80	0.0		(5-10') SAND, medium dense to loose, very pale brown and reddish yellow, moist to wet, non plastic cohesive	SP	Wet at 8' bgs
		0.0				
		0.0				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 570917.11  
 Easting (US ft) : 1463596.71

**Boring ID: B6-031-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-031-SB-1	(0-3') SILT with GRAVEL grading to SANDY SILT with GRAVEL, soft, dark brown, dry, non plastic, non cohesive	ML/SM	
	83	0.0				
		163				
		228	B6-031-SB-4	(3-3.3') GRAVEL, loose, very pale brown, moist, non plastic, non cohesive (3.3-7.5') CLAY, hard, very pale brown, dry to moist, medium plasticity, cohesive	GP	
5		40.3			CL	
		-				
	80	0.0				
		0.0			SP	
		0.0		(7.5-10') SAND, medium dense, reddish yellow and light grayish olive, very moist to wet, non plastic, non cohesive		
		0.0				
10				End of Boring		Wet at 9.5' bgs

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Rainy

Northing (US ft) : 570841.97  
 Easting (US ft) : 1463619.49

**Boring ID: B6-032-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-032-SB-1	(0-2.5') SILT with GRAVEL grading to SANDY SILT with GRAVEL, soft, brown to dark brown and gray, dry, non plastic, non cohesive	ML/SM	
	93	0.0				
		69.4		(2.5-4.3') CLAY grading to SANDY CLAY, soft to firm, very dark gray grading to pale brown, moist to very moist, high plasticity, cohesive	CH/SC	
		68.8	B6-032-SB-4			
		18.0		(4.3-5') SAND, loose, pale brown, very moist, non plastic, non cohesive	SP	
5		-		(5-7.5') SAND, dense to medium dense, reddish yellow grading to very pale brown, moist to wet, non plastic, non cohesive	SP	
	100	12.5				
		12.8		(7.5-10') CLAY, very firm, light gray and reddish yellow mottling, moist, high plasticity, cohesive	CL	
		0.0				
		0.0				
10				End of Boring		

Wet at 7' bgs  
 Light odor in sand

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/06/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571828.88  
 Easting (US ft) : 1462221.30

**Boring ID: B6-033-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-033-SB-1	(0-1.5') SILT with SAND, soft, brown to dark brown with trace oxidation and small SLAG GRAVEL, dry, non plastic, non cohesive	ML	Wet at 4.5' bgs
		4.6		(1.5-2') SLAG GRAVEL and SAND, loose, brown but blue tinted SLAG, dry, non plastic, non cohesive	GP/SP	
	80	1.8		(2-4.5') SAND with SILT and small GRAVEL, loose, brown grading to dark red, dry grading to moist, non plastic, non cohesive	SW	
		5.7	B6-033-SB-4			
		3.5		(4.5-5') SAND with GRAVEL and SILT, loose, dark red, wet, non plastic, non cohesive	SW	
5		-		(5-7') SLAG and BRICK with SILT, SAND and GRAVEL sized, loose, dark red, wet, non plastic, non cohesive	GP/SP	
100		-				
End of Boring						

Total Borehole Depth: 7' bgs.

Boring terminated due to refusal at 7' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571875.19  
 Easting (US ft) : 1461636.84

**Boring ID: B6-034-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.2') ASPHALT, loose, gray dry, non plastic, non cohesive	NA	Wet at 6.5' bgs
			B6-034-SB-1	(0.2-2.5') SLAG, GRAVEL and SAND sized, loose, brown, moist, non plastic, non cohesive	GW	
		8.1				
80		19.7		(2.5-3') SAND, fine to medium grained, loose, reddish yellow, dry, non plastic, non cohesive	SW	
			B6-034-SB-4	(3-3.5') CLAY with SAND, very firm, reddish yellow, dry, low plasticity, cohesive	CL	
				(3.5-4') GRAVELLY SAND, loose, reddish yellow, wet, non plastic, non cohesive	SW	
				(4-5') SANDY CLAY, soft, reddish yellow, moist, cohesive, low plasticity	CL	
5				(5-6.5') SAND with CLAY, very firm, reddish yellow, moist, non plastic, non cohesive	SC	
		0.9				
100				(6.5-7.5') SANDY CLAY, very soft, reddish yellow, wet, low plasticity, cohesive	CL	
				(7.5-8') SLAG, GRAVEL and SAND sized, loose, gray, wet, non plastic, non cohesive	GP/SP	
				End of Boring		

Total Borehole Depth: 8' bgs.

Boring terminated due to water and refusal at 8' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571854.89  
 Easting (US ft) : 1461765.26

**Boring ID: B6-035-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.3') ASPHALT, loose, gray, dry, non plastic, non cohesive	-	5" piece of asphalt and 3" wood fragment at 4' bgs
		1.1	B6-035-SB-1	(0.3-2.5') SLAG, GRAVEL and SAND sized, loose, brown grading to red at depth, moist, non plastic, non cohesive		
		4.4			GP/SP	
100		315.8		(2.5-3') SILT with GRAVEL, firm, yellowish brown, dry, non plastic, non cohesive	ML	
		111.3	B6-035-SB-4	(3-5') SILT with SLAG GRAVEL, soft, dark brown, yellowish brown and black, dry, non plastic, non cohesive	ML	
		18.5				
5		-		(5-9') SANDY SILT with SLAG GRAVEL and some lenses of firm CLAY, soft, brown, reddish yellow and gray, dry, non plastic, non cohesive	ML	Wet at 9' bgs
		-				
80		4.5				
		37.8				
		13.3		(9-10') SLAG GRAVEL with SAND, loose, reddish yellow and gray, wet, non plastic, non cohesive	GP	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571476.74  
 Easting (US ft) : 1459990.66

**Boring ID: B6-036-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-036-SB-1	(0-0.75') CONCRETE, loose, white dry	NA	
		-		(0.75-3') SILT, soft, pale brown, dry, low plasticity, cohesive	ML	
70		340.7				
		155.7		(3-9.5') SAND and SLAG GRAVEL, loose, brown, dry to very moist, non plastic, non cohesive		
		27.4				
5		-				Wet at 9.5' bgs Slight odor
		-	B6-036-SB-8		SP/GP	
70		233.6				
		108.8				
		41.1		(9.5-10') SANDY GRAVEL, loose, gray and brown, wet, non plastic, non cohesive	GP	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571342.03  
 Easting (US ft) : 1459930.94

**Boring ID: B6-037-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-037-SB-1	(0-3.8') SILTY GRAVEL with SAND, loose, brown, dry to very moist, non plastic, non cohesive	GW-GM	Very strong odor, no sheen
	85	1.3				
		8.4		(3.8-5') SILT with GRAVEL, soft, black, moist, non plastic, non cohesive	ML	Wet at 5' bgs
		2.1				
5		6.8	B6-037-SB-5	(5-8') SILTY SAND with GRAVEL, loose, dark brown to black, wet, non plastic, non cohesive	SM	
	80	-		(8-10') SANDY GRAVEL, loose, brown, wet, non plastic, non cohesive	GP/SP	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571389.26  
 Easting (US ft) : 1459935.06

**Boring ID: B6-038-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') CONCRETE, loose, white, dry, non plastic, non cohesive	NA	
			B6-038-SB-1	(0.5-3') SILT with SLAG GRAVEL and SAND, soft, brown and gray, dry, non plastic, non cohesive	ML	
	90	255.7				
		224.4				
		397.2	B6-038-SB-4	(3-3.5') SILT with SLAG GRAVEL and SAND, soft, brown and gray, dry, low plasticity, cohesive	ML	
		87.7		(3.5-5') BRICK, SAND and GRAVEL-sized fragments, loose, brown and red and gray, dry, non plastic, non cohesive	NA	
5				(5-9') SAND with BRICK and SLAG GRAVEL, loose, brown and red and gray, very moist, non plastic, non cohesive	SW	
	70	32.4				
		35.8				
		100.2				
		40.5		(9-10') SLAG GRAVEL with SILT, loose, gray, wet, non plastic, non cohesive	GP/SP	Moderate odor Wet at 9' bgs
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



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

Date : 06/13/2016  
 Weather : 60s, Sunny

Northing (US ft) : 569231.05  
 Easting (US ft) : 1462914.15

**Boring ID: B6-039-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-039-SB-1	(0-3.5') GRAVELLY SAND, loose, brown, dry, non plastic, non cohesive		
	92	20.4			GW/SW	
		32.0				
		18.2		(3.5-4') SLAG GRAVEL with SAND, gray and dark gray, dry to slightly moist, non plastic, non cohesive	GW	
		12.7	B6-039-SB-5	(4-5') SANDY CLAY with GRAVEL, tan, very moist, medium plasticity, cohesive	CL	Strong odor at 4.5' bgs
5		-		(5-7.5') GRAVELLY SAND, loose, brown, dry, non plastic, non cohesive		
	90	3.1			GW/SW	Wet at 7.5' bgs
		4.6		(7.5-8') SANDY GRAVEL, white, wet, non plastic, cohesive	SW/GW	
		20.7		(8-8.5') CLAYEY SAND, black, wet, low plasticity, cohesive	SC	Product at 8' bgs, strong odor and black
		0.8		(8.5-10') SLAG GRAVEL with SAND, light gray, wet, non plastic, non cohesive	GW	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



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

Date : 06/13/2016  
 Weather : 60s, Sunny

Northing (US ft) : 569248.54  
 Easting (US ft) : 1462952.66

**Boring ID: B6-040-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.2	B6-040-SB-1	(0-3') SANDY GRAVEL with SILT, loose, black to tan, dry, non plastic, non cohesive		
	90	1.0			SW/GW	
		6.1				
		12.5		(3-4') SLAG GRAVEL with some SAND, loose, very moist, non plastic, non cohesive	GW	
		0.8	B6-040-SB-5	(4-5') CLAY with reddish yellow mottles and some SAND, very stiff, tan, high plasticity, cohesive	CL	
5		1.2		(5-7.5') SANDY CLAY, slightly dense, gray, slightly moist, medium plasticity, cohesive	CL	
	100	0.9		(7.5-8') GRAVEL with some CLAY, gray to black, wet, non plastic, cohesive	GW	
		0.4		(8-10') SANDY CLAY, slightly dense, gray, slightly moist, medium plasticity	CL	
		0.1	B6-040-SB-10			
10	0	-		(10-11') No return, refusal - possible concrete		
End of Boring						

Boring refusal at 11' bgs

Total Borehole Depth: 11' bgs.

Boring terminated due to refusal at 11' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Rainy

Northing (US ft) : 569058.05  
 Easting (US ft) : 1462671.97

**Boring ID: B6-041-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-041-SB-1	(0-8.5') SILTY SAND with GRAVEL, loose, light brown, dark brown, blue-gray, dry, non plastic, non cohesive, traces of SLAG throughout	SM	SILT/CLAY lense at 4-4.5' bgs
	82	0.9				
		1.3				
		2.4	B6-041-SB-4			
5		<0.1		(8.5-15') SLAG GRAVEL, very loose, blue gray, wet, non plastic, non cohesive	GW	Wet at 8.5' bgs
		-				
		-				
	67	1.3				
		4.9				
		0.2				
10		-				
		-				
	40	-				
		<0.1				
15		<0.1				

End of Boring

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Rainy

Northing (US ft) : 569036.02  
 Easting (US ft) : 1462683.48

**Boring ID: B6-042-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-042-SB-1	(0-8.5') SLAG, SAND and GRAVEL-sized, very loose, light brown, dark brown, blue-gray, dry, non plastic, non cohesive	SM/GW	
		-				
60	2.8	4.8				
		0.6				
5		-		(8.5-10') SLAG, GRAVEL-sized, very loose, light blue-gray, wet, non plastic, non cohesive, some SLAG	GW	Wet at 8.5' bgs
		-	B6-042-SB-8			
60	8.4	8.4				
		4.6				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/14/2016  
 Weather : 80s, Sunny

Northing (US ft) : 569305.47  
 Easting (US ft) : 1462862.90

**Boring ID: B6-043-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-043-SB-1	(0-0.5') CONCRETE, loose, white, dry	NA	
		-		(0.5-5') SANDY GRAVEL SLAG, loose, light brown, dry, non plastic, non cohesive	GW	
50	19.4					
	8.4					
	8.8					
5		4.3		(5-10') SANDY GRAVEL SLAG, loose, brown to light gray, dry to moist, non plastic, non cohesive	GW	
	4.0					
84	22.5		B6-043-SB-8			
	12.8				GW	
	0.0					
10		-		(10-13') SANDY GRAVEL, loose, brown to light gray, wet, non plastic, non cohesive		
		-			GW	
29		-				
		-		(13-13.5') GRAVEL with SAND SLAG, very dense, grayish blue, dry to wet, non plastic, non cohesive		
				End of Boring		
15						Wet at 12.5' bgs

Total Borehole Depth: 13.5' bgs.

Boring terminated due to refusal at 13.5' bgs.



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

Date : 06/13/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569315.33  
 Easting (US ft) : 1462960.62

**Boring ID: B6-044-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-044-SB-1	(0-5') SANDY GRAVEL with SILT and a very stiff/plastic CLAYEY zone at 4.5', loose, brown to black, dry, non plastic, non cohesive	GW-GM	Moist at 4' bgs
	86	22.8				
		281.1	B6-044-SB-4			
		19.9				
5		0.6		(5-8') CLAY with some SAND, very stiff, reddish yellow and gray to brown, moist, medium plasticity to high plasticity, cohesive	CL/CH	
	100	0.6				
		21.7		(8-8.5') GRAVEL, light gray to gray, very moist, non plastic, non cohesive	GW	
		0.1		(8.5-9.5') CLAY with some SAND, very stiff, reddish yellow and gray to brown, moist, medium plasticity to high plasticity, cohesive	CL/CH	Wet at 9.5' bgs
10				(9.5-10') CLAYEY GRAVEL, loose, dark gray, wet, non plastic, non cohesive	GC	
End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/14/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569598.49  
 Easting (US ft) : 1462951.06

**Boring ID: B6-045-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		4.3	B6-045-SB-1	(0-1') SANDY GRAVEL, loose, light to dark gray, dry, non plastic, non cohesive	GW	
		5.6		(1-2') SANDY SILT, very stiff, gray to brown and yellowish red, dry, low plasticity, cohesive	ML	
	100	1.7		(2-4.5') SANDY GRAVEL with SLAG and BRICK, light gray to brown, non plastic, non cohesive	GW	
		0.6				
		0.4	B6-045-SB-5	(4.5-5') CLAYEY GRAVEL, soft, black, wet, non plastic, non cohesive	GC	Wet zone at 4.5' bgs (perched)
5		0.9		(5-7.5') CLAY with some SAND, soft, olive gray, very moist, medium plasticity, cohesive	CL	Odor at 5'
		0.2				Wet zone in clay at 7' bgs
	80	2.3		(7.5-10') CLAY with some SAND, very stiff, reddish yellow and brown to gray, slightly moist, high plasticity, cohesive	CL	
		3.2				
		0.0	B6-045-SB-10			
10		-		(10-15') CLAY with some SAND, soft, reddish yellow and brown to gray, wet, cohesive, high plasticity	CL	
	40	-				Wet at 15' bgs
		-				
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.





Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : B. Gehman  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/14/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569666.88  
 Easting (US ft) : 1463036.05

**Boring ID: B6-046-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS		
0	94	4.2	B6-046-SB-1	(0-2') GRAVELLY SAND with CINDER BALLAST and SLAG at 1.8', loose, dark brown, dry, non plastic, non cohesive	SW	Wet zone in clay at 7' bgs		
		17.4						
		22.2	B6-046-SB-6	(2-5') SANDY CLAY, gray to reddish yellow to brown, slightly moist, medium plasticity, cohesive	CL			
		1.9						
	0.2							
5	7.1							
	100		B6-046-SB-10	(5-6') SANDY CLAY, olive gray, slightly moist, medium plasticity, cohesive	CL			
		2.7					(6-7') SAND, tan to dark brown to black, very moist, non plastic, non cohesive	SW
		0.0					(7-8.5') SANDY CLAY, very soft, gray to dark tan, sticky, medium plasticity, cohesive	CL
		0.7						
10		0.0		(8.5-20') CLAY, hard to stiff, gray to brown and reddish yellow, slightly moist to wet at bottom, medium plasticity, cohesive	CL	Wet at 20' bgs		
	100	-						
	-	-						
	-	-						
15		-						
	100	-						
	-	-						
20		-						
End of Boring								

Total Borehole Depth: 20' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571786.69  
 Easting (US ft) : 1460453.97

**Boring ID: B6-047-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-047-SB-1	(0-3') SANDY SILT with some SLAG GRAVEL, soft, dark gray and brown, moist, non plastic, non cohesive		Trace oxidation
	86	9.1			ML	
		7.5				
		23.4		(3-3.5') SILTY SAND, loose, dark brown, wet, non plastic, non cohesive	SM	
		5.0		(3.5-5') SILT with SAND and small SLAG GRAVEL, soft, red, brown and pale brown, dry, non plastic, non cohesive	ML	
5		26.0	B6-047-SB-6	(5-6') SILTY SAND with SLAG GRAVEL and BRICK, loose, red and brown, dry, non plastic, non cohesive	SM	
		30.4		(6-6.3') SILTY CLAY, firm, moist, low plasticity, cohesive	CL	
				(6.3-6.9') CONCRETE, loose, pale yellow, dry, non plastic, non cohesive	-	
	100	19.8		(6.9-7.5') SILTY SAND, loose, pale yellow, dry, non plastic, non cohesive	SP	
				(7.5-8') SILT, firm, brown, moist, low plasticity, cohesive	ML	
		20.2		(8-8.5') SILT, soft, brown, dry, non plastic, non cohesive	ML	
				(8.5-9') CLAY, very firm, pale brown and strong brown mottling, dry, low plasticity, cohesive	CL	
		10.5		(9-9.5') SILT, firm, dark brown, dry to moist, low plasticity, cohesive	ML	Wet at 9.5' bgs
				(9.5-10') SILT, soft, dark brown, wet, low plasticity, cohesive	ML	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571776.07  
 Easting (US ft) : 1460368.15

**Boring ID: B6-048-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		5.0	B6-048-SB-1	(0-0.5') SLAG GRAVEL, loose, moist, non plastic, non cohesive	GP	Wet at 8' bgs
		3.8		(0.5-3') SANDY SILT, soft, very dark brown, dry, non plastic, non cohesive	ML	
80		2.2				
		2.0		(3-5') SILT with large SLAG GRAVEL, soft, dark brown, very moist, low plasticity, cohesive	ML	
5		-				
		0.9		(5-6.5') SILTY SLAG GRAVEL, loose, brown and red, moist, non plastic, non cohesive	GP-GM	
		6.0		(6.5-7') SLAG GRAVEL, loose, gray, very moist, non plastic, non cohesive	GP	
90		11.7	B6-048-SB-8	(7-8') SILT, soft, very dark brown, very moist, low plasticity, cohesive	ML	
		10.9		(8-10') SLAG GRAVEL with SILT, loose, dark brown and gray, wet, non plastic, non cohesive	GP	
10		6.3				
End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571934.62  
 Easting (US ft) : 1460131.00

**Boring ID: B6-049-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		8.6	B6-049-SB-1	(0-2.5') GRAVELLY SILT with SAND, soft, brown, very moist, non plastic, non cohesive	ML	
		75.2				
	60	55.2		(2.5-5.5') SLAG GRAVEL, with SILT, loose, gray and brown, wet, non plastic, non cohesive	GP	
		-				
		-				
5		4.1		(5.5-5.7') SILTY CLAY, firm, strong brown, dry, medium plasticity, cohesive	CL	
		5.5		(5.7-5.8') SLAG GRAVEL, loose, brown, very moist, non plastic, non cohesive	GP	
	100	19.8	B6-049-SB-8	(5.8-9') CLAY, very firm, strong brown and pale brown mottling, dry, medium plasticity, cohesive	CL	
		0.3				
		0.7	B6-049-SB-10	(9-10') CLAY, soft, strong brown and pale brown mottling, moist, medium plasticity, cohesive	CL	
10		-		(10-12') CLAY, soft, pale brown and strong brown mottling, very moist, medium plasticity, cohesive	CL	
		-				
	100	-		(12-15') CLAY, very soft, pale brown, wet, medium plasticity, cohesive	CL	Wet at 12' bgs
		-				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571874.28  
 Easting (US ft) : 1460074.28

**Boring ID: B6-050-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.2') ASPHALT, loose, gray, dry, non plastic, non cohesive	-	
			B6-050-SB-1	(0.2-2') SLAG GRAVEL, loose, pale brown, dry, non plastic, non cohesive	GP	
		5.3				
	78	10.3		(2-3') SAND with SLAG GRAVEL, loose, brown, dry, non plastic, non cohesive	SP	
		14.3		(3-5.4') SLAG, GRAVEL-sized, loose, gray, very moist, non plastic, non cohesive	GP	
		1.8				
5	100	0.6	B6-050-SB-6	(5.4-6') SILT with trace SLAG GRAVEL, firm, pale brown, dry, non plastic, non cohesive	ML	Boring refusal at 6' bgs
End of Boring						
10						

Total Borehole Depth: 6' bgs.

Boring terminated due to refusal at 6' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy, Rainy

Northing (US ft) : 568746.80  
 Easting (US ft) : 1462508.43

**Boring ID: B6-051-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B6-051-SB-1	(0-1') CONCRETE, hard, dry	-	
				(1-2.5') SILT, very stiff, tan, dry, non plastic, cohesive	ML	
	83			(2.5-3') SAND, medium grained, loose, yellowish brown, moist, non plastic, non cohesive	SP	
				(3-7') CLAY with trace SAND, stiff, tan, dry to moist, medium plasticity, cohesive	CL	
5			B6-051-SB-6			
				(7-10') CLAY, medium stiff, brown with reddish yellow oxidation, moist to wet, high plasticity, cohesive	CL	
	100					
		<0.2			CL	
		<0.2				Wet at 9.5' bgs
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy, Rainy

Northing (US ft) : 568817.70  
 Easting (US ft) : 1462500.14

**Boring ID: B6-052-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-052-SB-1	(0-1') CONCRETE, hard, dry	-	
	83	2.5		(1-4') SILT, medium stiff, reddish yellow, dry, low plasticity, cohesive	ML	
		2.1				
		0.6				
		<0.2		(4-5') SAND with trace SILT, fine to medium grained, medium dense, pale brown, wet, non plastic, non cohesive	SP	Wet at 4' bgs
5		2.9		(5-10') SILTY CLAY with trace SAND, very soft, pale brown with reddish yellow oxidation, wet, medium plasticity, cohesive		
	93	0.6			CL	
		0.3				
		<0.2				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571656.78  
 Easting (US ft) : 571656.78

**Boring ID: B6-053-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') ORGANIC SILT, soft, very pale brown, dry, low plasticity, cohesive	OL	
		-	B6-053-SB-1	(0.5-4') SAND with SLAG GRAVEL, loose, brown, dry, non plastic, non cohesive		
		6.7				
63		2.2			SW	
		5.5	B6-053-SB-4			
End of Boring						
5						

Total Borehole Depth: 4' bgs.

Boring terminated due to refusal at 4' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571702.83  
 Easting (US ft) : 1460034.69

**Boring ID: B6-054-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-054-SB-1	(0-3') SILT with SAND and SLAG GRAVEL, soft, light gray grading to brown, dry to very moist, non plastic, non cohesive	ML	
	75	8.9				
		76.0		(3-4') SANDY GRAVEL, loose, brown and gray, very moist to wet, non plastic, non cohesive	SP	Moderate odor
		558.6	B6-054-SB-4			
End of Boring						
5						
10						

Total Borehole Depth: 4' bgs.

Boring terminated due to refusal at 4' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Sunny

Northing (US ft) : 571477.60  
 Easting (US ft) : 1462442.62

**Boring ID: B6-055-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.2	B6-055-SB-1	(0-2') SANDY SILT with SLAG GRAVEL, soft, brown, dry but wet at very top, non plastic, non cohesive	ML	
		3.1				
	93	4.1		(2-5') CLAY with small SLAG GRAVEL throughout, very firm, pale brown, dry, low plasticity, cohesive	CL	
		3.3				
		2.9				
5		1.8		(5-7.5') CLAY, very firm, gray, dry, medium plasticity, cohesive	CL	
		2.2	B6-055-SB-7			
	100	7.0		(7.5-8.5') SANDY CLAY, very soft, brownish gray, wet, medium plasticity, cohesive	CL	Wet at 7.5' bgs
		8.0				
		8.0		(8.5-10') CLAY, soft, brownish gray, very moist, high plasticity, cohesive	CH	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 80s, Cloudy

Northing (US ft) : 571429.98  
 Easting (US ft) : 1462393.57

**Boring ID: B6-056-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-056-SB-1	(0-2.5') SAND and SLAG GRAVEL, loose, brown, wet to dry, non plastic, non cohesive	GP/SP	Glass present
	70	1.4		(2.5-3') BRICK and CONCRETE GRAVEL, loose, yellow and gray, dry, non plastic, non cohesive	GP	
		0.5		(3-3.8') SILT grading to SAND, soft to loose, black grading to pale brown, moist, non plastic, non cohesive	ML/SP	
		0.0		(3.8-5') BRICK GRAVEL and SAND, loose, red and yellow and gray, non plastic, non cohesive	-	
5		-		(5-7') BRICK GRAVEL and SAND with some CLAY, loose, red and yellow and gray, very moist, non plastic, non cohesive	-	
	70	34.8	B6-056-SB-8	(7-10') GRAVELLY CLAY, very soft, gray, black, and red, very moist to wet, high plasticity, cohesive	CL	Sheen, strong odor Apparent product from 7-10' bgs
		33.3			CL	Wet at 8.5' bgs
		0.7				
10		-		(10-15') CLAY, soft, grayish green, very moist, high plasticity, cohesive	CL	
	50	0.0				
		0.0				
		0.0				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water and piezometer installation at 15' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 569986.62  
 Easting (US ft) : 1462575.11

**Boring ID: B6-057-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-057-SB-1	(0-1') CONCRETE, hard, dry	-	1st attempt refusal at 3' bgs
	83	5.3		(1-3') SILTY SAND and GRAVEL, fine to medium grained, dense, reddish yellow, dry, non plastic, non cohesive	SM/GW	
		3.9		(3-7') Fine grained SAND, dense, reddish yellow, dry, cohesive	SP/SM	
		2.7				
5		1.2				
		3.2				
	100	3.9				
		9.0	B6-057-SB-8	(7-12.5') SILT, medium soft, reddish yellow, dry to moist, non plastic, cohesive	ML	Saturated at 12.5' bgs
		1.6				
		1.2	B6-057-SB-10			
10		<0.2				
		<0.2				
	100	<0.2		(12.5-13') SAND, fine grained, loose, reddish yellow, wet, non plastic, cohesive	SP	
		<0.2		(13-15') CLAY, soft, reddish-yellow and gray, wet, medium plasticity, cohesive	CL	
		<0.2				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 569973.78  
 Easting (US ft) : 1462600.55

**Boring ID: B6-058-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-058-SB-1	(0-3.5') SAND and GRAVEL, fine to coarse, loose, dry, non plastic, non cohesive	SW/GW	
70		2.6				
		1.2				
		2.2				
5		6.3	B6-058-SB-5	(3.5-8.5') SILTY SAND with GRAVEL, fine to medium grained, angular, loose, gray-green and reddish yellow, dry to wet, cohesive	SM/GW	
		-				
43		-				
		5.9				
10		2.7	B6-058-SB-10	(8.5-10') CLAYEY SILT, soft, pale brown with brown, wet to moist, medium plasticity, cohesive	ML	
		<0.2			ML	
		<0.2				
100		<0.2				
		<0.2				
		<0.2		(13.5-15') SILTY CLAY, very soft, gray-green and pale brown, moist then wet, medium plasticity, cohesive	CL	
15		<0.2				Wet at 14' bgs
End of Boring						

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Sunny

Northing (US ft) : 570004.88  
 Easting (US ft) : 1462810.99

**Boring ID: B6-059-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-059-SB-1	(0-1') CONCRETE, hard, dry	-	
	63	5.2		(1-9') SILTY SAND and GRAVEL with ~15% SLAG, fine to coarse grained, angular, medium dense, dark brown, dark gray, gray-green, dry to moist, non plastic, non cohesive	SM/GW	
		28.5				
		7.6				
5		-				
	38	65.3	B6-059-SB-8			
		43.6				
10		2.3	B6-059-SB-10	(9-15') SILTY SAND with trace GRAVEL, fine to coarse grained, dense, reddish yellow, dark brown, gray, moist to wet, non plastic, cohesive		
	73	1.7			SM	Wet at 12.5' bgs
		0.6				
		0.3				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Sunny

Northing (US ft) : 569987.09  
 Easting (US ft) : 1462812.50

**Boring ID: B6-060-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-060-SB-1	(0-1') CONCRETE, hard, dry	-	Fill material 0-13' bgs
48		-		(1-9') SILTY SAND and GRAVEL with trace SILT and SLAG, fine to coarse, loose, dark brown and brown, dry to moist, non plastic, non cohesive	SM/GM	
		11.3	B6-060-SB-4			
		1.6				
5		-				
43		-				
		7.1				
10		10.8		(9-10') CONCRETE, hard, gray-green, dry	-	
66		-		(10-13') CLAYEY GRAVEL, angular, soft to loose, pale brown and brown, dry to wet, medium plasticity, cohesive	GC	Wet at 12' bgs
		0.2				
		0.3				
End of Boring						

Total Borehole Depth: 13' bgs.

Boring terminated due to refusal 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 : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy, Rain

Northing (US ft) : 568863.50  
 Easting (US ft) : 1462446.45

**Boring ID: B6-061-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-061-SB-1	(0-3.5') SILTY SAND fine grained with trace well rounded GRAVEL, very loose, dark brown, non plastic, non cohesive	SM	1st attempt hit void 2-5' bgs 2nd attempt-completed at 20' to the west
	70	2.1				
		4.2	B6-061-SB-4	(3.5-4.5') SANDY SILT, soft, gray-green and brown, dry, non plastic, non cohesive	ML	Saturated at 4.5' bgs
		2.5		(4.5-8.5') SILTY SAND with trace GRAVEL, fine to medium grained, loose, dark brown and pale brown, wet, non plastic, cohesive	SM	
5		-				
	80	10.2				
		9.9				
		4.1		(8.5-10') SILTY CLAY, soft, brownish and gray-green, wet, medium plasticity, cohesive	CL	
		1.8				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.





Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Ali Berenbrok - Tim Niblett  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 568886.21  
 Easting (US ft) : 1462455.12

**Boring ID: B6-062-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-062-SB-1	(0-4.5') SILTY SAND, fine to coarse grained with trace GRAVEL, loose, dark brown and dark gray, dry, non plastic, non cohesive	SM	Fill material (0-4.5' bgs)
	85	4.1				
		4.6				
		4.7	B6-062-SB-4			
5		1.2		(4.5-6') SILT with some SAND, soft, tan and reddish yellow, moist to wet, non plastic, cohesive	ML	Wet at 5' bgs
		<0.2				
	100	<0.2		(6-10') CLAY, very soft, brown with yellowish red oxidation, wet, high plasticity, cohesive	CL	
10		<0.2				
End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 80s, Cloudy

Northing (US ft) : 571239.79  
 Easting (US ft) : 1462420.94

**Boring ID: B6-063-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-063-SB-1	(0-1.5') SAND and GRAVEL, loose, very dark brown, moist, non plastic, non cohesive	GP/SP	
		6.4		(1.5-2') SAND, loose, reddish yellow, very moist, non plastic, non cohesive	SP	
	90	22.5		(2-3') SLAG, SAND and GRAVEL-sized, loose, gray and brown, moist, non plastic, non cohesive	GP/SP	
		68.4		(3-3.3') SILT, firm, pale brown, moist, non plastic, non cohesive	ML	
		0.1		(3.3-4') SLAG GRAVEL, loose, gray and brown, moist, non plastic, non cohesive	GP/SP	
5		2.0		(4-5.5') SILT with SLAG GRAVEL, firm, pale brown, moist, non plastic, non cohesive	ML	
		5.6		(5.5-7') SLAG GRAVEL, loose, very dark brown and gray, moist to very moist, non plastic, non cohesive	SP/GP	
	100	9.0		(7-10') CLAY, firm to soft, greenish gray, moist, sandy at depth, medium to high plasticity, cohesive		
		9.8	B6-063-SB-9		CL/CH	
		0.1				
10		-		(10-12') SANDY CLAY grading to CLAY, soft, greenish gray, very moist, high plasticity, cohesive	CL	Sludge-type odor
		0.0				
	80	0.0		(12-12.5') SLAG GRAVEL, loose, greenish gray, wet, non plastic, non cohesive	GP	Wet at 12' bgs
		0.0		(12.5-15') CLAY, soft to very soft, greenish gray, wet, high plasticity, cohesive	CL	
		0.0				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 80s, Cloudy

Northing (US ft) : 571237.74  
 Easting (US ft) : 1462394.43

**Boring ID: B6-064-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-064-SB-1	(0-2') SAND and SLAG GRAVEL SLAG, loose, dark brown, moist, non plastic, non cohesive	GP/SP	
		0.0				
	80	0.0		(2-2.5') SILT with SAND, soft, brown, dry, non plastic, non cohesive	ML	
		2.7		(2.5-4') SLAG GRAVEL, loose, gray and brown, dry, non plastic, non cohesive	GP/SP	
		0.0		(4-5') SLAG GRAVEL, loose, black, strong brown and trace white, moist	GP/SP	
5		0.2		(5-5.8') BRICK GRAVEL, loose, yellow, dry, non plastic, non cohesive	-	
		1.7		(5.8-10') CLAY, firm to soft, greenish gray and reddish yellow mottled, moist, medium plasticity, cohesive		
	100	2.3	B6-064-SB-8		CL	
		1.2				
		0.0	B6-064-SB-10			
10		-		(10-15') CLAY, very firm but soft at 12', greenish gray, moist to wet, medium plasticity, cohesive		
		0.0				
	87	0.0			CL	
		0.0				
		0.0				
15		0.0				Wet at 15' bgs
End of Boring						

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/16  
 Weather : 80s, Sunny

Northing (US ft) : 571473.63  
 Easting (US ft) : 1459784.47

**Boring ID: B6-065-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-065-SB-1	(0-1') ORGANIC SILT, soft, brown, dry, non plastic, non cohesive		Small roots present
4.5				(1-3') SILT with SAND, firm to spot, brown, dry, low plasticity, cohesive	ML	
6.0	90					Wet at 4.5' bgs
9.3			B6-065-SB-4	(3-3.3') CONCRETE, loose, white, dry, non plastic, non cohesive	NA	
				(3.3-3.7') SILT, firm, reddish yellow, dry, low plasticity, cohesive	ML	
7.4				(3.7-4.5') SANDY SILT, soft, dark brown, moist, non plastic, non cohesive	ML	
5.1				(4.5-6') SANDY GRAVEL, loose, dark brown, wet, non plastic, non cohesive	GP/SP	
3.5				(6-7') SILT with SAND, very firm, greenish brown, moist, low plasticity, cohesive	MC	
6.0	100			(7-9') SANDY GRAVEL, loose, brown, wet, non plastic, non cohesive	GP/SP	
8.4						
End of Boring						
10						

Total Borehole Depth: 9' bgs.

Boring terminated due to refusal at 9' 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 : 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**

(page 1 of 1)

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	Strong oil odor, trace product Wet at 5' bgs Product present throughout sleeve and in clay
		40.0				
5		510.8	B6-066-SB-5	(4.5-5') SILT with SAND, soft, black, very moist to wet, non plastic, non cohesive	ML	
		20.7		(5-6.5') SANDY GRAVEL, loose, black, wet, non plastic, non cohesive	GP/SP	
	100	-		(6.5-9.5') CLAY, very soft, olive green and black, wet, high plasticity, cohesive	CL	Strong odor and slightly viscous with sheen
		-				
10		-		(9.5-10') SANDY GRAVEL, loose, black, wet, non plastic, non cohesive	GP/SP	Strong odor
	100	-		(10-13') CLAY with some SLAG GRAVEL, very soft, dark gray to black, wet, high plasticity, cohesive	CL	
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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/06/16  
 Weather : 80s, Sunny

Northing (US ft) : 571971.11  
 Easting (US ft) : 1462554.66

**Boring ID: B6-067-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-067-SB-1	(0-1.2') ORGANIC SILT, soft, dark brown, moist, non plastic, non cohesive	OL	Grass and small roots present
	90	2.8		(1.2-2.2') SILT with SAND, soft, dark brown, dry, non plastic, non cohesive	ML	
		15.9		(2.2-4') SLAG GRAVEL with SAND, GRAVEL and SAND sized, loose, gray, dry, non plastic, non cohesive	GP/SP	
		29.6				Moderate odor
		200.7	B6-067-SB-5	(4-4.7') SLAG GRAVEL with SILT, GRAVEL and SAND sized, with large WOOD fragment, loose, brown and gray, very moist, non plastic, non cohesive	GP/SP	
5		-		(4.7-7.7') SILT type material, firm, white, moist, non low plasticity, cohesive	ML	Wet at 8.5' bgs
		-				
	50	26.6		(7.7-8') SLAG GRAVEL and SAND, loose, brown, dry, non plastic, non cohesive	-	
		110.1		(8-8.5') CLAY, soft, brown with yellowish brown mottling, medium plasticity, cohesive	CL	
		14.1		(8.5-9') SAND with GRAVEL, loose, dark brown and pale brown, wet, non plastic, non cohesive	SP	
				(9-10') CLAY, soft to firm, grayish brown, moist, medium plasticity, cohesive	CL	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/30/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571239.34  
 Easting (US ft) : 1459383.21

**Boring ID: B6-068-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		4.3	B6-068-SB-1	(0-1') SILTY SAND with quartzite GRAVEL, loose, very pale brown, dry, non plastic, non cohesive	SP	Wet at 4.5' bgs
		1.8		(1-2.5') SANDY SILT, soft, very pale brown, dry, low plasticity, cohesive	ML	
100		1.2		(2.5-3') SANDY CLAY, soft, pale brown, moist, cohesive, medium plasticity	CL	
		38.4	B6-068-SB-4	(3-3.5') CLAYEY SAND with GRAVEL, loose, pale brown, very moist, non plastic, non cohesive	SW	
				(3.5-4.5') CLAY, hard, pale brown and light gray, dry, medium plasticity, cohesive	CL	
5		30.4		(4.5-5.5') GRAVELLY SAND with SILT, loose, very dark brown, wet, non plastic, non cohesive	SP/GP	
		-		(5.5-6) WOOD fragments with SILT, wet	-	
		-		(6-9.5') SILTY CLAY with SAND and GRAVEL, very firm, dark brown, moist to wet, low plasticity, cohesive	CL	
100		-				
		-				
		-		(9.5-10') SANDY GRAVEL with SILT, loose, very dark brown, wet, non plastic, non cohesive	GP	Trace sheen, odor, possible product
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/2016  
 Weather : 80s, Sunny

Northing (US ft) : 572086.11  
 Easting (US ft) : 1460731.04

**Boring ID: B6-069-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.5	B6-069-SB-1	(0-3') SILT with some SLAG GRAVEL, soft, brown, moist to dry, non plastic, non cohesive		
		1.1			ML	
	84	5.7				
		3.0		(3-4') SILTY BRICK and SLAG GRAVEL, loose, brown, yellow and reddish yellow, non plastic, non cohesive	GP/GM	
		0.5		(4-5') GRAVELLY CLAY, large BRICK at bottom, soft, brown with trace reddish yellow, moist, low plasticity, cohesive	CL	
5		-		(5-8.5') SILTY SAND with SLAG and BRICK GRAVEL, soft, brown with trace yellow, moist, non plastic, non cohesive		
	50	4.5			SM	
		16.1	B6-069-SB-8.5			
		24.5		(8.5-9.5') SANDY GRAVEL with SILT, loose, dark brown, wet, non plastic, non cohesive	SP/GP	Wet at 8.5' bgs
10				(9.5-10') SANDY SILT with SLAG GRAVEL, soft, dark brown, wet, non plastic, non cohesive	ML	
End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/05/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571757.84  
 Easting (US ft) : 1461098.10

**Boring ID: B6-070-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		0.9	B6-070-SB-1	(0-1') SLAG and BRICK GRAVEL with SILT, loose, brown and yellow, dry, non plastic, non cohesive	GP		
		28.9		(1-6.5') SILT with SLAG and BRICK GRAVEL and trace SAND, soft, brown and gray, dry, non plastic, non cohesive	ML		
	94	543.8					
		66.3	B6-070-SB-4				
		13.7			CL		
5		-		(6.5-7') SILTY CLAY with GRAVEL, firm, pale brown and reddish yellow mottling, moist, low plasticity, cohesive			
		1.2		(7-8') SANDY GRAVEL, loose, brown and dark gray, wet, non plastic, non cohesive			GP/SP
	80	14.4		(8-9') SILTY CLAY, firm, grayish brown, moist to dry, low plasticity, cohesive			CL
		63.5		(9-9.8') CLAY, soft, grayish brown, moist then wet, low plasticity, cohesive	CL		
		70.0		(9.8-10') SANDY GRAVEL, loose, dark brown, wet, non plastic, non cohesive	SP/GP		
10				End of Boring		Wet at 9.5' bgs	

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 80s, Sunny

Northing (US ft) : 569740.43  
 Easting (US ft) : 1463364.83

**Boring ID: B6-071-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-071-SB-1	(0-1.4') SILT with SAND, soft, dark brown, moist, non plastic, non cohesive	ML	
		0.2		(1.4-1.8') CONCRETE, loose, gray, dry, non plastic, non cohesive	NA	
	80	1.1		(1.8-10') SAND and SLAG GRAVEL, loose, gray and brown, dry to wet at bottom, non plastic, non cohesive		
		3.1	B6-071-SB-4			
		1.3				
5		-			SP/GP	
		-				
	60	0.3				
		1.9				
		0.9				Wet at 9' bgs
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 80s, Sunny

Northing (US ft) : 570457.03  
 Easting (US ft) : 1463017.37

**Boring ID: B6-072-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.3') SILT with SAND, soft, brown, dry, non plastic, non cohesive	ML	
		0.5	B6-072-SB-1	(0.3-0.7') CINDER BALLAST, loose, black, moist, non plastic, non cohesive	-	
		1.0		(0.7-1.3') SILT with SAND, soft, brown, dry, non plastic, non cohesive	ML	
		1.3		(1.3-2') CINDER BALLAST, loose, black, moist, non plastic, non cohesive	-	
	100	1.5	B6-072-SB-4	(2-4') SILT grading to CLAY, firm, brownish gray, dry, low plasticity, cohesive	ML/CL	
		0.6		(4-5') CLAY, very firm, brownish gray, dry, medium plasticity, cohesive	CL	
5		-		(5-7.6') CLAY, very soft, dark gray, moist, high plasticity, cohesive	CL	
		0.1		(7.6-10') SLAG GRAVEL, large, loose, light gray, moist to wet, non plastic, non cohesive	GP	
	50	0.2				
		0.2				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/167/2016  
 Weather : 80s, Cloudy

Northing (US ft) : 571211.18  
 Easting (US ft) : 1463204.49

**Boring ID: B6-073-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-073-SB-1	(0-2.2') SILT with SAND and GRAVEL, loose, black, dry, non plastic, non cohesive	ML	Wet at 5' bgs
	80	0.0				
		0.2		(2.2-2.7') SILT, very firm, pale brown and reddish yellow, dry, low plasticity, cohesive	ML	
		0.5		(2.7-3.5') SLAG GRAVEL, loose, gray and light gray, moist, non plastic, non cohesive	GP/SP	
		0.3	B6-073-SB-5	(3.5-4.9') CLAY, hard, light gray and reddish yellow mottling, dry, high plasticity, cohesive	CL	
5		-		(4.9-5.5') SAND, loose, pale brown, wet, non plastic, non cohesive	SP	
		0.3		(5.5-10') CLAY, very firm, light gray and reddish yellow mottling, dry, high plasticity, cohesive	CL	
10		0.0				
		0.9				
		0.0				
End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 571635.97  
 Easting (US ft) : 1462790.95

**Boring ID: B6-074-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-1.5') SILT, firm, brown, dry, low plasticity, cohesive	ML	
		0.4	B6-074-SB-1			
		0.5		(1.5-2.5') SILTY SLAG GRAVEL, loose, dark gray, dry, non plastic, non cohesive	GP-GM	
100		1.5		(2.5-8') SILT, soft to firm, gray, dry to moist, low plasticity, cohesive		
		3.0	B6-074-SB-4			
		1.3				
5		0.3			ML	Slight odor
		0.5				
100		0.2				
		0.2		(8-9') CLAYEY SILT, very soft, dark gray, wet, low plasticity, cohesive	ML	Wet at 8' bgs
		0.1		(9-10') CLAY, soft, gray, very moist, medium plasticity, cohesive	CL	Wood fragments
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 80s, Cloudy

Northing (US ft) : 571760.13  
 Easting (US ft) : 1463645.90

**Boring ID: B6-075-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-075-SB-1	(0-2.5') SAND and SLAG GRAVEL, loose, brown, dry, non plastic, non cohesive	SP/GP	Wet at 7' bgs
		-				
60		0.3		(2.5-5') SLAG, fine to coarse, loose, gray to dark gray, dry to moist, non plastic, non cohesive	SP/GP	
		4.4				
		0.5	No sample due to large diameter slag			
5		-		(5-7') SLAG, coarse, loose, gray, dry, non plastic, non cohesive	GP	
		0.8				
70		0.0		(7-8') CLAY, very soft, pale brown, wet, high plasticity, cohesive	CL	
		0.0				
		0.0		(8-10') CLAY, hard, pale brown with reddish yellow mottling, dry, high plasticity, cohesive	CL	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 07/06/2016  
 Weather : 80s, Sunny

Northing (US ft) : 572130.46  
 Easting (US ft) : 1463347.57

**Boring ID: B6-076-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-	B6-076-SB-1	(0-0.5') ORGANIC SILT with SAND, soft, brown, moist, non plastic, non cohesive	OL	Small grass and roots present	
				(0.5-5.5') SANDY SILT, soft, brown then very dark gray then brown, dry, non plastic, non cohesive			
	80	2.5					
		2.4			ML		Metallic shimmer
		0.8					Yellow brick and metallic SLAG at 4' bgs
		9.1					
5		35.9		(5.5-7') SILT, very firm, yellowish brown, dry, low plasticity, cohesive	ML		
		20.4					
	100	105.2	B6-076-SB-8	(7-8') SILT, very firm, yellowish brown, dry, low plasticity, cohesive	ML		
		9.7		(8-10') SLAG GRAVEL and SAND, loose, dark brown, wet, non plastic, non cohesive	GP/SP	Wet at 8' bgs	
		3.3					
10	End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy, Rainy

Northing (US ft) : 570152.57  
 Easting (US ft) : 1463598.20

**Boring ID: B6-077-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-077-SB-1	(0-0.7') SILT with GRAVEL, soft, very pale brown, dry, non plastic, non cohesive	ML	Wet at 4' bgs
		9.8		(0.7-2.5') SILT with large GRAVEL, firm, brown, dry, non plastic, non cohesive	ML	
80		0.0		(2.5-3.5') CLAY with SILT, soft, very dark gray, moist, medium plasticity, cohesive	CL	
		0.0	B6-077-SB-4	(3.5-4.3') CLAY grading to SANDY CLAY, very soft, pale brown, moist to wet, high plasticity to low plasticity, cohesive	CH/CL	
		0.0		(4.3-4.7') SAND, loose, pale brown, wet, non plastic, non cohesive	SP	
5				(4.7-5') SANDY CLAY, soft, pale brown, very moist, high plasticity, cohesive	CL	
		0.8		(5-5.8') SAND, loose, pale brown, wet, non plastic, non cohesive	SP	
		0.5		(5.8-10') SANDY CLAY grading to CLAY, hard, pale brown and light gray mottling, dry, high plasticity, cohesive		
100		0.1			CL	
		0.1				
10		0.1		End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.





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

Date : 06/17/2016  
 Weather : 60s, Cloudy

Northing (US ft) : 570696.75  
 Easting (US ft) : 1462395.62

**Boring ID: B6-078-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.8	B6-078-SB-1	(0-1') CONCRETE, hard, dry	NA	
	92	1.7		(1-9') SAND and GRAVEL with SILT and CLAY, fine to coarse, subangular, medium dense, tan, gray-green, red, dark gray, dry, non plastic, non cohesive	SW/GW	
		2.4				
		16.1				
		29.5				
5		-				
	82	17.7				
		34.9	B6-078-SB-8			
		24.7				
10		2.1		(9-15') CLAY, very soft, gray-green, moist to wet, high plasticity, cohesive		Wet at 9.5' bgs
		-			CL	
		-				
	40	-				
		<0.1				
		<0.1				
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/15/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 570487.23  
 Easting (US ft) : 1463459.59

**Boring ID: B6-079-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') CONCRETE, loose, gray, dry, non plastic, non cohesive	NA	Wet at 7' bgs
			B6-079-SB-1	(0.5-2.5') SILT, soft grading to very firm, brownish gray and dark gray, dry, non plastic, non cohesive	ML	
	93	97.5				
		49.8		(2.5-4.7') CLAY with SILT, firm, pale brown, moist, high plasticity, cohesive	CL	
		0.0				
		0.0				
5				(4.7-5') CLAYEY SAND, firm, reddish yellow, moist, non plastic, non cohesive	SP	
				(5-6.2') CLAY, very soft, pale brown and gray, very moist, high plasticity, cohesive	CL	
	90	9.6	B6-079-SB-7	(6.2-9.5') SAND, soft to medium dense, very pale brown, to pale brown with reddish yellow staining, moist to wet, non plastic, non cohesive	SP	
		21.3				
		0.0				
		14.0		(9.5-10') SANDY CLAY grading to CLAY, soft, light gray, moist, high plasticity, cohesive	CL	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 571239.99  
 Easting (US ft) : 1463600.74

**Boring ID: B6-080-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-080-SB-1	(0-3.5') SLAG GRAVEL, loose, brown, dry, non plastic, non cohesive	GP	
		-				
40		-				
		0.0				
		0.0		(3.5-5') CLAY, hard, pale brown and reddish yellow, dry, high plasticity, cohesive	CL	
5		0.0	B6-080-SB-6	(5-8') CLAY grading to SANDY CLAY, very firm grading to very soft, dry then wet, medium plasticity, cohesive	CL	
		0.0				
100		0.0				
		0.0		(8-10') SAND, medium dense, pale brown, wet, non plastic, non cohesive	SP	
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 80s, Cloudy

Northing (US ft) : 571621.60  
 Easting (US ft) : 1463297.54

**Boring ID: B6-081-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B6-081-SB-1	(0-0.5') SLAG GRAVEL, loose, dark brown, very moist, non plastic, non cohesive	GP	Wet at 5.5' bgs
				(0.5-5.5') SAND and SLAG GRAVEL, loose, grayish brown and gray, dry to moist, non plastic, non cohesive	SP/GP	
	50	0.0				
		0.8				
		26.5	B6-081-SB-5			
5		0.4		(5.5-6.5') SAND and SLAG GRAVEL with CLAY, loose, grayish brown and gray, wet, non plastic, non cohesive	SP/GP	
		0.3		(6.9-9') CLAY with SAND, very soft, black grading to pale brown and brownish yellow, wet, high plasticity, cohesive	CL	
	100	0.0				
		0.1				
		0.0		(9-10') CLAY, very firm, reddish yellow and pale brown, dry, high plasticity, cohesive	CL	
10	End of Boring					

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 80s, Sunny

Northing (US ft) : 571271.36  
 Easting (US ft) : 1462827.07

**Boring ID: B6-082-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0				(0-0.5') SILTY SAND and GRAVEL, loose, dark brown, dry, non plastic, non cohesive	SM	Intermittent black coarse sand layer	
		0.1	B6-082-SB-1	(0.5-3') SILT grading to CLAY, hard, pale brown and reddish yellow grading to brown, low plasticity, cohesive	ML/CL		
		0.2					
100		0.2			GP		
		0.1		(3-3.3') SLAG GRAVEL, loose, light gray, dry, non plastic, non cohesive	CL		
		0.1		(3.3-4.5') CLAY, hard, reddish yellow, dry, low plasticity, cohesive			
		0.1	B6-082-SB-5	(4.5-5') SAND, medium grained, loose, strong brown, wet, non plastic, non cohesive	SP		
5		-		(5-5.8') SAND, medium grained, loose, strong brown, wet, non plastic, non cohesive	SP		Wet at 5.7' bgs
		0.8		(5.8-7') SANDY CLAY, very soft, black and grayish brown, wet, low plasticity, cohesive	CL		
		0.1		(7-8') SANDY CLAY, hard, reddish yellow, dry, low plasticity, cohesive	CL		
		0.2		(8-8.5') SANDY CLAY, very soft, reddish yellow, dry, low plasticity, cohesive	CL		
		0.1		(8.5-10') CLAY with SAND, hard, reddish yellow and light gray mottles, dry, low plasticity, cohesive	CL		
10				End of Boring			

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy, Rainy

Northing (US ft) : 569309.02  
 Easting (US ft) : 1462636.78

**Boring ID: B6-083-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.3	B6-083-SB-1	(0-3') Fine SAND and coarse GRAVEL with trace SLAG, loose, dark brown and dark gray, dry, non plastic, non cohesive	SW/GW	
		0.5				
100		2.4				
		3.0		(3-5.5') SANDY SILT with GRAVEL and some SAND, medium soft, tan brown and dark gray, non plastic, non cohesive	ML	
		2.4				
5		-		(5.5-6.5') GRAVEL with SAND and some SLAG, loose, dark gray and dark brown, dry, non plastic, non cohesive	GW	
		53.2				
	100	88.3	B6-083-SB-8	(6.5-10') CLAY, soft, gray-green and tan, moist to wet, high plasticity, cohesive	CL	
		59.0				
		0.9				
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.



Client : EnviroAnalytics Group  
 ARM Project No. : 150300M-5-3  
 Project Description : Sparrows Point - Parcel B6  
 Site Location : Sparrows Point, MD  
 ARM Representative : J. Yapple, P.G.  
 Checked by : M. Replogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Kevin Pumphrey  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/16/2016  
 Weather : 70s, Cloudy

Northing (US ft) : 569651.91  
 Easting (US ft) : 1462521.52

**Boring ID: B6-084-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		3.4	B6-084-SB-1	(0-1') SAND and GRAVEL, fine to coarse, angular, loose, light tan and white and black, dry, non plastic, non cohesive	SW/GW	
	100	1.4		(1-7') Fine SAND with trace SILT, very dense to loose, reddish yellow and tan, dry to moist, non plastic, non cohesive	SP	
		0.4				
		0.0				
5		0.0				
		2.5				
		6.3	B6-084-SB-7			
	100	6.3		(7-15') CLAY, soft, tan-gray with trace red-yellow mottles to 13', moist to wet, high plasticity, cohesive	CL	
		6.3				
		3.7				
10		1.4				
		0.2				
	100	0.0				
		0.0				Wet at 12' bgs
		0.0				Boring terminated at 15' bgs due to water
15				End of Boring		

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 80s, Sunny

Northing (US ft) : 570897.96  
 Easting (US ft) : 1462914.54

**Boring ID: B6-085-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B6-085-SB-1	(0-0.2') SILT, organic, soft, brown, dry, low plasticity, cohesive	OL	Small roots
				(0.2-2.5') GRAVELLY SILT, loose, brown and gray, dry, non plastic, non cohesive	ML	
	90			(2.5-3.5') SILT, very firm, grayish brown, dry, low plasticity, cohesive	ML	
				(3.5-5') SANDY SILT, soft, yellowish red, dry, non plastic, non cohesive	ML	
5				(5-7.5') SANDY SILT with small GRAVEL, soft, yellowish red, dry, non plastic, non cohesive	ML	
	60		B6-085-SB-8	(7.5-10') SILT grading to fine to medium grained SAND, soft to medium dense, dark brown, moist to wet, non plastic, non cohesive	ML/SW	
						Wet at 9' bgs
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 06/17/2016  
 Weather : 80s, Sunny

Northing (US ft) : 570057.80  
 Easting (US ft) : 1463153.27

**Boring ID: B6-086-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-086-SB-1	(0-3.5') SILT with SAND and GRAVEL, loose, black to grayish brown, dry, non plastic, non cohesive	ML	Small roots
60	0.5	-				
		1.2	B6-086-SB-4	(3.5-5') SANDY SLAG GRAVEL, loose, light gray to gray, dry, non plastic, non cohesive	GP/SP	
5	0.6	-				
		-		(5-10') SLAG GRAVEL, fine to coarse, loose, gray and brown, wet, non plastic, non cohesive	GP	Wet at 7.5' bgs
50	0.8	-				
	1.0	-				
10	0.1	-				
End of Boring						

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 01/10/2017  
 Weather : 30s, Cloudy

Northing (US ft) : 569093.24  
 Easting (US ft) : 1462850.77

**Boring ID: B6-087-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	-	-		(0-4.5') CONCRETE, hard, gray, dry, non plastic, non cohesive		Cored through 4' of concrete (truline)
20	-	-				
5	-	7.5	B6-087-SB-5	(4.5-7.5') SAND, fine to medium grained, dense, yellowish brown, moist, no plasticity, no cohesion	SW	... (4.5-5') Sand may be moist due to driller placing water in boring
78	-	1.6	B6-087-SB-7.5			
	1.4			(7.5-10') SLAG, large GRAVEL, SAND-sized, medium dense, brownish gray and brown, dry then wet at 8', non plastic, non cohesive	GP	Wet at 8.7' bgs Heavy sheen in water (8.7-10') No visible product
	2.0					
10				End of Boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 09/19/2016  
 Weather : 80s, Rainy  
 Northing (US ft) : 568800.2977  
 Easting (US ft) : 1462756.232

**Boring ID: B6-088-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B6-088-SB-1	(0-0.2') SAND, dense, very pale brown, moist, no plasticity, no cohesion	SW NA	Strong sweet odor around concrete
				(0.2-0.4') CONCRETE, loose, white, dry, no plasticity, no cohesion	SW	
				(0.4-1') SAND, dense, very pale brown, moist, no plasticity, no cohesion	CL	
				(1-2') CLAY, hard, pale yellow, dry, low plasticity, cohesive	CL	
	70	7.6		(2-3.5') SAND, dense, very pale brown, moist, no plasticity, no cohesion	SW	
		2.4		(3.5-4') CLAY, medium stiff, brown, dry, low plasticity, cohesive	CL	
		16.8	B6-088-SB-5	(4-8') SLAG, SAND and GRAVEL-sized, loose, grayish brown, dry, no plasticity, no cohesion	SW/GW	
5						
	50	0.0				
				(8-8.5') SAND, medium dense, light brownish gray, moist, no plasticity, no cohesion	SW	
				(8.5-10') SAND, loose to medium dense, light brownish gray, wet, no plasticity, no cohesion	SW	Wet at 8.5' bgs
10				End of boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 09/19/2016  
 Weather : 80s, Rainy

Northing (US ft) : 570659.28  
 Easting (US ft) : 1463610.45

**Boring ID: B6-089-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		23.8	B6-089-SB-1	(0-0.8') GRAVELLY SILT with SAND, soft, brown, moist, no plasticity, no cohesion	ML	Moderate odor throughout; predominately at 1-3' bgs	
		66.8		(0.8-2.5') SLAG, SAND and GRAVEL-sized, medium dense, gray and light gray, dry, no plasticity, no cohesion	SW/GW		
100		232.1		(2.5-3') CLAYEY SILT with SLAG GRAVEL, medium stiff, black, moist to dry, low plasticity, cohesive	ML		
		148.4	B6-089-SB-4	(3-4') CLAY, hard, gray and yellowish brown mottling, high plasticity, cohesive	CL		
5		125.6		(4-6.8') CLAY with SILT, hard, brownish gray and reddish yellow mottling, medium plasticity, cohesive	CL		
		64.8			CL		
100		-		(6.8-8') SAND, dense, light brownish gray, wet, no plasticity, no cohesion	SW		Wet at 6.8' bgs
		-		(8-9') CLAYEY SAND, dense, yellowish red, very moist, no plasticity, no cohesion	SW-SC		
		-		(9-10') CLAY with a one inch SAND layer at 9.6', very firm, brownish gray and reddish yellow mottling, moist, high plasticity, cohesive	CL		
10				End of boring			

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 09/19/2016  
 Weather : 80s, Rainy

Northing (US ft) : 570849.50  
 Easting (US ft) : 1462253.23

**Boring ID: B6-090-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0		-		(0-0.2') SILT, hard, brown, dry, no plasticity, no cohesion	ML	SB-2 collected from 0-0.2' + 1.2-2' bgs	
				(0.2-1.2') CONCRETE, SAND and GRAVEL-sized, loose, white, dry, no plasticity, no cohesion	NA		
	90	104.5	B6-090-SB-2	(1.2-3') SAND with CONCRETE GRAVEL, loose, pale brown, dry, no plasticity, no cohesion	SW		
		48.5					
		15.5		(3-3.5') SILTY SAND with CONCRETE GRAVEL, loose, dark brown, moist, no plasticity, no cohesion	SM		
				(3.5-3.9') SILT, medium dense, reddish yellow, dry, no plasticity, no cohesion	ML		
		0.6		(3.9-5') SLAG, SAND and GRAVEL-sized, loose, grayish brown and gray, dry, no plasticity, no cohesion	SW/GW		
5		-		(5-7.5') SILTY SAND, very fine grained, medium dense, yellowish red, moist, no plasticity, no cohesion	SW		
	90	24.9	B6-090-SB-8	(7.5-9') CLAY with SAND, soft, grayish brown, moist, low plasticity, cohesive	CL		
		3.5					
		10.1	B6-090-SB-10	(9-9.4') SILTY SAND, loose, dark brown, dry, no plasticity, no cohesion	SM		
10		-		(9.4-12.5') SANDY CLAY, soft, grayish brown, moist, low plasticity, cohesive	CL		
	70	0.6					
		-		(12.5-14') SAND, loose grading to medium dense, gray to brownish gray, wet then very moist 13.5-14', no plasticity, no cohesion	SW		Wet at 12.5' bgs
		-		(14-14.5') SLAG, SAND-sized, dense, very dark brown and black, dry, no plasticity, no cohesion	SW		
15		-		(14.5-15') CLAYEY SAND, medium dense, grayish brown, very moist, no plasticity, no cohesion	SW-SC		
				End of boring			

Total Borehole Depth: 15' bgs.

Boring terminated due to water at 15' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 09/19/2016  
 Weather : 80s, Rainy

Northing (US ft) : 569479.80  
 Easting (US ft) : 1462392.41

**Boring ID: B6-091-SB**

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		2.6	B6-091-SB-1	(0-1.5') SANDY SILT, soft, brownish gray, dry, no plasticity, no cohesion	ML	No water encountered Boring terminated at 20' bgs due to maximum allowable depth
	100	8.9		(1.5-1.7') SLAG GRAVEL, large, loose, light gray, dry, no plasticity, no cohesion	GP	
		4.5		(1.7-5') SILT with CLAY grading to CLAYEY SILT, hard, grayish brown with yellowish brown at 3-4', dry, low plasticity, cohesive	ML	
		5.9				
		1.1				
5		4.2		(5-6.5') SILTY CLAY, hard, brownish gray, dry, low plasticity, cohesive	CL	
	100	10.1		(6.5-7.5') SAND, dense, yellowish red, moist, no plasticity, no cohesion	SW	
		5.6		(7.5-18') CLAY, very firm (7.5-10') then firm to soft (10-18'), brownish gray with reddish yellow mottling, moist but very moist (9.8-10'), high plasticity, cohesive		
		12.8	B6-091-SB-9			
		10.6	B6-091-SB-10			
10		0.0				
	100	0.0			CH	
		0.0				
		0.0				
15		0.0				
	100	0.0				
		0.0				
		0.0		(18-20') CLAY, soft, gray, very moist, high plasticity, cohesive	CL	
20		0.0				
End of boring						

Total Borehole Depth: 20' bgs.

Boring terminated due to water at 20' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 09/21/2016  
 Weather : 80s, Sunny

Northing (US ft) : 568504.06  
 Easting (US ft) : 1462664.96

**Boring ID: B6-092-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B6-092-SB-1	(0-2.1') SLAG, SILT to GRAVEL-sized, medium dense, brown and gray, dry, no plasticity, no cohesion	ML/GW	Trace oxidation
		11.5				
	84	8.7		(2.1-5') CLAY with trace SLAG GRAVEL, hard, gray (2.1-2.5') then grayish brown and reddish yellow mottling, low plasticity low plasticity grading to high plasticity, cohesive	CL/CH	
		3.1				
5		0.0				
		0.7		(5-9') CLAY, soft to very soft then hard at 7.7' +, brownish gray with reddish yellow mottling from 6-9', moist to very moist then dry at 7.7' +, high plasticity, cohesive	CL	
	100	8.5				
		7.2				
		51.3	B6-092-SB-9			
		49.9		(9-10') SAND, very fine to medium grained, dense to loose, pale brown, wet, no plasticity, no cohesion	SW	Wet at 9' bgs
10				End of boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' 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 : M. Repogle, E.I.T.  
 Drilling Company : Green Services, Inc.  
 Driller : Don Marchese  
 Drilling Equipment : Geoprobe 7822DT

Date : 09/21/2016  
 Weather : 80s, Sunny

Northing (US ft) : 570364.50  
 Easting (US ft) : 1463641.00

**Boring ID: B6-093-SB**

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		92.2	B6-093-SB-1	(0-0.3') ORGANIC SILT with SAND, loose, brown, moist, no plasticity, no cohesion	OL	Organic matter
				(0.3-1.5') SILTY SAND with SLAG (SAND and GRAVEL-sized), loose, brown and gray, dry to moist, no plasticity, no cohesion, SLAG increases with depth	SM	
		126.4		(1.5-2.5') CLAY, firm, grayish brown, moist, high plasticity, cohesive	CL	
100		146.3		(2.5-3.1') SANDY CLAY, soft, reddish yellow, moist, medium plasticity, cohesive	CL	
		106.7		(3.1-3.8') SAND, very fine to medium grained, dense, very moist to wet, very pale brown and light yellowish brown, no plasticity, no cohesion	SW	
		0.4		(3.8-6.6') CLAY, hard, light gray, pale brown and reddish yellow, dry, medium plasticity, cohesive	CL	
5		39.5				
		178.5	B6-093-SB-7	(6.6-7') SAND, fine grained, dense, light gray and reddish yellow, moist, no plasticity, no cohesion	SW	
	100	-		(7-10') SAND, very fine to medium grained, dense to loose, light gray, very pale brown, and reddish yellow; wet, no plasticity, no cohesion	SW	
10				End of boring		

Total Borehole Depth: 10' bgs.

Boring terminated due to water at 10' bgs.