
FIGURES

TABLES

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **B4-040-SB-1**

1,4-Dioxane	0.11	mg/kg	24	no	R
Bromomethane	0.0057	mg/kg	30	no	R

Sample: **B4-040-SB-5**

1,4-Dioxane	0.095	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.077	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.19	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.077	mg/kg	210	no	R
2,4-Dichlorophenol	0.077	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.077	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.19	mg/kg	1,600	no	R
2-Chlorophenol	0.077	mg/kg	5,800	no	R
2-Methylphenol	0.077	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.15	mg/kg	41,000	no	R
Bromomethane	0.0048	mg/kg	30	no	R
Pentachlorophenol	0.19	mg/kg	4	no	R
Phenol	0.077	mg/kg	250,000	no	R

Sample: **B4-041-SB-1**

1,4-Dioxane	0.097	mg/kg	24	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0048	mg/kg	30	no	R

Sample: **B4-041-SB-4**

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.077	mg/kg	120,000	no	R
Bromomethane	0.0062	mg/kg	30	no	R

Sample: **B4-042-SB-1**

1,4-Dioxane	0.14	mg/kg	24	no	R
Benzaldehyde	0.073	mg/kg	120,000	no	R
Bromomethane	0.0071	mg/kg	30	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *B4-042-SB-5*

1,4-Dioxane	0.092	mg/kg	24	no	R
Benzaldehyde	0.069	mg/kg	120,000	no	R
Bromomethane	0.0046	mg/kg	30	no	R

Sample: *B4-043-SB-1*

1,4-Dioxane	0.11	mg/kg	24	no	R
Bromomethane	0.0055	mg/kg	30	no	R

Sample: *B4-043-SB-5*

1,4-Dioxane	0.11	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.077	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.19	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.077	mg/kg	210	no	R
2,4-Dichlorophenol	0.077	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.077	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.19	mg/kg	1,600	no	R
2-Chlorophenol	0.077	mg/kg	5,800	no	R
2-Methylphenol	0.077	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.15	mg/kg	41,000	no	R
Benzaldehyde	0.077	mg/kg	120,000	no	R
Bromomethane	0.0054	mg/kg	30	no	R
Pentachlorophenol	0.19	mg/kg	4	no	R
Phenol	0.077	mg/kg	250,000	no	R

Sample: *B4-044-SB-1*

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.07	mg/kg	120,000	no	R
Bromomethane	0.0061	mg/kg	30	no	R

Sample: *B4-044-SB-4*

1,4-Dioxane	0.16	mg/kg	24	no	R
Bromomethane	0.008	mg/kg	30	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *B4-045-SB-1*

1,4-Dioxane	0.13	mg/kg	24	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0065	mg/kg	30	no	R

Sample: *B4-045-SB-10*

1,4-Dioxane	0.11	mg/kg	24	no	R
Benzaldehyde	0.073	mg/kg	120,000	no	R
Bromomethane	0.0053	mg/kg	30	no	R
Mercury	0.1	mg/kg	350	no	R

Sample: *B4-045-SB-5*

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0059	mg/kg	30	no	R
Mercury	0.11	mg/kg	350	no	R

Sample: *B4-046-SB-1*

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.071	mg/kg	120,000	no	R
Bromomethane	0.0059	mg/kg	30	no	R

Sample: *B4-046-SB-5*

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0061	mg/kg	30	no	R

Sample: *B4-047-SB-1*

1,4-Dioxane	0.13	mg/kg	24	no	R
Bromomethane	0.0066	mg/kg	30	no	R

Sample: *B4-047-SB-5*

1,4-Dioxane	0.096	mg/kg	24	no	R
Benzaldehyde	0.076	mg/kg	120,000	no	R
Bromomethane	0.0048	mg/kg	30	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: **B4-048-SB-1**

1,4-Dioxane	0.14	mg/kg	24	no	R
2,3,4,6-Tetrachlorophenol	0.072	mg/kg	25,000	no	R
2,4,5-Trichlorophenol	0.18	mg/kg	82,000	no	R
2,4,6-Trichlorophenol	0.072	mg/kg	210	no	R
2,4-Dichlorophenol	0.072	mg/kg	2,500	no	R
2,4-Dimethylphenol	0.072	mg/kg	16,000	no	R
2,4-Dinitrophenol	0.18	mg/kg	1,600	no	R
2-Chlorophenol	0.072	mg/kg	5,800	no	R
2-Methylphenol	0.072	mg/kg	41,000	no	R
3&4-Methylphenol(m&p Cresol)	0.14	mg/kg	41,000	no	R
Benzaldehyde	0.072	mg/kg	120,000	no	R
Bromomethane	0.0068	mg/kg	30	no	R
Pentachlorophenol	0.18	mg/kg	4	no	R
Phenol	0.072	mg/kg	250,000	no	R

Sample: **B4-048-SB-10**

1,4-Dioxane	0.11	mg/kg	24	no	R
Benzaldehyde	0.07	mg/kg	120,000	no	R
Bromomethane	0.0054	mg/kg	30	no	R

Sample: **B4-048-SB-5**

1,4-Dioxane	0.11	mg/kg	24	no	R
Benzaldehyde	0.07	mg/kg	120,000	no	R
Bromomethane	0.0055	mg/kg	30	no	R

Sample: **B4-049-SB-1**

1,4-Dioxane	0.098	mg/kg	24	no	R
Benzaldehyde	0.074	mg/kg	120,000	no	R
Bromomethane	0.0049	mg/kg	30	no	R

Sample: **B4-049-SB-4.5**

1,4-Dioxane	0.12	mg/kg	24	no	R
Benzaldehyde	0.076	mg/kg	120,000	no	R
Bromomethane	0.0062	mg/kg	30	no	R

Rejected Results for Soil

Parameter	Result	Units	PAL	Exceeds PAL?	Flag
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Sample: *B4-050-SB-1*

1,4-Dioxane	0.12	mg/kg	24	no	R
Bromomethane	0.006	mg/kg	30	no	R

Sample: *B4-050-SB-5*

1,4-Dioxane	0.093	mg/kg	24	no	R
Benzaldehyde	0.077	mg/kg	120,000	no	R
Bromomethane	0.0047	mg/kg	30	no	R

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APPENDIX A

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Table 1 - Soil Samples
Parcel B4 (Full) Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland

Sub-Parcel	Source Area/ Description	REC & Finding/ SWMU/ AOC	Figure or Drawing of Reference	RATIONALE	Number of Locations	Sample Locations	Boring Depth	Sample Depth	Analytical Parameters: Soil Samples
B4-1	Drip Legs		Drip Legs Drawing 5885B	Coke oven gas condensate was removed from the gas pipelines at drip legs located throughout the distribution system. The condensate was typically discharged to drums, although it is possible some spilled out of the drums and on to the ground. A subset of the drip legs was selected for investigation.	2	B4-001 and B4-002	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-1	REC Oil House	REC 8C, Finding 203	REC Location Map/ Drawing 5020	The Phase I ESA identified this particular oil house to be a REC, because the conditions and status of the building were unknown. The oil house was positively identified on several sets of historical drawings. Current aerial images indicate that this structure is no longer in use and has been demolished.	3	B4-003 through B4-005	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-1	Emergency Plating Pit		Drawing 5120-A	Investigate potential impacts related to the emergency plating pit (potential leaks or releases).	2	B4-006 and B4-007	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-1	Substation/ Transformers		Drawing 5120	Investigate potential impacts related to a substation/transformers which are not on the list of PCB-containing equipment (potential leaks or releases).	2	B4-008 and B4-009	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-1	Parcel B4 Coverage			Investigate potential impacts related to any historical activities which may have occurred on the site (potential leaks or releases).	3	B4-010 through B4-012	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')

Table 1 - Soil Samples
Parcel B4 (Full) Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland

Sub-Parcel	Source Area/ Description	REC & Finding/ SWMU/ AOC	Figure or Drawing of Reference	RATIONALE	Number of Locations	Sample Locations	Boring Depth	Sample Depth	Analytical Parameters: Soil Samples
B4-2	Desulfurizer Stations		Drawings 5014 and 5020	Investigate potential impacts related to the desulfurizer stations (potential leaks or releases).	4	B4-014 through B4-017	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Drip Legs		Drip Legs Drawing 5885B	Coke oven gas condensate was removed from the gas pipelines at drip legs located throughout the distribution system. The condensate was typically discharged to drums, although it is possible some spilled out of the drums and on to the ground. A subset of the drip legs was selected for investigation.	8	B4-018 through B4-025	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Mould Treatment Building		Drawing 5026	Investigate potential impacts related to the mould treatment building (potential leaks or releases).	2	B4-026 and B4-027	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Fuel Department		Drawing 5014	Investigate potential impacts related to the fuel department (potential leaks or releases).	2	B4-028 and B4-029	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')

Table 1 - Soil Samples
Parcel B4 (Full) Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland

Sub-Parcel	Source Area/ Description	REC & Finding/ SWMU/ AOC	Figure or Drawing of Reference	RATIONALE	Number of Locations	Sample Locations	Boring Depth	Sample Depth	Analytical Parameters: Soil Samples
B4-2	Non-REC Oil House		Drawing 5020	Investigate potential impacts related to the oil house classified as a non-REC (potential leaks or releases).	2	B4-030 and B4-031	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Gas Pump Station	REC 8D, Finding 204	REC Location Map/ Drawing 5014	Based on interviews conducted by Weaver Boos, they determined this gas pumping station to be a REC because the station was associated with coke oven gas. It is possible that a historical release of gas condensate may have occurred. The gas pumping station was positively identified on several sets of historical drawings. Current aerial images indicate that this structure is no longer in use and has been demolished.	3	B4-032 through B4-034	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Substations/ Transformers		Drawings 5020 and 5120	Investigate potential impacts related to substations/transformers which may have included PCB-containing equipment (potential leaks or releases).	4	B4-035 through B4-038	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-1 & B4-2	Tar Tanks		Drawing 5020	Investigate potential impacts related to the tar tanks (potential leaks or releases).	4	B4-039 through B4-042	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')

Table 1 - Soil Samples
 Parcel B4 (Full) Sampling Plan Summary
 Former Sparrows Point Steel Mill
 Sparrows Point, Maryland

Sub-Parcel	Source Area/ Description	REC & Finding/ SWMU/ AOC	Figure or Drawing of Reference	RATIONALE	Number of Locations	Sample Locations	Boring Depth	Sample Depth	Analytical Parameters: Soil Samples
B4-2	Thickener Tanks		Drawings 5014, 5020, and 5121	Investigate potential impacts related to the thickener tanks (potential leaks or releases).	4	B4-043 through B4-046	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Parcel B4 Coverage			Investigate potential impacts related to any historical activities which may have occurred on the site (potential leaks or releases).	5	B4-013; B4-047 through B4-050	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Mould Yards		Drawing 5120	MDE Request. Investigate potential impacts related to the mould yards (potential leaks or releases).	2	B4-054 and B4-055	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Water Treatment Area		Drawing 5526	MDE Request. Investigate potential impacts related to the water treatment area (potential leaks or releases).	1	B4-056	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	No. 3 Open Hearth		Drawings 5121 and 5127	MDE Request. Investigate potential impacts related to the No. 3 Open Hearth (potential leaks or releases).	1	B4-057	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
B4-2	Additional PCB Investigation			MDE Request. Investigate potential impacts in the vicinity of an elevated PCB detection (potential leaks or releases).	2	B4-058 and B4-059	Total depth of 20 feet or groundwater.	0-1', 4-5', 9-10' bgs. 4-5' interval may be adjusted in the field based on observations or field screening.	VOC, SVOC, Metals, DRO/GRO, PCBs (0-1')
				Total	56				

Soil Borings Sampling Density Requirements (from Worksheet 17 - Sampling Design and Rationale)

Engineered Barrier (71-100 acres): 1 boring per 5 acres with no less than 35.

No Engineered Barrier (1-15 acres): 0.5 boring per acre with no less than 3.

Engineered Barrier (70.5 acres) = **35 borings required, 53 proposed**

No Engineered Barrier (1.6 acres) = **3 borings required, 3 proposed**

VOCs - Volatile Organic Compounds (Target Compound List)

SVOCs - Semivolatile Organic Compounds (Target Compound List)

Metals - (Target Analyte List plus Hexavalent Chromium and Cyanide)

PCBs - Polychlorinated Biphenyls

DRO/GRO - Diesel Range Organics/Gasoline Range Organics

bgs - Below Ground Surface

Table 2 - Sub-Slab Soil Gas Samples
Parcel B4 (Full) Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland

Source Area/ Description	RATIONALE	Number of Locations	Sample Locations	Boring Depth	Sample Depth	Analytical Parameters: Sub-Slab Soil Gas
Maintenance Shop (Coverage)	Investigate potential impacts related to any historical activities which may have occurred within the maintenance shop (potential leaks or releases).	1	B4-051	6 inches below bottom of concrete slab	6 inches below bottom of concrete slab	VOCs
Maintenance Shop (Parts Washer)	Investigate potential impacts related to the observed parts washer (potential leaks or releases).	1	B4-052	6 inches below bottom of concrete slab	6 inches below bottom of concrete slab	VOCs
Maintenance Shop (Storage Enclosure & Oil Release)	Investigate potential impacts related to the storage enclosure and small oil release (potential leaks or releases).	1	B4-053	6 inches below bottom of concrete slab	6 inches below bottom of concrete slab	VOCs
Total		3				

Soil Gas Sampling Density Requirements (from **Worksheet 17 - Sampling Design and Rationale**)

Sub-Slab: 1 sample collected per 20,000 ft², with a minimum of 3 per building

Maintenance Shop (5,750 ft²) = 3 **Samples**

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APPENDIX B

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ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,546.4789
 Easting (US ft) : 1,457,554.39

Boring ID: B4-001-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B4-001-SB-1	(0-1') SAND, fine to medium grained with GRAVEL SLAG, very loose, soft, light brown	SW-GW	
100		0.1		(1-1.5') GRAVEL, with ASPHALT, hard, very loose, black, moist	SW	
				(1.5-2') SAND, fine to medium grained with GRAVEL SLAG, very loose, soft, light brown	SW-GW	
				(2-6') SAND, very loose, brown with some oxidation present, dry	SW	
120.1						
		395.6	B4-001-SB-4		SW	Wet at 7' bgs
132.1						
181.9						
5	100	181.9		(6-6.3') SAND, coarse grained, slightly firm, loose, gray, moist	SW	
		119.6		(6.3-7') SAND, very loose, brown with some oxidation present, moist; wet at bottom	SW	Boring terminated at 7' bgs due to encountering groundwater
End of Boring						

Total Borehole Depth: 7' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,524.3374
 Easting (US ft) : 1,457,547.755

Boring ID: B4-002-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-002-SB-1	(0-4') SAND, fine to medium grained with gravel, very loose, light brown, dry	SW	
		-				
50		2.2				
		4.3				
5		2.2	B4-002-SB-5	(4-8.5') SAND, coarse grained, beige, with large pieces of oxidized metal, moist, no plasticity, no cohesion	SP	
		-				
60		0.7				
		-				
		-		(8.5-10') GRAVEL, with SAND, hard, loose, light gray, wet	GW	Wet at 8.5' bgs Boring terminated at 10' bgs due to encountering groundwater
10		-				

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 2/19/2016
 Weather : 50s, cloudy/windy

Northing (US ft) : 564,603.8415
 Easting (US ft) : 1,457,209.414

Boring ID: B4-003-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-003-SB-1	(0-2') SILT, black, with some gray to white granular SLAG, moist	ML	
75		0.1		(2-4') Sandy SILT, black, fine grained with some gray granular SLAG, moist	SM	
		1.4				
5		396.5	B4-003-SB-5	(4-7') Sandy SILT, brown and black, moist	SM	
25		-		(7-10') SLAG, black, granular with some red BRICK, wet	SW-GW	Wet at 7' + bgs
10		-				Boring terminated at 10' bgs due to water

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 2/29/2016
 Weather : 50s, cloudy
 Northing (US ft) : 564,599.7756
 Easting (US ft) : 1,457,235.99

Boring ID: B4-004-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-004-SB-1	(0-1.5') SILT, brown, with brownish gray SLAG, moist	ML	Wet at 7.5' + bgs Boring terminated at 8' bgs due to refusal and water.
		0.1		(1.5-2.5') CONCRETE, light brown to white, with gray SLAG, dry	N/A	
87		3.0		(2.5-4') SILT, dark brown to black with some mustard yellow, moist	ML	
		241.7	B4-004-SB-4			
		26.0		(4-6') SLAG, red to black, moist	GW	
5		0.2				
		100		(6-7.5') Sandy SILT, fine grained, reddish brown, moist	SM	
		-		(7.5-8') SLAG, granular, white to black, wet	SW	
End of Boring						
10						

Total Borehole Depth: 8' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 2/29/2016
 Weather : 50s, cloudy/windy

Northing (US ft) : 564,621.3024
 Easting (US ft) : 1,457,234.51

Boring ID: B4-005-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-005-SB-1	(0-4') Sandy SILT, fine grained, with some CONCRETE, brown to black, moist	SM	
50	4.5	5.3		(4-7') CONCRETE, gray and white and bluish green in spots	N/A	No 5' or 10' samples taken due to concrete and slag
30				(7-10') SLAG, black with some yellowish red, wet	GW	Wet at 7' + bgs Boring terminated at 10' bgs due to water

Total Borehole Depth: 10' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,696.7803
 Easting (US ft) : 1,457,613.429

Boring ID: B4-006-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-9') SAND, with few GRAVEL, very loose, brown, moist		
		-	B4-006-SB-1			
		-				
44		-				
		1.3				
		20.9	B4-006-SB-5			
5		-		(9-10') SAND, fine to medium grained, loose, gray, wet, no cohesion	SP-SW	Wet at 7' + bgs
		-				
80		1.4				
		0.9				
		6.5				
10					SP-SW	Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,646.6698
 Easting (US ft) : 1,457,612.088

Boring ID: B4-007-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') GRAVEL, hard, loose, light gray, dry	GW	
		-	B4-007-SB-1	(0.5-2.5') SAND, medium to coarse grained with GRAVEL, very loose, light gray, dry		
80		7.5			SW-GW	
		18.3		(2.5-3.6') CONCRETE, SAND to GRAVEL sized, very loose, white	N/A	
		5.6		(3.6-7') SAND, medium to fine grained, very loose, dark brown, dry		
5		59.6	B4-007-SB-5		SW	
		11.9				
		3.9		(7-7.5') SAND, coarse grained, dark brown, wet, no cohesion	SP	Wet at 7' + bgs Boring terminated at 7.5' bgs due to encountering groundwater and refusal
			End of Boring			
10						

Total Borehole Depth: 7.5' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 2/29/2016
 Weather : 50s, cloudy/windy

Northing (US ft) : 564,846.4933
 Easting (US ft) : 1,457,807.583

Boring ID: B4-008-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-1') SILT, fine grained with some QUARZ, brown, moist	ML	Wet at 8' + bgs Boring terminated at 10' bgs due to water.
	83	1.3	B4-008-SB-1	(1-4') SILTY SAND, fine to medium grained, brown, dry	ML	
		0.7				
		1.3			ML	
		0.2				
		-		(4-5.5') SILTY SAND, brown, fine to medium grained with some gray CONCRETE and trace SLAG, moist	SM	
5		3.1		(5.5-7') SILTY SAND, fine to medium grained with some granular SLAG, brown	SM	
		21.6	B4-008-SB-7			
	80	-		(7-7.5') SLAG, medium GRAVEL sized, black and brown, with some red BRICK chunks	GW	
		-		(7.5-8') SLAG chunks, white	GP	
		-		(8-9') SILTY CLAY, brown, saturated	CL	
		-		(9-10') SLAG, medium GRAVEL sized, black, saturated	GP	
10						

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,902.9773
 Easting (US ft) : 1,457,802.794

Boring ID: B4-009-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0			B4-009-SB-1	(0-1.5') SAND, fine grained with fill GRAVEL, loose, brown, dry, no plasticity	SP		
				(1.5-6') SAND, loose, light brown, dry			
	87				SW		
			B4-009-SB-5				
				(6-7.5') SAND, medium to coarse grained, loose, brownish gray, moist, no plasticity	SW		
5				(7.5-8.5') SAND, coarse grained, beige, no cohesion	SP		
			End of Boring				Wet at 8.5' bgs Boring terminated at 8.5' bgs due to encountering groundwater and refusal
10							

Total Borehole Depth: 8.5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 2/29/2016
 Weather : 50s, cloudy
 Northing (US ft) : 564,241.6121
 Easting (US ft) : 1,457,500.436

Boring ID: B4-010-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-2') SILT, brown, with some gray small to medium GRAVEL sized SLAG, dry	ML	Wet at 8' + bgs Boring terminated at 10' bgs due to water.
		6.7	B4-010-SB-1			
		10.5				
100		11.6		(2-3') SANDY SILT, fine grained with some granular SLAG, dark brown, moist	ML	
		8.3		(3-4') SLAG, mustard yellow to white to gray, moist	GW	
		0.5		(4-5') SILTY SAND, fine grained, black, moist	SM	
5		25.9	B4-010-SB-6	(5-6') SILTY SAND, fine grained, gray to black, moist	SM	
		6.6		(6-7.5') SILTY SAND, fine grained with granular SLAG and trace BRICK pieces, brown, dry	SM	
90		3.4		(7.5-8') SILT, bluish green, moist, possible SLAG derived	ML	
		2.3		(8-10') SAND, medium grained, light brown, wet	SP	
10		-				

Total Borehole Depth: 10' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 2/29/2016
 Weather : 50s, cloudy
 Northing (US ft) : 564,873.9603
 Easting (US ft) : 1,457,226.524

Boring ID: B4-011-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-011-SB-1	(0-1') SILT, dark brown to black, fine grained with black SLAG, moist	ML	Wet at 5' + bgs Boring terminated at 6' bgs due to refusal and water.
				(1-2') CONCRETE, gray to white, dry	N/A	
				(2-2.5') SAND, light brown, with some gray CONCRETE, moist	SW	
				(2.5-3.5') SLAG, with some medium grained SAND, brown	GW-SW	
			B4-011-SB-4.5	(3.5-4') SLAG, black, moist	GW	
				(4-4.5') SAND, medium grained, light brown, moist	SP	
				(4.5-6') SLAG, with some SAND, gray to white to bluish green, moist, wet at 5' bgs	GW-SW	
5				End of Boring		
10						

Total Borehole Depth: 6' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,454.9432
 Easting (US ft) : 1,456,764.743

Boring ID: B4-012-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') SANDY GRAVEL, hard, loose, light brown, dry	GW	No water encountered
			B4-012-SB-1	(0.5-2.5') SILTY SAND, very loose, light brown, dry, no plasticity		
		84.5			SM	
92		298.2		(2.5-3') SAND, fine to medium grained, very loose, brown, dry, some oxidation	SW	
		806.0		(3-4') COBBLES, purple, porphyritic, hard, loose, dry	GW	
5		1,509.4	B4-012-SB-5	(4-5') GRAVELLY SAND, reddish yellow and black with metallic flakes, loose, dry	GW/SW	Boring terminated at 5' bgs due to refusal

Total Borehole Depth: 5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 2/29/2016
 Weather : 50s, cloudy
 Northing (US ft) : 564,194.4787
 Easting (US ft) : 1,457,219.774

Boring ID: B4-013-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-		(0-0.9') CONCRETE, light gray	N/A	
		-	B4-013-SB-1	(0.9-4.5') SILT, black with gray to white to tan to black slag, moist		
50		0.9			ML/GM	
		0.6				
		0.6		(4.5-5.5') CLAY, brownish orange, moist	CL	
5		47.5		(5.5-7') SILT, brown to black, with gray and brown slag and chunks of metal	ML/GM	
		209.4	B4-013-SB-7.5	(7-7.5') Silty SAND, brown to black, fine grained, moist	SM	
87		-		(7.5-8') SILT, black, fine grained with some red brick, wet	ML	Wet at 7.5' + bgs
		-		(8-9') SLAG, brown to gray to white, with some brown coarse grained sand	GW	
		-		(9-10') SLAG, gray to white, saturated	GW	
10						Boring terminated at 10' bgs due to water.

Total Borehole Depth: 10' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,106.7147
 Easting (US ft) : 1,457,557.483

Boring ID: B4-014-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-014-SB-1	(0-2.5') SAND, with metallic GRAVEL SLAG and FILL GRAVEL, loose, dark brown to brown, dry	SW	Wet at 5' bgs
	80	15.4			SW	
		15.8		(2-5.4') SAND, with CLAY, firm, tan, no plasticity, no cohesion	SW	
		13.1			CL	
		11.7	B4-014-SB-5	(4-5') SANDY CLAY, soft, gray, moist, medium plasticity, cohesive	CL	
5	100	9.2		(5-6.5') Sandy CLAY, soft, tan with black mottling, wet, medium plasticity, cohesive	CL	Boring terminated at 6.5' bgs due to refusal and water.
		9.7				
End of Boring						

Total Borehole Depth: 6.5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,106.9473
 Easting (US ft) : 1,457,583.037

Boring ID: B4-015-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		18.2	B4-015-SB-1	(0-3') SAND, fine to medium grained with SLAG GRAVEL, loose, soft, brown, dry, more GRAVEL in top foot	SW	
		17.5				
	90	14.0		(3-7.5') SANDY CLAY grading to CLAY with trace SAND, firm, tan with orange mottles, moist, medium plasticity, cohesive	CL	Wet at 7.5' + bgs
		19.0				
5		12.4	B4-015-SB-5			
		14.4				
100		15.9				
End of Boring						

Total Borehole Depth: 7.5' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/4/2016
 Weather : 30s, cloudy
 Northing (US ft) : 563,903.9119
 Easting (US ft) : 1,456,625.045

Boring ID: B4-016-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-016-SB-1	(0-9') SAND, medium grained with trace FINES, loose, light brown, dry, increasing moisture with depth, no plasticity, no cohesion		
50		52.3				
5		21.1	B4-016-SB-5	(9-10') SILTY GRAVEL, hard, black, wet, no plasticity, no cohesion	SW	Wet at 9' + bgs Boring terminated at 10' bgs due to encountering groundwater
		-				
50		27.6				
		-				

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/7/2016
 Weather : 30s, sunny
 Northing (US ft) : 563,899.6368
 Easting (US ft) : 1,456,691.251

Boring ID: B4-017-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-4') SAND, with GRAVEL SLAG, grading to SILTY SAND, loose, soft, light brown, dry		
		18.5	B4-017-SB-1			
		18.3			SW-SM	
	90	30.3				
		18.7	B4-017-SB-4			
		17.6		(4-5') SANDY SILT, soft, dark brown, dry, no plasticity, cohesive	ML	
5		32.3		(5-7') SANDY SILT, with GRAVEL, soft, dark brown, wet, low plasticity, cohesive	ML	
	100	-				Wet at 6' + bgs
						Boring terminated at 7' bgs due to refusal
				End of Boring		

Total Borehole Depth: 7' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/4/2016
 Weather : 30s, sunny
 Northing (US ft) : 564,006.6299
 Easting (US ft) : 1,456,610.572

Boring ID: B4-018-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	80	-	B4-018-SB-1	(0-4.5') SAND, with trace FINES, soft, brown, light brown at 2' bgs, dry	SW	
		25.2				
		22.7				
		23.1				
		20.9	B4-018-SB-5	(4.5-6') SILT, dark brown, moist, no plasticity, cohesive	ML	
		-		(6-10') GRAVELLY SILT, soft, black, wet with sheen, low plasticity, no cohesion	ML	
10	100	-				Wet at 7.5' + bgs Petroleum odor throughout Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/4/2016
 Weather : 30s, sunny
 Northing (US ft) : 564,015.8857
 Easting (US ft) : 1,456,632.493

Boring ID: B4-019-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-019-SB-1	(0-2.5') SAND, fine grained with trace SILT, loose, brown, dry but moist in top 6 inches, no plasticity	SW	Wet at 8' + bgs
		19.0				
80		20.0		(2.5-6.6') SILT, with trace SAND, soft, dark brown, dry, no plasticity	ML	
		23.0				
		46.6	B4-019-SB-5			
5		-				
		21.6		(6.6-7.6') GRAVEL, SLAG with CONCRETE and BRICK, loose, hard, gray, dry	GP	
	80	29.2		(7.6-8') SAND, beige, with gray CONCRETE, loose, hard, moist	SW	
		42.1		(8-10') SILTY GRAVEL, hard, loose, black, wet, no plasticity	GM	
10		-				Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/4/2016
 Weather : 30s, sunny
 Northing (US ft) : 564,247.0422
 Easting (US ft) : 1,457,971.906

Boring ID: B4-020-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-020-SB-1	(0-1.3') SANDY SILT, soft, brown with maroon tinge at bottom, moist, no plasticity, cohesive	SM	
		15.0		(1.3-2') SAND, brown, with metallic GRAVEL, loose, soft, moist, no plasticity, no cohesion	SW	
	80	16.0		(2-3.5') SAND, light brown with trace blue flakes, loose, dry	SW	
		23.5		(3.5-4') SAND, medium to coarse grained, soft, loose, black, moist, no plasticity	SW	
		24.7	B4-020-SB-5	(4-5') SAND, brown, with tan to green GRAVEL, soft, loose, moist	SW-GP	
5		-		(5-8') No Recovery - 3' void space felt by drillers	VOID	
	40	-		(8-10') GRAVEL, hard, loose, brown, wet, no plasticity	GW	Wet at 9' + bgs
10		-				Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/4/2016
 Weather : 30s, cloudy
 Northing (US ft) : 564,236.1045
 Easting (US ft) : 1,457,976.968

Boring ID: B4-021-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-021-SB-1	(0-2') SILTY SAND, loose, soft, brown, moist, no plasticity	SM	Wet at 7.5' + bgs Boring terminated at 10' bgs due to encountering groundwater
80		16.6		(2-2.5') SAND, fine grained, loose, light brown, dry, no plasticity	SP	
		15.0		(2.5-3.6') SAND, loose, brown grading to black, dry, no plasticity	SW	
		70.8		(3.6-6.6') GRAVELLY SAND, soft, beige and brown, oxidized in brown spots, dry, no plasticity; no brown spots at 6' bgs	SW	
5		71.3	B4-021-SB-5		SW	
		-		(6.6-7.5') CLAY, slightly firm, tan, very moist, high plasticity, cohesive	CH	
		51.5		(7.5-9.3') SILTY SAND, with GRAVEL, dark brown, wet with free water in sleeve, no plasticity, cohesive	SM	
		-		(9.3-10') SANDY SILT, soft, light gray to white, no plasticity, cohesive	ML	
10		-				

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : S. Kabis
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/14/2016
 Weather : 50s, cloudy/ light rain

Northing (US ft) : 564,024.7399
 Easting (US ft) : 1,456,739.698

Boring ID: B4-022-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-022-SB-1	(0-5') SAND, with GRAVEL, loose, brown, dry, no plasticity, no cohesion	SW	
		-				
		4.5				
70		5.1				
		5.6				
		13.1	B4-022-SB-5	(5-8') GRAVEL, with some SAND, loose, light tan to white, dry, bottom 3" wet, no cohesion, no plasticity	GW	Wet at 7.7' + bgs Boring terminated at 8' bgs due to refusal and water.
5		8.4				
100		8.0				
		7.0				
End of Boring						

Total Borehole Depth: 8' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : S. Kabis
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/14/2016
 Weather : 50s, cloudy/ light rain

Northing (US ft) : 564,027.6044
 Easting (US ft) : 1,456,760.097

Boring ID: B4-023-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-5') SAND, with GRAVEL, loose, dark brown, dry, no plasticity, no cohesion		
		-	B4-023-SB-1			
		1.4				
70		1.3			SW	
		1.3				
		1.5	B4-023-SB-5			
5				(5-10') GRAVEL, with some SAND, well graded, loose, light tan to white, dry, bottom 3" wet, no plasticity, no cohesion		
		9.7				
80		9.5			GP	
		9.2				
		8.7				
10						Wet at 9.75' + bgs Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,379.0966
 Easting (US ft) : 1,457,435.169

Boring ID: B4-024-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-2') SAND, with GRAVEL, loose, brown, dry, no plasticity		
		-	B4-024-SB-1		SW	
		12.8				
	80	13.8		(2-3') SAND, fine grained, loose, light beige, dry	SP	
		13.5		(3-3.5') SAND, loose, light brown, dry, no plasticity	SW	
		13.2	B4-024-SB-4.5	(3.5-4.5') SAND, fine grained, loose, light beige, dry	SP	
5				(4.5-5') SAND, with GRAVEL, dark brown, wet, no cohesion	SW	Wet at 4.5' + bgs Boring terminated at 5' bgs due to refusal and water

Total Borehole Depth: 5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,328.9642
 Easting (US ft) : 1,457,497.078

Boring ID: B4-025-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-3') SAND, with GRAVEL, loose, light gray, dry, no plasticity		
		-	B4-025-SB-1			
		13.2			SW	
80		12.6				
		12.1		(3-4') SAND, coarse grained with GRAVEL, loose, brown, dry, no plasticity	SP-GW	
				(4-4.3') COBBLE/GRAVEL, pale white, SANDSTONE type rock with white GRAVEL sized grains, hard, loose, dry	GP	
		10.1	B4-025-SB-5	(4.3-5') SAND, coarse grained, loose, soft, brown, moist	SP	Wet at 5' + bgs
5						Boring terminated at 5' bgs due to refusal and water.

Total Borehole Depth: 5' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,486.7143
 Easting (US ft) : 1,457,231.378

Boring ID: B4-026-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-026-SB-1	(0-1.8') SAND, soft, brown, moist, no plasticity, no cohesion	SW	
		-		(1.8-2') ASPHALT, GRAVEL sized, hard, loose, black, dry	N/A	
	70	2.5		(2-4') GRAVELLY SAND, loose, brown, dry, no plasticity	SW-GW	
		4.2				
5		1.2	B4-026-SB-5	(4-6.6') SAND, tan, moist, no plasticity, no cohesion	SW	
		-				
	70	0.1		(6.6-10') CLAY, soft, firm, light gray with orange mottling, wet becoming drier with depth, low plasticity, cohesive	CL	Wet at 6' + bgs Gaseous odor
		0.0				
10		-				Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,490.0836
 Easting (US ft) : 1,457,219.699

Boring ID: B4-027-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-027-SB-1	(0-5.5') GRAVELLY SAND, loose, soft, brown and gray, dry, grading to moist		
		0.8				
80		2.2			SW-GW	Gaseous odor
		3.0				
		5.2	B4-027-SB-5			
5		-		(5.5-6.3') SAND, very coarse grained, soft, loose, beige, wet, no plasticity	SP	Wet at 6' + bgs
		-		(6.3-7') SAND, very coarse grained, loose, soft, dark brown, wet	SP	
80		-		(7-10') CLAY, soft, gray, wet, medium plasticity, cohesive; firm at dry at 9' bgs	CL	
		-				
		8.6				
10						Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/7/2016
 Weather : 30s, sunny
 Northing (US ft) : 563,922.2251
 Easting (US ft) : 1,457,513.719

Boring ID: B4-028-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	94	-	B4-028-SB-1	(0-2.5') SILTY SAND, soft, brown, very moist, dry at 1.8' bgs, no plasticity, cohesive	SM	Boring terminated at 4' bgs due to refusal
		14.5				
		15.2		(2.5-2.8') CONCRETE, hard, loose, gray, dry	N/A	
		15.8	B4-028-SB-4	(2.8-3.5') SANDY SILT, soft, brown, moist, low plasticity, cohesive	ML	
5				End of Boring		

Total Borehole Depth: 4' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/7/2016
 Weather : 30s, sunny
 Northing (US ft) : 563,926.6273
 Easting (US ft) : 1,457,442.749

Boring ID: B4-029-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	100	32.3	B4-029-SB-1	(0-1.5') SILTY SAND, with metallic GRAVEL, loose, soft, brown, dry, moist at top 1", no plasticity	SM	
						Boring terminated at 1.5' bgs due to refusal
End of Boring						
5						

Total Borehole Depth: 1.5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 40s, sunny
 Northing (US ft) : 565,113.2404
 Easting (US ft) : 1,456,245.479

Boring ID: B4-030-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-030-SB-1	(0-2.5') SAND, brown, with little slag gravel, dry, loose, no plasticity	SW	Wet at 6' + bgs Boring terminated at 10' bgs due to encountering groundwater
7.2						
8.4	80			(2.5-7.5') Sandy SILT, black, very fine grained, dry, soft, no plasticity; moist and very soft at 4' bgs; wet at 6' bgs		
7.9						
6.1			B4-030-SB-5		ML	
9.0						
10.4						
7.4	100			(7.5-9') CLAY, light gray, soft, moist, medium cohesion, medium plasticity	CL	
4.5						
3.6				(9-10') CLAY, gray and orange mottled, moist, firm, medium cohesion, medium plasticity	CL	

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 40s, sunny
 Northing (US ft) : 565157.3184
 Easting (US ft) : 1456219.035

Boring ID: B4-031-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-031-SB-1	(0-2.3') SANDY CLAY, soft, tan, moist, low plasticity, cohesive	CL	
				(2.3-3.3') SILTY SAND, loose, soft, dark brown, dry, no plasticity	SM	
			B4-031-SB-4	(3.3-3.6') SLAG, gray, GRAVEL sized with beige SAND, hard, loose, dry	GW-SW	
				(3.6-4.1') SAND, black, loose, moist	SW	
				(4.1-4.5') SAND, coarse grained with BRICK GRAVEL, beige, wet, no plasticity, no cohesion	SP	Wet at 4.1' + bgs
				(4.5-5') SANDY SILT, firm, brown, wet, no plasticity, cohesive	ML	Boring terminated at 5' bgs due to encountering groundwater
5						

Total Borehole Depth: 5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : S. Kabis
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/14/2016
 Weather : 50s, cloudy/light rain
 Northing (US ft) : 563,816.759
 Easting (US ft) : 1,456,278.752

Boring ID: B4-032-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	23	8.7	B4-032-SB-1	(0-2') SAND, with GRAVEL, loose, brown, dry, no plasticity, no cohesion	SW	Boring terminated at 2' bgs due to refusal
End of Boring						
5						

Total Borehole Depth: 2' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : S. Kabis
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/14/2016
 Weather : 50s, cloudy/light rain
 Northing (US ft) : 563,927.7603
 Easting (US ft) : 1,456,283.801

Boring ID: B4-033-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.5') SAND, with GRAVEL, loose, brown, dry, no plasticity, no cohesion	SW	
100	35.5		B4-033-SB-1	(0.5-1.5') CONCRETE FRAGMENTS, SAND to GRAVEL-sized, loose, white, dry, no plasticity, no cohesion	N/A	
	12.1			(1.5-2') SAND, with GRAVEL, loose, brown, dry, no plasticity, no cohesion	SW	
End of Boring						
5						

Total Borehole Depth: 2' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : S. Kabis
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/14/2016
 Weather : 50s, cloudy/light rain
 Northing (US ft) : 563,951.0656
 Easting (US ft) : 1,456,374.767

Boring ID: B4-034-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-034-SB-1	(0-1') SAND, with GRAVEL, loose, brown, dry, no plasticity, no cohesion	SW	
69		7.0		(1-3.5') BRICK FRAGMENTS, dense, red, wet, no plasticity, no cohesion	N/A	
		8.9				
End of Boring						
5						

Total Borehole Depth: 3.5' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,284.0063
 Easting (US ft) : 1,457,558.296

Boring ID: B4-035-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS		
0			B4-035-SB-1	(0-0.6') TOPSOIL, with MICA flakes and small ROOTS, soft, brown, moist, no plasticity, cohesive	ML	Wet at 7' + bgs		
				(0.6-1') GRAVEL, fill material, hard, loose, white, dry	GW			
		11.4		(1-6.5') SANDY SILT, hard, tan and gray, dry, low plasticity, cohesive	ML			
90		10.6						
		10.0						
		9.2	B4-035-SB-5					
5				(6.5-7') SLAG, GRAVEL sized, hard, loose, brown, moist	GW			
		14.7						
		12.5					(7-10') CLAY, gray, very wet grading to moist at depth, high plasticity, cohesive	CH
80		11.0						
		10.5				Boring terminated at 10' bgs due to encountering groundwater		
10								

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,546.4789
 Easting (US ft) : 1,457,554.39

Boring ID: B4-036-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-036-SB-1	(0-1.3') SAND, poorly graded, fine grained with GRAVEL, soft, loose, brown, dry, no plasticity	SP	Wet at 8.5' + bgs Boring terminated at 10' bgs due to encountering groundwater
		12.3		(1.3-4.5') CLAY, trace sand, very firm, light gray with reddish yellow mottling, high plasticity, cohesive; grades to SANDY CLAY, very firm, light gray with reddish yellow mottling, high plasticity, cohesive	CH	
	80	14.2				
		11.6				
		11.0	B4-036-SB-5	(4.5-8.1') SANDY GRAVEL, hard, loose, brown with oxidation, moist, no plasticity		
5		-			GP	
		-				
	40	-				
		9.4		(8.1-8.5') SAND, poorly graded, coarse grained with GRAVEL, loose, light beige, dry, no plasticity	SP	
		9.1		(8.5-9') SAND, poorly graded, very coarse grained, beige, wet, no plasticity, no cohesion	SP	
10				(9-10') CLAYEY SAND, firm, dark brown grading to gray, wet, low plasticity, cohesive	SC	

Total Borehole Depth: 10' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny
 Northing (US ft) : 564,807.8356
 Easting (US ft) : 1,456,369.476

Boring ID: B4-037-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-037-SB-1	(0-4.0') SAND, with SILT, loose, brown, dry	SW	
70		12.5				
		12.5				
		12.2				
5		11.7		(4-7.5') SANDY CLAY, brown to gray, gray at 6' bgs, moist, medium plasticity, cohesive	CL	Diesel smell
		24.5	B4-037-SB-6			
		21.6				
100		25.1		(7.5-9.6') CLAYEY SILT, firm, brownish gray, moist, low plasticity, cohesive; grading to SILTY CLAY with trace SAND that is firm, moist, low plasticity, cohesive	ML/CL	
		22.0				
10		22.3	B4-037-SB-10	(9.6-10') SILTY SAND, loose, gray, moist, cohesive	SM	Wet at 10' + bgs
		21.3		(10-11.5') SAND, loose, gray, wet, no cohesion	SW	
		14.7		(11.5-13') SAND, loose, reddish yellow, wet, no cohesion	SW	Boring terminated at 13' bgs due to encountering groundwater
End of Boring						
15						

Total Borehole Depth: 13' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny
 Northing (US ft) : 564,704.6505
 Easting (US ft) : 1,456,344.519

Boring ID: B4-038-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-038-SB-1	(0-1.5') TOPSOIL, with ROOTS present, soft, dark brown, no plasticity, cohesive	ML	
90		1.4		(1.5-2.6') SAND, fine grained, loose, dark brown, reddish yellow at 2.5' bgs; black at 3.1' bgs, dry, no plasticity, no cohesion	SP	
		2.4		(3.1-5') SAND, fine grained, loose, brown, dry grading to moist, no plasticity	SP	
		3.2			SP	
		3.5	B4-038-SB-5			
5		-		(5-6') SANDY CLAY, soft, tan, moist, medium plasticity, cohesive	CL	
		0.0		(6-9') CLAYEY SAND, soft, tan, moist, no cohesion		
100		0.0			SC	
		0.1				
		0.0	B4-038-SB-10	(9-10') CLAY, with trace SAND, tan, moist, high plasticity, cohesive	CH	
10		-		(10-12') SANDY CLAY, soft, tan, moist, medium plasticity, cohesive	CL	
		-				
		-		(12-14.6') CLAYEY SAND, very soft, tan, wet, low plasticity, cohesive	SC	Wet at 12' + bgs
		-				
15		-		(14.6-15') CLAY, very firm, gray, moist, medium plasticity, cohesive	CL	Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,199.0932
 Easting (US ft) : 1,456,711.099

Boring ID: B4-039-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-039-SB-1	(0-2') CLAY, trace SAND, very soft, beige, moist, medium plasticity, cohesive	CL	
		11.1				
80		11.8		(2-3.5') FILL, hard, loose, dry	N/A	
		11.0				
		10.6	B4-039-SB-5	(3.5-5') SILT, trace SAND, soft, loose, dark brown, slightly moist, no plasticity	ML	
5				(5-6') SANDY SILT, very soft, black, wet, low plasticity, cohesive	ML	Wet at 5' + bgs
100						Boring terminated at 6' bgs due to encountering groundwater

Total Borehole Depth: 6' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
ARM Project No. : 150300M-7-3
Project Description : Sparrows Point - Parcel B4
Site Location : Sparrows Point, MD
ARM Representative : L. Perrin
Checked by : W. Mader P.G., CPSS
Drilling Company : Green Services, Inc
Driller : Don Marchese
Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
Weather : 30s, sunny

Northing (US ft) : 565,177.739
Easting (US ft) : 1,456,710.579

Boring ID: B4-040-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-040-SB-1	(0-2') SANDY CLAY, very soft, beige, moist, medium plasticity, cohesive	CL	
		10.3				
	70	10.8		(2-3') FILL, hard, loose, dry	N/A	
		11.2		(3-4') SANDY GRAVEL, with SILT, hard with soft matrix, loose, dark brown, moist	GW-GM	
		9.6	B4-040-SB-5	(4-5') SANDY SILT, with GRAVEL, soft, loose, dark brown, moist	ML	Wet at 5' bgs
5						Boring terminated at 5' bgs due to encountering groundwater

Total Borehole Depth: 5' bgs.



ARM Group Inc.
Earth Resource Engineers
and Consultants

Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,865.1204
 Easting (US ft) : 1,456,829.184

Boring ID: B4-041-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	-	-	B4-041-SB-1	(0-3') SANDY GRAVEL, hard, loose, gray, dry	GW	
70	-	-		(3-5') SILTY SAND, loose, brown, moist	SM	
5	70	9.0		(5-6.5') SANDY SILT, brown, dry	ML	
100	-	122.6	B4-026-SB-5	(6.5-7.5') SANDY GRAVEL, hard, loose, gray, wet	GW	
		4.1		(7.5-8') SAND, loose, brown, wet	SW	Sulfur odor
		2.0		(8-10') CLAY, with trace SAND and 3" GRAVEL layer at 9' bgs, brown, high plasticity, cohesive	CH	Boring terminated at 10' bgs due to encountering groundwater
		3.8				

Total Borehole Depth: 10' bgs.



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 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/1/2016
 Weather : 40s, sunny
 Northing (US ft) : 564,918.5082
 Easting (US ft) : 1,456,833.648

Boring ID: B4-042-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-0.6') SAND, fine to medium grained with GRAVEL, loose, light reddish yellow, dry	SW-GW	Mothball odor
		1.0	B4-042-SB-1	(0.6-1') SAND, fine grained with GRAVEL, loose, soft, light orange to yellow, dry	SW	
		7.2		(1-2.5') SANDY SILT, slightly firm, dark brown and reddish yellow, moist, cohesive	ML	
100		3.0		(2.5-5') SILT, firm, white and gray, moist, cohesive		
		5.4			ML	
5		5.2	B4-042-SB-5			Boring terminated at 5' bgs due to refusal

Total Borehole Depth: 5' bgs.



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 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/7/2016
 Weather : 30s, sunny
 Northing (US ft) : 564,167.613
 Easting (US ft) : 1,457,767.731

Boring ID: B4-043-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0						
		-	B4-043-SB-1	(0-2.5') SANDY SILT, large chunk of metal at 2.5', soft, brown, no plasticity	ML	
		9.4				
70		14.1		(2.5-5.5') SAND, with GRAVEL, loose, light brown, dry, no plasticity; firm, moist, no plasticity, and no cohesion at 4.3' bgs	SW	
		13.2				
		12.6	B4-043-SB-5			
5		-		(5.5-7.5') SILTY SAND, fine grained, brown, moist, no plasticity, cohesive; very moist at 7.5' and medium grained SAND	SM	
		12.2				
80		14.1		(7.5-10') GRAVEL, with SILT, hard, brown, wet, no plasticity, no cohesion	GM	Wet at 7.5' + bgs
		14.3				
10		-				Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



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 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/4/2016
 Weather : 30s, cloudy
 Northing (US ft) : 564,064.3297
 Easting (US ft) : 1,457,779.897

Boring ID: B4-044-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0				(0-2.5') SAND, with metallic GRAVEL and SLAG, loose, brown, dry		
		-	B4-044-SB-1			
		23.0			SW	
80		27.5		(2.5-3.5') SAND, very fine grained, loose, dark brown, dry, no plasticity	SP	
		32.8	B4-044-SB-4			
		15.3		(3.5-8.5') SAND, coarse to very coarse grained, loose, beige, moist, no plasticity; increasing moisture with depth		
5		-				
		15.3			SW	
80		18.0				
		-		(8.5-10') SANDY GRAVEL, loose, hard, dark brown, wet		Wet at 8.5' + bgs
		-			GW	
10						Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



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 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 30s, cloudy/windy

Northing (US ft) : 564,887.548
 Easting (US ft) : 1,458,010.069

Boring ID: B4-045-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-045-SB-1	(0-1.8') TOPSOIL, small ROOTS present, soft, brown, moist, cohesive	ML	
		4.9				
	70	5.1		(1.8-2.1') CONCRETE, GRAVEL sized, hard, loose, gray (2.1-9') SAND, loose, light brown, dry; moist at 7' bgs	N/A	
		5.1				
		4.2	B4-045-SB-5			
5		-			SW	
		-				
	60	6.4				
		9.6				
		9.4	B4-045-SB-10	(9-11') CONCRETE, GRAVEL sized, hard, loose, dry	N/A	Sulfur odor
10		-				
		3.6		(11-13') SAND, loose, gray and brown, dry	SW	
	60	5.2				
		-		(13-14.5') GRAVEL, with SAND sized CONCRETE, loose, beige and gray, dry	SW-GW	Wet at 14.5' + bgs
		-				
15		-		(14.5-15') SAND, medium dense, brown, wet, no plasticity, no cohesion	SW	Boring terminated at 15' bgs due to encountering groundwater

Total Borehole Depth: 15' bgs.



ARM Group Inc.
Earth Resource Engineers
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 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/4/2016
 Weather : 30s, cloudy
 Northing (US ft) : 564,748.8154
 Easting (US ft) : 1,457,983.98

Boring ID: B4-046-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-046-SB-1	(0-5.5') SAND, fine to medium grained, loose, light brown, no plasticity		Wet at 9.5' +bgs
60	0.8	-			SW	
	2.0					
5	1.7		B4-046-SB-5			
	-			(5.5-8') SANDY GRAVEL, hard, loose, gray, dry, no plasticity	GW	
80	1.6					
	1.9			(8-9') SAND, with FILL GRAVEL, loose, brown to black to maroon, dry, wet	SW	
	2.2			(9-9.5') SANDY SILT, firm, maroon to brown to beige, moist, no plasticity, cohesive	SM	
10	2.4			(9.5-13') SAND, medium to coarse grained with GRAVEL, soft, loose, brown to beige, wet, no plasticity	SW	
	-			(13-15') SAND, coarse grained with GRAVEL, beige, wet, no plasticity, no cohesion	SP	
15						Boring terminated at 15' bgs due to groundwater.

Total Borehole Depth: 15' bgs.



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 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,349.596
 Easting (US ft) : 1,456,107.575

Boring ID: B4-047-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	70	-	B4-047-SB-1	(0-2.5') SILTY SAND, black, with green SLAG, loose, moist, no plasticity	SM	
				(2.5-5') SAND, firm, brown grading to tan, moist, no plasticity, no cohesion	SW	
			B4-047-SB-5			
				(5-6') SANDY CLAY, soft, tan, moist, low plasticity, cohesive	CL	
				(6-9.5') CLAY to SANDY CLAY, with trace SAND, tan, moist, medium plasticity, cohesive	CL	
				(9.5-10') SAND, with trace CLAY, brown, wet	SW	
10		2.6				Wet at 9.5' + bgs Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



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 Site Location : Sparrows Point, MD
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 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 30s, sunny
 Northing (US ft) : 565,385.501
 Easting (US ft) : 1,457,903.781

Boring ID: B4-048-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-048-SB-1	(0-2.6') SAND, loose, brown, dry, no plasticity	SW	Void interval (5-8' bgs) per driller
50		4.0		(2.6-3.3') CONCRETE, SAND to GRAVEL sized, loose, white, dry, no plasticity	N/A	
		49.4		(3.3-3.6') SAND, loose, beige, dry	SW	
				(3.6-4.5') SAND, with GRAVEL, loose, grayish brown, dry	SW	
		4.7	B4-048-SB-5	(4.5-5') GRAVEL, hard, loose, brown, dry, no plasticity	GW	
5				5-8' No Recovery - Driller noted ~3' void	VOID	
30				(8-9.5') SAND, with GRAVEL, loose, grayish brown, dry	SW	
		10.9		(9.5-10') SAND, with large GRAVEL, loose, soft, reddish yellowish brown, moist	SW	
10						Wet at 10' + bgs Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



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 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 3/2/2016
 Weather : 30s, sunny

 Northing (US ft) : 565,208.986
 Easting (US ft) : 1,457,005.894

Boring ID: B4-049-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS		
0 5 60 10	80	-	B4-049-SB-1	(0-0.3') SAND, with 15% FINES, tan, moist, no plasticity, no cohesion	SW			
				(0.3-0.6') CONCRETE, GRAVEL sized, hard, loose, dry	N/A			
				(0.6-3') SAND, fine grained, loose, dark brown, dry	GP			
			2.4	-	B4-049-SB-4.5		(3-3.5') FILL, hard, loose, dry	GP
							(3.5-4.5') SAND, loose, dark brown, dry	SW
							(4.5-5') FILL, hard, loose, dry	N/A
			1.5	-			(5-8') SAND, very coarse grained with GRAVEL, loose, brown and beige, dry	SW-GP
							(8-9.5') SAND, fine to medium grained with <10% GRAVEL FILL, loose, dark brown, dry	SW
							(9.5-10') SAND, medium to coarse grained, brown and beige, wet, no cohesion	SW

Total Borehole Depth: 10' bgs.

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Client : EnviroAnalytics Group
 ARM Project No. : 150300M-7-3
 Project Description : Sparrows Point - Parcel B4
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Tim Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 3/3/2016
 Weather : 30s, sunny
 Northing (US ft) : 564,546.4789
 Easting (US ft) : 1,457,554.39

Boring ID: B4-050-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	-	-	B4-050-SB-1	(0-0.7') ORGANIC SILT, GRASS and small ROOTS present, soft, brown, moist, low plasticity, cohesive	OL	
				(0.7-2.5') SILTY SAND, fine grained, loose, black, dry, no plasticity	SM	
80		13.5				
		14.9		(2.5-4.5') CLAY, hard, brown, dry, low plasticity, cohesive	CL	
		13.0				
5		12.9	B4-050-SB-5	(4.5-5.5') SAND, poorly graded, medium grained, soft, loose, reddish yellow, moist, no plasticity	SP	
		-		(5.5-7.5') SANDY CLAY, firm, tan, moist, medium plasticity, cohesive	CL	
		-				
70		2.3		(7.5-9') CLAY, firm, brown, moist, medium plasticity, cohesive	CL	
		12.3				
10		12.9		(9-10') SAND, trace CLAY, loose, dark brown, wet, no plasticity, cohesive	SW	Wet at 9' + bgs Boring terminated at 10' bgs due to encountering groundwater

Total Borehole Depth: 10' bgs.



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 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 7/22/2016
 Weather : 90s, sunny

 Northing (US ft) : 565053.4094
 Easting (US ft) : 1456898.064

Boring ID: B4-054-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-054-SB-1	(0-4') SILT with trace SAND and GRAVEL, soft, grayish brown grading to dark brown with white SILT from 2-2.5', dry, non plastic, non cohesive	ML	Lens of low plasticity SILT at 7' bgs
		13.2				
80		185.1				
		850.7			SP	
		263.6		(4-4.2') SAND with SILT, fine grained, loose, reddish brown, dry, non plastic, non cohesive	ML	
5			B4-054-SB-6	(4.2-5') SANDY SILT with BRICK GRAVEL, soft, black and yellow, dry, non plastic, non cohesive	-	
		8,916		(5-6') BRICK, SAND and GRAVEL sized, loose, light red to reddish yellow, dry, non plastic, non cohesive	-	
		93.5		(6-7.5') SILTY SAND, loose, black and reddish yellow, dry, non plastic, non cohesive	SM	
100		59.2			CL	
		-		(7.5-8') SILTY CLAY, firm, very pale brown and reddish yellow, dry, low plasticity, cohesive	SM	
				(8-9') SILTY SAND with GRAVEL, loose, black with few areas of red, moist to wet, non plastic, non cohesive	SM	
End of Boring						

Total Borehole Depth: 9' bgs.



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 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 7/21/2016
 Weather : 90s, sunny
 Northing (US ft) : 565233.8545
 Easting (US ft) : 1457242.763

Boring ID: B4-055-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-055-SB-1	(0-2') SANDY SILT with GRAVEL, soft, brown, dry, non plastic, non cohesive	ML	Wet at 5.5' + bgs
5.2						
80		21.3		(2-3') CONCRETE, loose, white, dry, non plastic, non cohesive	NA	
24.3				(3-4.5') SILT with SAND, soft, brown, dry, non plastic, non cohesive	ML	
37.8			B4-055-SB-5	(4.5-5') SLAG, SAND sized, medium to coarse grained, black moist, non plastic, non cohesive	SW	
5				(5-5.5') SILT with SAND, hard, brown, dry, non plastic, non cohesive	ML	
				(5.5-6') SILTY SAND, fine grained, dark brown, wet, non plastic, non cohesive	SM	
				(6-7') SLAG, SAND sized, medium to coarse grained, black wet, non plastic, non cohesive	SW	
100				(7-8') CLAYEY SILT, hard, gray, dry, cohesive, low plasticity	ML	
				(8-10') CLAYEY SILT, hard, reddish yellow and gray mottling grading to all reddish yellow, dry, low plasticity, cohesive	ML	
10						Boring terminated due to water at 10 bgs.

Total Borehole Depth: 10' bgs.



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 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 7/21/2016
 Weather : 90s, sunny
 Northing (US ft) : 565468.5779
 Easting (US ft) : 1457662.793

Boring ID: B4-056-SB

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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	
			B4-056-SB-1.5	(0.5-3') SILT, firm, strong brown and brown, dry, low plasticity, cohesive	ML	
60		17.0		(3-6.5') SLAG GRAVEL, GRAVEL and SAND sized, loose, grayish brown, dry, non plastic, non cohesive	SP/GP	
		2.2				
		2.8				
5		4.9				
		3.7	B4-056-SB-7.5	(6.5-7.5') SANDY SILT, soft, brown, dry, non plastic, non cohesive	ML	
100		12.0		(7.5-10') SILTY SAND with few SLAG GRAVEL, fine to medium grained, loose, brown, wet, non plastic, non cohesive, with few CLAY lenses	SM	Wet at 7.5' + bgs
10						Boring terminated due to water at 10 bgs.

Total Borehole Depth: 10' bgs.



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 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 7/22/2016
 Weather : 90s, sunny
 Northing (US ft) : 565074.2614
 Easting (US ft) : 1457956.311

Boring ID: B4-057-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B4-057-SB-1	(0-3') SILT with SLAG and metallic-like SLAG GRAVEL which increases with depth, soft, dark brown, dry, non plastic, non cohesive	ML	
	80	202.3				
		1,134				
		4,400		(3-3.3') CONCRETE, loose, white, dry, non plastic, non cohesive	-	
		>15,000	B4-057-SB-5	(3.3-4') SILT with SAND, soft, brown, dry, non plastic, non cohesive	ML	
5				(4-5') SILTY SAND with large SLAG and metallic SLAG, loose, brown, red, yellowish red and yellow, dry, non plastic, non cohesive	SM/GW	Moderate oxidation
				(5-10') SILT with SLAG and BRICK GRAVEL, soft, brown, dry, non plastic, non cohesive		
	20	-			ML	Poor recovery
		901.6	B4-057-SB-10			
10				(10-15') BRICK, GRAVEL and SAND sized, loose, yellow, brown and red, wet, non plastic, non cohesive		
	20	-			-	Very poor recovery
		-				Wet at 14' + bgs
15		-				Boring terminated due to water at 15' bgs.

Total Borehole Depth: 15' bgs.



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 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 7/22/2016
 Weather : 90s, sunny
 Northing (US ft) : 564161.6218
 Easting (US ft) : 1457575.237

Boring ID: B4-058-SB

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Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			B4-058-SB-1	(0-0.5') SILT with SLAG GRAVEL, soft, grayish brown, dry, non plastic, non cohesive	ML	Note: SB-1 excludes asphalt material Wet at 8' + bgs Trace bivalve shells Boring terminated due to water at 10' bgs.
				(0.5-1.1') ASPHALT, hard, gray, dry, non plastic, non cohesive	-	
	90	1,002		(1.1-2.5') GRAVELLY SILT with SAND, soft, grayish brown, dry, non plastic, non cohesive	ML	
		1,118		(2.5-5') SAND with trace SILT, fine to coarse grained, loose, brown, strong brown, light gray and yellow, dry to moist, non plastic, non cohesive	SP/SW	
		95.6				
		18.6				
5		0.7		(5-7.5') SAND, medium to coarse grained, dense, strong brown with few light gray grains, vey moist, non plastic, non cohesive	SW	
		101.2				
100		116.8	B4-058-SB-8	(7.5-8') SILT with SAND and GRAVEL, soft, brown and light gray, dry, non plastic, non cohesive	ML	
		212.0		(8-9.9') SLAG and BRICK with SILT, GRAVEL and SAND sized, loose, red, dark brown and gray, wet, non plastic, non cohesive	GP/SP	
		120.1				
10				(9.9-10') SILT, firm, yellowish brown, moist, non plastic, non cohesive	ML	
				End of Boring		

Total Borehole Depth: 10' bgs.



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 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : W. Mader P.G., CPSS
 Drilling Company : Green Services, Inc
 Driller : Don Marchese
 Drilling Equipment : Geoprobe 7822DT

Date : 7/22/2016
 Weather : 90s, sunny
 Northing (US ft) : 564148.8878
 Easting (US ft) : 1457427.695

Boring ID: B4-059-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	100	14.7	B4-059-SB-1	(0-2.5') SILT with SAND and GRAVEL SLAG, soft, grayish brown, dry, non plastic, non cohesive	ML	Wet at 9.5' + bgs Boring terminated due to water at 9.5' bgs.
		56.5				
5	100	265.4		(2.5-4.5') SILT with SAND and few GRAVEL SLAG, soft, dark brown, dry, non plastic, non cohesive	ML	
		205.3	B4-059-SB-4			
5	100	82.2		(4.5-5') SAND, medium to coarse grained, loose, pale yellow to brown, dry, non plastic, non cohesive	SW	
		14.7		(5-5.5') SILT with medium grained SAND, hard, brown and pale yellow, dry, non plastic, non cohesive	ML	
		16.6		(5.5-5.8') SLAG, SAND sized, loose, black, dry, non plastic, non cohesive	SW	
		16.6		(5.8-7') SILTY SAND, loose, brown, dry, non plastic, non cohesive	SM	
10	100	108.3		(7-9.5') SILT grading to SILTY SAND, very firm, white to light gray, moist, non plastic, non cohesive	ML	
		126.4				
10		88.4		(9.5-10') SLAG with SILT, GRAVEL and SAND sized, loose, wet, non plastic, non cohesive	GP/SP	
End of Boring						

Total Borehole Depth: 10' bgs.

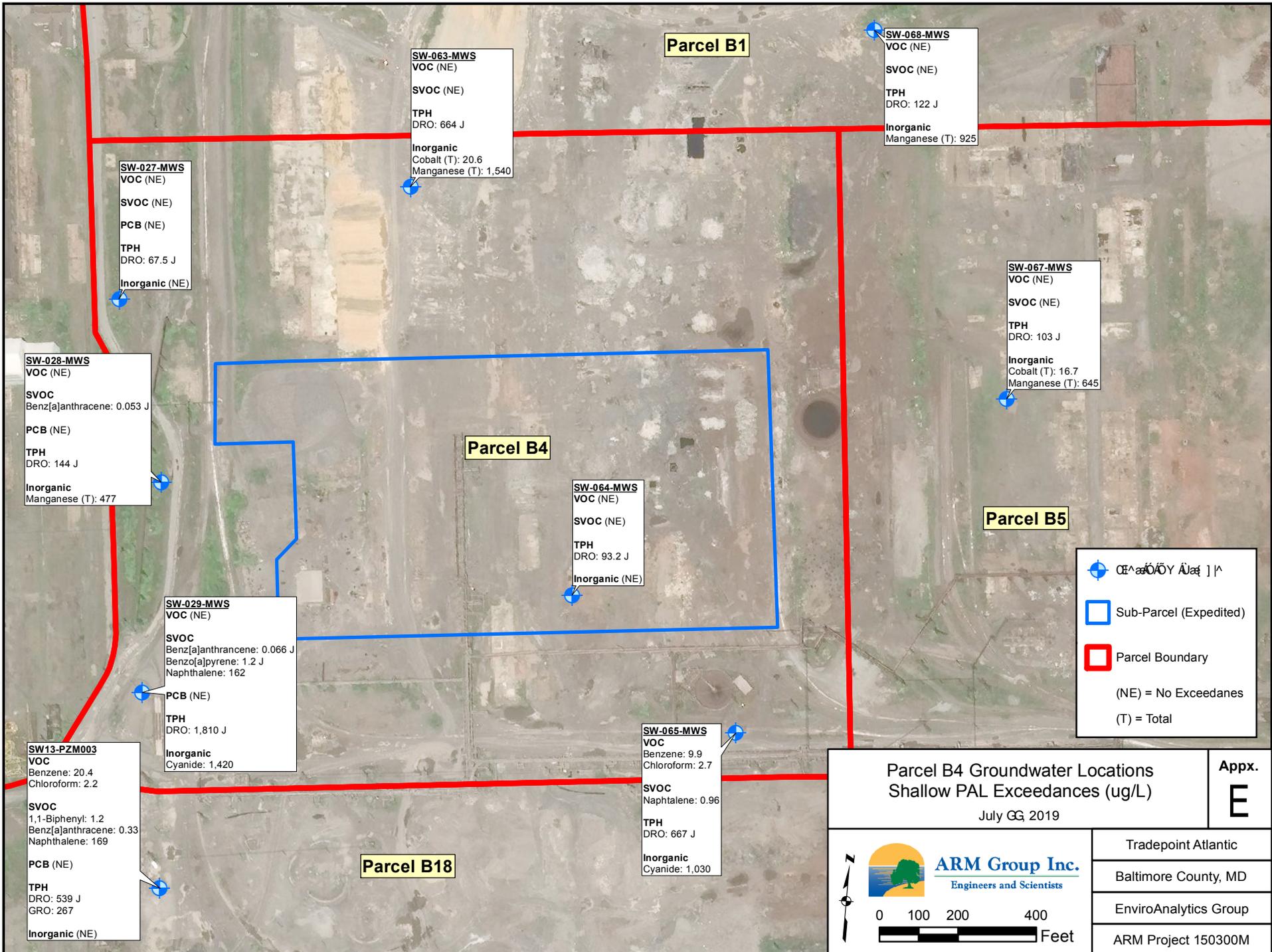
APPENDIX C

APPENDIX D

Parcel B4 - IDW Drum Log

Drum Identification Number	Designation	Activity/Phase	Parcel	Contents	Open Date
335-Soil-2/29/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil	2/29/2016
336-PPE-2/29/16-B4	Non-haz.	Parcel B4	Parcel B4	PPE	2/29/2016
337-Liners-2/29/16-B4	Non-haz.	Parcel B4	Parcel B4	Liners	2/29/2016
338-Decon water-2/29/16-B4	Non-haz.	Parcel B4	Parcel B4	Decon water	2/29/2016
339-Nitric Acid-2/29/16-B4	Non-haz.	Parcel B4	Parcel B4	Nitric Acid	2/29/2016
340-PPE-3/3/16-B4	Non-haz.	Parcel B4	Parcel B4	PPE	3/3/2016
342-Soil-3/4/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil	3/4/2016
343-PPE-3/8/16-B4	Non-haz.	Parcel B4	Parcel B4	PPE	3/8/2016
194-S-12/17/15-B4	Non-haz.	Parcel B4	Parcel B4	Soil	12/17/2015
263-GW-1/12/16-B4	Non-haz.	Parcel B4	Parcel B4	Purge water	1/12/2016
264-S-1/13/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil	1/13/2016
265-S-1/14/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil	1/14/2016
284-GW-1/19/16-B4	Non-haz.	Parcel B4	Parcel B4	Decon water	1/19/2016
298-S-1/27/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil/Slag	1/27/2016
299-S-1/27/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil/Slag	1/27/2016
404-S-1/28/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil	1/28/2016
411-S-2/4/16-B4	Non-haz.	Parcel B4	Parcel B4	Soil	2/4/2016
425-GW-2/2/16-B4	Non-haz.	Parcel B4	Parcel B4	Ground water	2/2/2016
426-GW-1/29/16-B4	Non-haz.	Parcel B4	Parcel B4	Ground water	1/29/2016
455-GW-2/9/16-B4	Non-haz.	Parcel B4	Parcel B4	Purge water	2/9/2016
471-GW-2/18/16-B4	Non-haz.	Parcel B4	Parcel B4	Ground water	2/18/2016
480-GW-2/26/16-B4	Non-haz.	Parcel B4	Parcel B4	Ground water	2/26/2016
728-Liners-10/12/16-B4	Non-Haz	B4	B4	Liners	10/10/2016
729-Soil-10/12/16-B4	Non-Haz	B4	B4	Soil	10/12/2016
740-PPE-10/27/16-B4	Non-Haz	B4	B4	PPE	10/26/2016

APPENDIX E



SW-063-MWS
 VOC (NE)
 SVOC (NE)
 TPH
 DRO: 664 J
 Inorganic
 Cobalt (T): 20.6
 Manganese (T): 1,540

SW-068-MWS
 VOC (NE)
 SVOC (NE)
 TPH
 DRO: 122 J
 Inorganic
 Manganese (T): 925

SW-027-MWS
 VOC (NE)
 SVOC (NE)
 PCB (NE)
 TPH
 DRO: 67.5 J
 Inorganic (NE)

SW-067-MWS
 VOC (NE)
 SVOC (NE)
 TPH
 DRO: 103 J
 Inorganic
 Cobalt (T): 16.7
 Manganese (T): 645

SW-028-MWS
 VOC (NE)
 SVOC
 Benz[a]anthracene: 0.053 J
 PCB (NE)
 TPH
 DRO: 144 J
 Inorganic
 Manganese (T): 477

Parcel B4

SW-064-MWS
 VOC (NE)
 SVOC (NE)
 TPH
 DRO: 93.2 J
 Inorganic (NE)

Parcel B5

SW-029-MWS
 VOC (NE)
 SVOC
 Benz[a]anthracene: 0.066 J
 Benzo[a]pyrene: 1.2 J
 Naphthalene: 162
 PCB (NE)
 TPH
 DRO: 1,810 J
 Inorganic
 Cyanide: 1,420

SW-065-MWS
 VOC
 Benzene: 9.9
 Chloroform: 2.7
 SVOC
 Naphtalene: 0.96
 TPH
 DRO: 667 J
 Inorganic
 Cyanide: 1,030

SW13-PZM003
 VOC
 Benzene: 20.4
 Chloroform: 2.2
 SVOC
 1,1-Biphenyl: 1.2
 Benz[a]anthracene: 0.33
 Naphthalene: 169
 PCB (NE)
 TPH
 DRO: 539 J
 GRO: 267
 Inorganic (NE)

Parcel B18

CEAS/05/14/15
 Sub-Parcel (Expedited)
 Parcel Boundary
 (NE) = No Exceedances
 (T) = Total

Parcel B4 Groundwater Locations Shallow PAL Exceedances (ug/L) July 2019		Appx. E
		Tradepoint Atlantic
		Baltimore County, MD
		EnviroAnalytics Group
		ARM Project 150300M

APPENDIX F

QA/QC Tracking Log

Date:	Sample IDs		
2/29/2016	1)	B4-010-SB-1	
	2)	B4-010-SB-6	
	3)	B4-013-SB-1	
	4)	B4-013-SB-7.5	
	5)	B4-004-SB-1	
	6)	B4-004-SB-4	
	7)	B4-003-SB-1	Duplicate: B4-003-SB-5
	8)	B4-003-SB-5	Date: 2/29/2016
	9)	B4-005-SB-1	MS/MSD: B4-008-SB-1
	10)	B4-011-SB-1	Date: 2/29/19
	11)	B4-011-SB-4.5	Field Blank:
	12)	B4-008-SB-1	Date: 2/29/2016
	13)	B4-008-SB-7	Eq. Blank:
3/1/2016	14)	B4-009-SB-1	Date: 2/29/2016
	15)	B4-009-SB-5	
	16)	B4-007-SB-1	
	17)	B4-007-SB-5	
	18)	B4-006-SB-1	
	19)	B4-006-SB-5	
	20)	B4-002-SB-1	

Date:	Sample IDs		
3/2/2016	1)	B4-038-SB-10	
	2)	B4-050-SB-1	
	3)	B4-050-SB-5	
	4)	B4-027-SB-1	
	5)	B4-027-SB-5	
	6)	B4-026-SB-1	
	7)	B4-026-SB-5	Duplicate: B4-030-SB-5
	8)	B4-024-SB-1	Date: 3/3/2016
	9)	B4-024-SB-4.5	MS/MSD: B4-047-SB-5
	10)	B4-025-SB-1	Date: 3/3/2016
	11)	B4-025-SB-5	Field Blank:
3/3/2016	12)	B4-047-SB-1	Date: 3/2/2016
	13)	B4-047-SB-5	Eq. Blank:
	14)	B4-031-SB-1	Date: 3/2/2016
	15)	B4-031-SB-4	
	16)	B4-030-SB-1	
	17)	B4-030-SB-5	
	18)	B4-036-SB-1	
	19)	B4-036-SB-5	
	20)	B4-035-SB-1	

3/1/2016	1)	B4-002-SB-5	
	2)	B4-001-SB-1	
	3)	B4-001-SB-4	
	4)	B4-012-SB-1	
	5)	B4-012-SB-5	
	6)	B4-041-SB-1	
	7)	B4-041-SB-4	Duplicate: B4-039-SB-5
	8)	B4-042-SB-1	Date: 3/2/2016
	9)	B4-042-SB-5	MS/MSD: B4-037-SB-6
3/2/2016	10)	B4-049-SB-1	Date: 3/2/2016
	11)	B4-049-SB-4.5	Field Blank:
	12)	B4-040-SB-1	Date: 3/1/2016
	13)	B4-040-SB-5	Eq. Blank:
	14)	B4-039-SB-1	Date: 3/1/2016
	15)	B4-039-SB-5	
	16)	B4-037-SB-1	
	17)	B4-037-SB-6	
	18)	B4-037-SB-10	
	19)	B4-038-SB-1	
	20)	B4-038-SB-5	

3/3/2016	1)	B4-035-SB-5	
	2)	B4-014-SB-1	
	3)	B4-014-SB-5	
	4)	B4-015-SB-1	
	5)	B4-015-SB-5	
	6)	B4-048-SB-1	
	7)	B4-048-SB-5	Duplicate: B4-015-SB-5
	8)	B4-048-SB-10	Date: 3/3/2016
	9)	B4-045-SB-1	MS/MSD: B4-021-SB-1
	10)	B4-045-SB-5	Date: 3/4/2016
	11)	B4-045-SB-10	Field Blank:
3/4/2016	12)	B4-046-SB-1	Date: 3/3/2016
	13)	B4-046-SB-5	Eq. Blank:
	14)	B4-021-SB-1	Date: 3/3/2016
	15)	B4-021-SB-5	
	16)	B4-020-SB-1	
	17)	B4-020-SB-5	
	18)	B4-044-SB-1	
	19)	B4-044-SB-4	
	20)	B4-016-SB-1	

Trip Blanks: 2/29/2016, 3/1/2016, 3/2/2016, 3/3/2016, 3/4/2016

QA/QC Tracking Log

Date:	Sample IDs	
3/4/2016	1)	B4-016-SB-5
	2)	B4-019-SB-1
	3)	B4-019-SB-5
	4)	B4-018-SB-1
	5)	B4-018-SB-5
3/7/2016	6)	B4-043-SB-1
	7)	B4-043-SB-5 <u>Duplicate:</u> B4-043-SB-5
	8)	B4-028-SB-1 <u>Date:</u> 3/7/2016
	9)	B4-028-SB-4 <u>MS/MSD:</u> B4-017-SB-4
	10)	B4-029-SB-1 <u>Date:</u> 3/7/2016
	11)	B4-017-SB-1 <u>Field Blank:</u>
3/14/2016	12)	B4-017-SB-4 <u>Date:</u> 3/4/2016
	13)	B4-022-SB-1 <u>Eq. Blank:</u>
	14)	B4-022-SB-5 <u>Date:</u> 3/4/2016
	15)	B4-023-SB-1 <u>Notes:</u>
	16)	B4-023-SB-5
7/21/2016	17)	B4-032-SB-1
	18)	B4-033-SB-1
	19)	B4-034-SB-1
	20)	B4-056-SB-1.5

Date:	Sample IDs	
4/20/2016	1)	B4-051-SG
	2)	B4-052-SG
	3)	B4-053-SB
4/20/2016	4)	
	5)	
	6)	
	7)	<u>Duplicate:</u> B4-052-SG
	8)	<u>Date:</u> 4/20/2016
	9)	<u>MS/MSD:</u>
	10)	<u>Date:</u>
	11)	<u>Field Blank:</u>
	12)	<u>Date:</u>
	13)	<u>Eq. Blank:</u>
	14)	<u>Date:</u> 4/20/2016
	15)	
	16)	
	17)	
	18)	
	19)	
	20)	

7/21/2016	1)	B4-056-SB-7.5
	2)	B4-055-SB-1
	3)	B4-055-SB-5
7/22/2016	4)	B4-054-SB-1
	5)	B4-054-SB-6
	6)	B4-057-SB-1
	7)	B4-057-SB-5 <u>Duplicate:</u> B4-022-SB-1
	8)	B4-059-SB-1 <u>Date:</u> 3/14/2016
	9)	B4-059-SB-4 <u>MS/MSD:</u> B4-054-SB-6
	10)	B4-058-SB-1 <u>Date:</u> 7/22/2016
	11)	B4-058-SB-8 <u>Field Blank:</u>
	12)	<u>Date:</u> 7/22/2016
	13)	<u>Eq. Blank:</u>
	14)	<u>Date:</u> 7/22/2016
	15)	
	16)	
	17)	
	18)	
	19)	
	20)	

1)	
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6)	
7)	<u>Duplicate:</u>
8)	<u>Date:</u>
9)	<u>MS/MSD:</u>
10)	<u>Date:</u>
11)	<u>Field Blank:</u>
12)	<u>Date:</u>
13)	<u>Eq. Blank:</u>
14)	<u>Date:</u>
15)	
16)	
17)	
18)	
19)	
20)	

CRRGP FİZİ " "

EVALUATION OF DATA COMPLETENESS
Percentage of Non-rejected Results vs. Total Results

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
1,1,1-Trichloroethane	VOC	Air	ug/m3	3	2	0	3	100.00%
1,1,2,2-Tetrachloroethane	VOC	Air	ug/m3	3	0	0	3	100.00%
1,1,2-Trichloroethane	VOC	Air	ug/m3	3	0	0	3	100.00%
1,1-Dichloroethane	VOC	Air	ug/m3	3	0	0	3	100.00%
1,1-Dichloroethene	VOC	Air	ug/m3	3	0	0	3	100.00%
1,2,3-Trichlorobenzene	VOC	Air	ug/m3	3	3	0	3	100.00%
1,2,4-Trichlorobenzene	VOC	Air	ug/m3	3	0	0	3	100.00%
1,2-Dibromo-3-chloropropane	VOC	Air	ug/m3	3	3	0	3	100.00%
1,2-Dibromoethane	VOC	Air	ug/m3	3	0	0	3	100.00%
1,2-Dichlorobenzene	VOC	Air	ug/m3	3	0	0	3	100.00%
1,2-Dichloroethane	VOC	Air	ug/m3	3	0	0	3	100.00%
1,2-Dichloroethene (Total)	VOC	Air	ug/m3	3	0	0	3	100.00%
1,2-Dichloropropane	VOC	Air	ug/m3	3	0	0	3	100.00%
1,4-Dichlorobenzene	VOC	Air	ug/m3	3	0	0	3	100.00%
1,4-Dioxane	VOC/SVOC	Air	ug/m3	3	0	0	3	100.00%
2-Butanone (MEK)	VOC	Air	ug/m3	3	3	0	3	100.00%
4-Methyl-2-pentanone (MIBK)	VOC	Air	ug/m3	3	3	0	3	100.00%
Acetone	VOC	Air	ug/m3	3	3	0	3	100.00%
Benzene	VOC	Air	ug/m3	3	3	0	3	100.00%
Bromodichloromethane	VOC	Air	ug/m3	3	3	0	3	100.00%
Bromoform	VOC	Air	ug/m3	3	0	0	3	100.00%
Bromomethane	VOC	Air	ug/m3	3	0	0	3	100.00%
Carbon disulfide	VOC	Air	ug/m3	3	3	0	3	100.00%
Carbon tetrachloride	VOC	Air	ug/m3	3	0	0	3	100.00%
Chlorobenzene	VOC	Air	ug/m3	3	0	0	3	100.00%
Chloroethane	VOC	Air	ug/m3	3	0	0	3	100.00%
Chloroform	VOC	Air	ug/m3	3	3	0	3	100.00%
Chloromethane	VOC	Air	ug/m3	3	3	0	3	100.00%
cis-1,2-Dichloroethene	VOC	Air	ug/m3	3	0	0	3	100.00%
cis-1,3-Dichloropropene	VOC	Air	ug/m3	3	0	0	3	100.00%
Dibromochloromethane	VOC	Air	ug/m3	3	0	0	3	100.00%
Ethylbenzene	VOC	Air	ug/m3	3	3	0	3	100.00%
Isopropylbenzene	VOC	Air	ug/m3	3	0	0	3	100.00%
Methyl tert-butyl ether (MTBE)	VOC	Air	ug/m3	3	0	0	3	100.00%
Methylene Chloride	VOC	Air	ug/m3	3	3	0	3	100.00%
Styrene	VOC	Air	ug/m3	3	2	0	3	100.00%
Tetrachloroethene	VOC	Air	ug/m3	3	3	0	3	100.00%
Toluene	VOC	Air	ug/m3	3	3	0	3	100.00%
trans-1,2-Dichloroethene	VOC	Air	ug/m3	3	0	0	3	100.00%
trans-1,3-Dichloropropene	VOC	Air	ug/m3	3	0	0	3	100.00%
Trichloroethene	VOC	Air	ug/m3	3	1	0	3	100.00%
Vinyl chloride	VOC	Air	ug/m3	3	0	0	3	100.00%
Xylenes	VOC	Air	ug/m3	3	3	0	3	100.00%
1,1,1-Trichloroethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,1,2,2-Tetrachloroethane	VOC	Soil	mg/kg	99	0	2	97	97.98%
1,1,2-Trichloro-1,2,2-Trifluoroethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,1,2-Trichloroethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,1-Biphenyl	SVOC	Soil	mg/kg	99	40	0	99	100.00%
1,1-Dichloroethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,1-Dichloroethene	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,2,3-Trichlorobenzene	VOC	Soil	mg/kg	99	4	0	99	100.00%
1,2,4,5-Tetrachlorobenzene	SVOC	Soil	mg/kg	99	0	0	99	100.00%
1,2,4-Trichlorobenzene	VOC	Soil	mg/kg	99	3	0	99	100.00%
1,2-Dibromo-3-chloropropane	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,2-Dibromoethane	VOC	Soil	mg/kg	99	0	0	99	100.00%

EVALUATION OF DATA COMPLETENESS
Percentage of Non-rejected Results vs. Total Results

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
1,2-Dichlorobenzene	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,2-Dichloroethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,2-Dichloroethene (Total)	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,2-Dichloropropane	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,3-Dichlorobenzene	VOC	Soil	mg/kg	99	0	0	99	100.00%
1,4-Dichlorobenzene	VOC	Soil	mg/kg	99	2	0	99	100.00%
1,4-Dioxane	VOC/SVOC	Soil	mg/kg	99	0	99	0	0.00%
2,3,4,6-Tetrachlorophenol	SVOC	Soil	mg/kg	99	0	22	77	77.78%
2,4,5-Trichlorophenol	SVOC	Soil	mg/kg	99	0	22	77	77.78%
2,4,6-Trichlorophenol	SVOC	Soil	mg/kg	99	0	22	77	77.78%
2,4-Dichlorophenol	SVOC	Soil	mg/kg	99	0	22	77	77.78%
2,4-Dimethylphenol	SVOC	Soil	mg/kg	99	2	22	77	77.78%
2,4-Dinitrophenol	SVOC	Soil	mg/kg	99	1	26	73	73.74%
2,4-Dinitrotoluene	SVOC	Soil	mg/kg	99	0	0	99	100.00%
2,6-Dinitrotoluene	SVOC	Soil	mg/kg	99	1	0	99	100.00%
2-Butanone (MEK)	VOC	Soil	mg/kg	99	19	0	99	100.00%
2-Chloronaphthalene	SVOC	Soil	mg/kg	99	0	0	99	100.00%
2-Chlorophenol	SVOC	Soil	mg/kg	99	0	22	77	77.78%
2-Hexanone	VOC	Soil	mg/kg	99	3	0	99	100.00%
2-Methylnaphthalene	SVOC	Soil	mg/kg	99	89	0	99	100.00%
2-Methylphenol	SVOC	Soil	mg/kg	99	2	22	77	77.78%
2-Nitroaniline	SVOC	Soil	mg/kg	99	0	0	99	100.00%
3&4-Methylphenol(m&p Cresol)	SVOC	Soil	mg/kg	99	7	22	77	77.78%
3,3'-Dichlorobenzidine	SVOC	Soil	mg/kg	99	0	0	99	100.00%
4-Chloroaniline	SVOC	Soil	mg/kg	99	1	0	99	100.00%
4-Methyl-2-pentanone (MIBK)	VOC	Soil	mg/kg	99	4	0	99	100.00%
4-Nitroaniline	SVOC	Soil	mg/kg	99	0	0	99	100.00%
Acenaphthene	SVOC	Soil	mg/kg	99	68	0	99	100.00%
Acenaphthylene	SVOC	Soil	mg/kg	99	90	0	99	100.00%
Acetone	VOC	Soil	mg/kg	99	78	0	99	100.00%
Acetophenone	SVOC	Soil	mg/kg	99	25	0	99	100.00%
Aluminum	Metal	Soil	mg/kg	99	99	0	99	100.00%
Anthracene	SVOC	Soil	mg/kg	99	80	0	99	100.00%
Antimony	Metal	Soil	mg/kg	99	1	0	99	100.00%
Aroclor 1016	PCB	Soil	mg/kg	46	0	0	46	100.00%
Aroclor 1221	PCB	Soil	mg/kg	46	1	0	46	100.00%
Aroclor 1232	PCB	Soil	mg/kg	46	0	0	46	100.00%
Aroclor 1242	PCB	Soil	mg/kg	46	1	0	46	100.00%
Aroclor 1248	PCB	Soil	mg/kg	46	6	0	46	100.00%
Aroclor 1254	PCB	Soil	mg/kg	46	15	0	46	100.00%
Aroclor 1260	PCB	Soil	mg/kg	46	18	0	46	100.00%
Aroclor 1262	PCB	Soil	mg/kg	46	0	0	46	100.00%
Aroclor 1268	PCB	Soil	mg/kg	46	2	0	46	100.00%
Arsenic	Metal	Soil	mg/kg	99	81	0	99	100.00%
Barium	Metal	Soil	mg/kg	99	99	0	99	100.00%
Benz[a]anthracene	SVOC	Soil	mg/kg	99	91	0	99	100.00%
Benzaldehyde	SVOC	Soil	mg/kg	99	30	69	30	30.30%
Benzene	VOC	Soil	mg/kg	99	18	0	99	100.00%
Benzo[a]pyrene	SVOC	Soil	mg/kg	99	91	0	99	100.00%
Benzo[b]fluoranthene	SVOC	Soil	mg/kg	99	92	0	99	100.00%
Benzo[g,h,i]perylene	SVOC	Soil	mg/kg	99	87	0	99	100.00%
Benzo[k]fluoranthene	SVOC	Soil	mg/kg	99	92	0	99	100.00%
Beryllium	Metal	Soil	mg/kg	99	60	0	99	100.00%
bis(2-chloroethoxy)methane	SVOC	Soil	mg/kg	99	0	0	99	100.00%
bis(2-Chloroethyl)ether	SVOC	Soil	mg/kg	99	0	0	99	100.00%

EVALUATION OF DATA COMPLETENESS
Percentage of Non-rejected Results vs. Total Results

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
bis(2-Chloroisopropyl)ether	SVOC	Soil	mg/kg	99	0	0	99	100.00%
bis(2-Ethylhexyl)phthalate	SVOC	Soil	mg/kg	99	7	0	99	100.00%
Bromodichloromethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
Bromoform	VOC	Soil	mg/kg	99	0	0	99	100.00%
Bromomethane	VOC	Soil	mg/kg	99	0	98	1	1.01%
Cadmium	Metal	Soil	mg/kg	99	51	0	99	100.00%
Caprolactam	SVOC	Soil	mg/kg	99	2	0	99	100.00%
Carbazole	SVOC	Soil	mg/kg	99	43	0	99	100.00%
Carbon disulfide	VOC	Soil	mg/kg	99	0	0	99	100.00%
Carbon tetrachloride	VOC	Soil	mg/kg	99	0	0	99	100.00%
Chlorobenzene	VOC	Soil	mg/kg	99	0	0	99	100.00%
Chloroethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
Chloroform	VOC	Soil	mg/kg	99	1	0	99	100.00%
Chloromethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
Chromium	Metal	Soil	mg/kg	99	99	0	99	100.00%
Chromium VI	Metal	Soil	mg/kg	99	25	8	91	91.92%
Chrysene	SVOC	Soil	mg/kg	99	94	0	99	100.00%
cis-1,2-Dichloroethene	VOC	Soil	mg/kg	99	0	0	99	100.00%
cis-1,3-Dichloropropene	VOC	Soil	mg/kg	99	0	0	99	100.00%
Cobalt	Metal	Soil	mg/kg	99	70	0	99	100.00%
Copper	Metal	Soil	mg/kg	99	96	0	99	100.00%
Cyanide	CN	Soil	mg/kg	99	87	0	99	100.00%
Cyclohexane	VOC	Soil	mg/kg	99	1	0	99	100.00%
Dibenz[a,h]anthracene	SVOC	Soil	mg/kg	99	84	0	99	100.00%
Dibromochloromethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
Dichlorodifluoromethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
Diesel Range Organics	TPH	Soil	mg/kg	99	97	0	99	100.00%
Diethylphthalate	SVOC	Soil	mg/kg	99	0	0	99	100.00%
Di-n-butylphthalate	SVOC	Soil	mg/kg	99	5	0	99	100.00%
Di-n-ocetylphthalate	SVOC	Soil	mg/kg	99	1	0	99	100.00%
Ethylbenzene	VOC	Soil	mg/kg	99	11	0	99	100.00%
Fluoranthene	SVOC	Soil	mg/kg	99	96	0	99	100.00%
Fluorene	SVOC	Soil	mg/kg	99	72	0	99	100.00%
Gasoline Range Organics	TPH	Soil	mg/kg	99	8	0	99	100.00%
Hexachlorobenzene	SVOC	Soil	mg/kg	99	1	0	99	100.00%
Hexachlorobutadiene	SVOC	Soil	mg/kg	99	0	0	99	100.00%
Hexachlorocyclopentadiene	SVOC	Soil	mg/kg	99	0	3	96	96.97%
Hexachloroethane	SVOC	Soil	mg/kg	99	1	0	99	100.00%
Indeno[1,2,3-c,d]pyrene	SVOC	Soil	mg/kg	99	91	0	99	100.00%
Iron	Metal	Soil	mg/kg	99	99	0	99	100.00%
Isophorone	SVOC	Soil	mg/kg	99	0	0	99	100.00%
Isopropylbenzene	VOC	Soil	mg/kg	99	1	0	99	100.00%
Lead	Metal	Soil	mg/kg	99	95	0	99	100.00%
Manganese	Metal	Soil	mg/kg	99	99	0	99	100.00%
Mercury	Metal	Soil	mg/kg	99	82	4	95	95.96%
Methyl Acetate	VOC	Soil	mg/kg	99	2	1	98	98.99%
Methyl tert-butyl ether (MTBE)	VOC	Soil	mg/kg	99	0	0	99	100.00%
Methylene Chloride	VOC	Soil	mg/kg	99	0	0	99	100.00%
Naphthalene	SVOC	Soil	mg/kg	99	83	0	99	100.00%
Nickel	Metal	Soil	mg/kg	99	89	0	99	100.00%
Nitrobenzene	SVOC	Soil	mg/kg	99	1	0	99	100.00%
N-Nitroso-di-n-propylamine	SVOC	Soil	mg/kg	99	0	0	99	100.00%
N-Nitrosodiphenylamine	SVOC	Soil	mg/kg	99	1	0	99	100.00%
PCBs (total)	PCB	Soil	mg/kg	46	25	0	46	100.00%
Pentachlorophenol	SVOC	Soil	mg/kg	99	0	24	75	75.76%

EVALUATION OF DATA COMPLETENESS
Percentage of Non-rejected Results vs. Total Results

Parameter	Parameter Group	Matrix	Unit	Number of Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
Phenanthrene	SVOC	Soil	mg/kg	99	94	0	99	100.00%
Phenol	SVOC	Soil	mg/kg	99	11	22	77	77.78%
Pyrene	SVOC	Soil	mg/kg	99	98	0	99	100.00%
Selenium	Metal	Soil	mg/kg	99	10	0	99	100.00%
Silver	Metal	Soil	mg/kg	99	25	0	99	100.00%
Styrene	VOC	Soil	mg/kg	99	1	0	99	100.00%
Tetrachloroethene	VOC	Soil	mg/kg	99	0	0	99	100.00%
Thallium	Metal	Soil	mg/kg	99	4	0	99	100.00%
Toluene	VOC	Soil	mg/kg	99	75	0	99	100.00%
trans-1,2-Dichloroethene	VOC	Soil	mg/kg	99	0	0	99	100.00%
trans-1,3-Dichloropropene	VOC	Soil	mg/kg	99	0	0	99	100.00%
Trichloroethene	VOC	Soil	mg/kg	99	0	0	99	100.00%
Trichlorofluoromethane	VOC	Soil	mg/kg	99	0	0	99	100.00%
Vanadium	Metal	Soil	mg/kg	99	99	0	99	100.00%
Vinyl chloride	VOC	Soil	mg/kg	99	0	0	99	100.00%
Xylenes	VOC	Soil	mg/kg	99	10	0	99	100.00%
Zinc	Metal	Soil	mg/kg	99	99	0	99	100.00%

Data validation has been completed for a representative 50% of all samples