



ARM Group Inc.

Engineers and Scientists

December 26, 2019

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

Re: Phase II Investigation Work Plan
Area A: Parcel A18 (Revision 0)
Comment Response Letter
Tradepoint Atlantic
Sparrows Point, MD 21219

Dear Ms. Brown:

On behalf of EnviroAnalytics Group, LLC (EAG), ARM Group Inc. (ARM) is providing the following responses to a set of comments received from the Maryland Department of the Environment (MDE) in an email dated September 9, 2019 regarding the submission of the Phase II Investigation Work Plan (Revision 0 dated June 28, 2019) for Parcel A18 of the Tradepoint Atlantic property located in Sparrows Point, Maryland. This letter provides responses to the recent comments and demonstrates that the requested changes to the sampling plan have been made in a satisfactory manner. Based on the minor revisions to the Work Plan, the Parcel A18 Phase II Investigation Work Plan itself will not be updated, but this comment response letter serves the purpose of documenting pertinent updates. Relevant attachments including revised sampling plan figures and an updated sampling plan table are included with this response to comments. Responses to the comments are provided below; the original comments are included in italics with responses following.

- 1. We want to conduct a site visit prior to beginning this site investigation. Please submit a timeframe for beginning work on this parcel so we can get a date scheduled to observe current site conditions.*

ARM understands that MDE conducted a site visit on November 7, 2019. Additional comments received after the site visit are addressed following the initial comments received.

- 2. Explain the issues with collecting samples from stormwater management ponds. MDE typically requires that sediment samples be collected from stormwater management ponds to ensure a complete assessment of the on-site environmental conditions.*

See additional comment #3 received after the MDE site visit.

3. *Add two additional groundwater sampling points in the area near A18-014 and A18-015 to investigate concerns related to historical dumping and elevated CVOCs on the adjacent A10 property. Groundwater borings located between A18-014 and A18-015, then between A18-014 and A18-002 would be acceptable locations.*

Two additional sample locations, A18-016 and A18-017, have been added to better assess the area of concern in the nearby A10 property. Soil and groundwater samples will be collected at each of these locations. The additional points are shown on the revised figures and have been added to the sampling plan table.

4. *Add an additional groundwater sampling point in the northern portion of the parcel, near proposed A18-009.*

See additional comment #2.

5. *Move A18-009-SB to the east of the railway to investigate the small bump out in the property that appears to have been cleared historically. This would make the location acceptable for collection of a groundwater sample as per the previous comment.*

See additional comment #2.

6. *Add a soil boring to the west of A18-009, on the west side of the railway.*

See additional comment #2.

7. *Collect a groundwater sample from the new boring added to the area west of the railway on the northern portion of the site, south of Interstate 695.*

See additional comment #2.

8. *Add two soil borings to the north of the easternmost stormwater management pond, directly adjacent to the Chesapeake Specialty Products property. It appears that a significant amount of materials storage is located on this adjacent property in close proximity to the boundary with Parcel A18. Collect a groundwater sample from at least one of these points.*

See additional comment #1.

Additional comments following November 7, 2019 site visit:

1. *Due to the sloped grade and access issues, the two additional soil borings northeast of the ponded area are no longer required.*

ARM understands that no additional soil borings will be required northeast of the ponded area.

2. *The land around A18-009-SB, outside of the rail lines, was observed to be significantly sloped and wooded. So no additional borings are required in this area*



and the location of A18-009-SB can remain as proposed in the Work Plan. Do add a groundwater sample to this boring location.

A piezometer will be installed, and a groundwater sample will be collected from the originally proposed location of A18-009.

3. *Sediment samples should be collected from this parcel, particularly due to access issues for a sizeable portion of the site.*

Sediment samples will be collected at four locations, two in each impoundment area. The approximate sediment sample locations are shown on the revised sampling plan figures. These locations may be adjusted in the field due to access restrictions and steep slopes. The sediment samples will characterize the accumulated sediment where Geoprobe® access will likely be infeasible due to standing water or wet ground conditions. Each of the sediment samples will be collected as a grab sample from the top 12 inches of sediment. The sediment sample locations appear at the edge of standing water as shown on the revised work plan figures.

All sediment samples will be collected in accordance with the methods specified in SOP No. 003 – Sediment Sampling. Each sediment sample will be analyzed for VOCs, SVOCs, TAL-Metals, Oil & Grease, TPH-DRO, TPH-GRO, PCBs, hexavalent chromium, and cyanide. Analytical methods, sample containers, preservatives, and holding times for the analyses are listed in the QAPP Worksheet 19 & 30 – Sample Containers, Preservation, and Holding Times.

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

Respectfully submitted,
ARM Group Inc.



Ryan Clancy
Staff Engineer



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



FIGURES



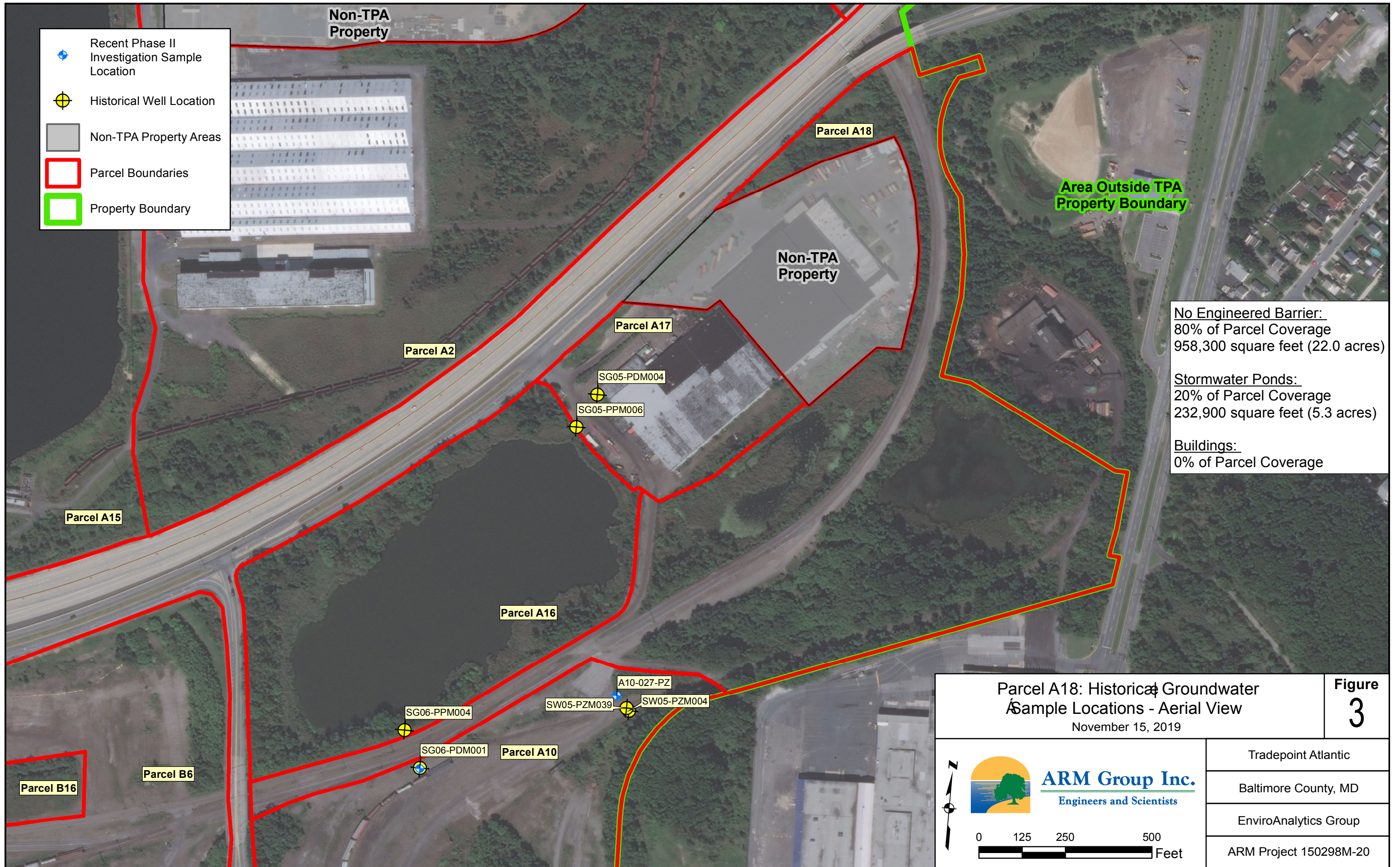
Site Boundary
 Parcel Boundaries
 Private Property






Tradepoint Atlantic Area A and Area B Parcels June 21, 2018		Figure 1
 ARM Group Inc. Engineers and Scientists		Tradepoint Atlantic Baltimore County, MD EnviroAnalytics Group
 		Area A: Project 150298M Area B: Project 150300M Development: Project 160443M



Figure

2



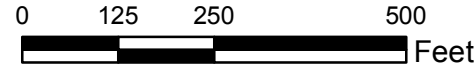


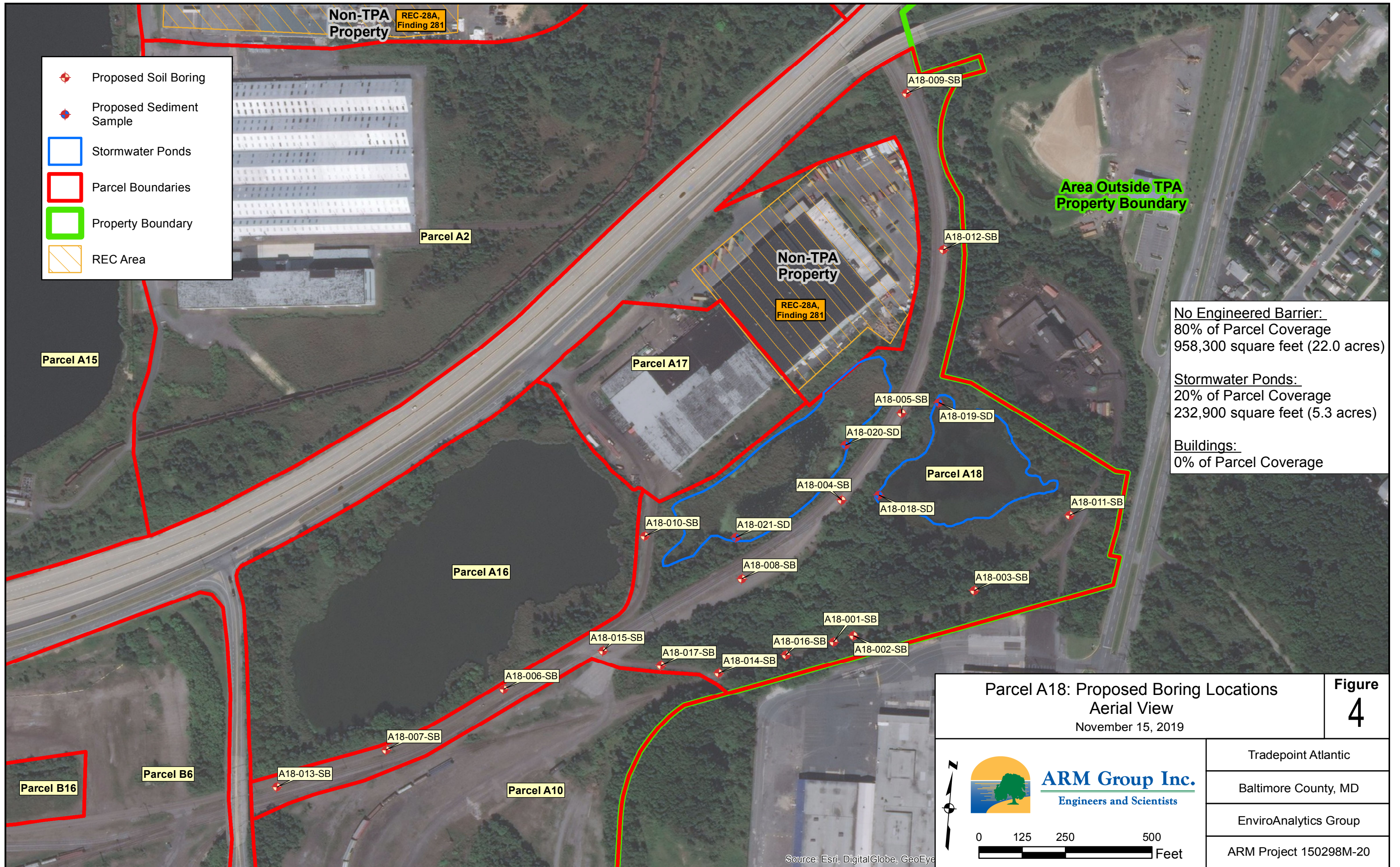
-  Recent Phase II Investigation Sample Location
-  Historical Well Location
-  Non-TPA Property Areas
-  Parcel Boundaries
-  Property Boundary

No Engineered Barrier:
 80% of Parcel Coverage
 958,300 square feet (22.0 acres)

Stormwater Ponds:
 20% of Parcel Coverage
 232,900 square feet (5.3 acres)

Buildings:
 0% of Parcel Coverage

Parcel A18: Historical Groundwater Sample Locations - Aerial View November 15, 2019		Figure 3
  ARM Group Inc. Engineers and Scientists	Tradepoint Atlantic	
	Baltimore County, MD	
	EnviroAnalytics Group	
	ARM Project 150298M-20	
		



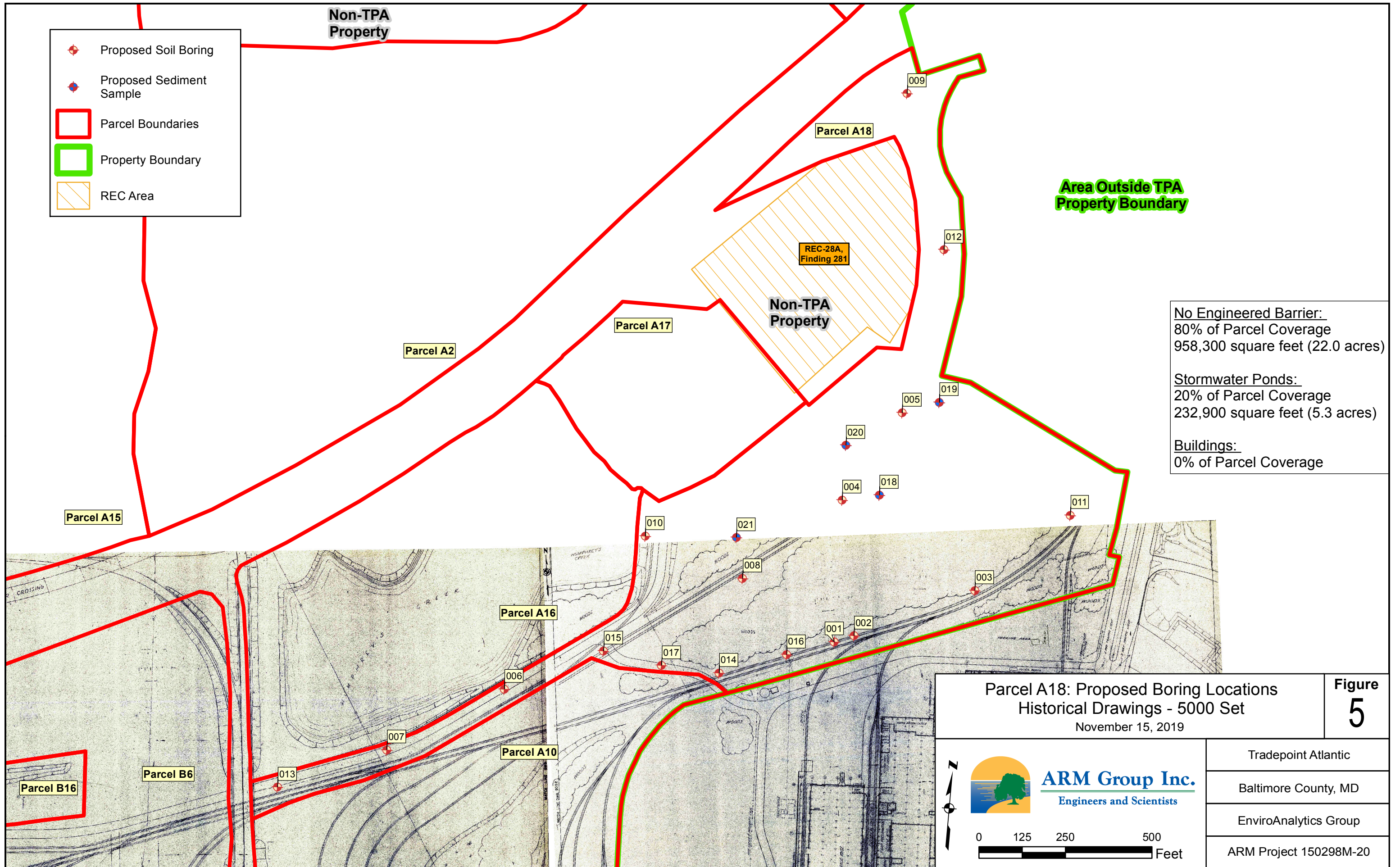
- Proposed Soil Boring
- Proposed Sediment Sample
- Stormwater Ponds
- Parcel Boundaries
- Property Boundary
- REC Area

No Engineered Barrier:
 80% of Parcel Coverage
 958,300 square feet (22.0 acres)






Stormwater Ponds:
 20% of Parcel Coverage
 232,900 square feet (5.3 acres)

Buildings:
 0% of Parcel Coverage

Parcel A18: Proposed Boring Locations Aerial View November 15, 2019		Figure 4
 Source: Esri, DigitalGlobe, GeoEye	 ARM Group Inc. Engineers and Scientists	
	Tradepoint Atlantic Baltimore County, MD	
	EnviroAnalytics Group	
	ARM Project 150298M-20	



Non-TPA Property

-  Proposed Soil Boring
-  Proposed Sediment Sample
-  Parcel Boundaries
-  Property Boundary
-  REC Area

Area Outside TPA Property Boundary



No Engineered Barrier:
80% of Parcel Coverage
958,300 square feet (22.0 acres)

Stormwater Ponds:
20% of Parcel Coverage
232,900 square feet (5.3 acres)

Buildings:
0% of Parcel Coverage

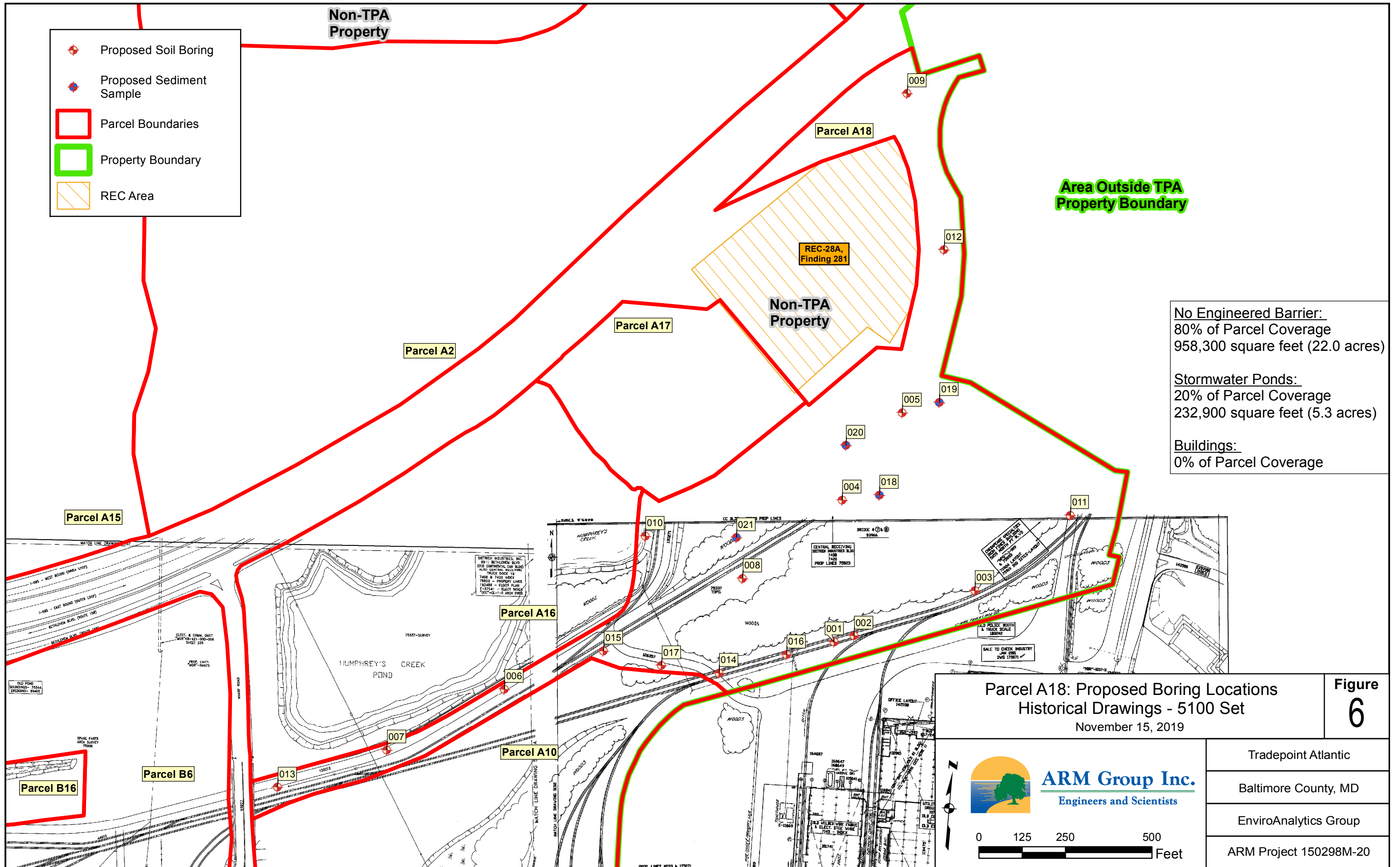
Parcel A18: Proposed Boring Locations
Historical Drawings - 5000 Set
November 15, 2019

Figure 5

  **ARM Group Inc.**
Engineers and Scientists

0 125 250 500 Feet

Tradepoint Atlantic
Baltimore County, MD
EnviroAnalytics Group
ARM Project 150298M-20



No Engineered Barrier:
 80% of Parcel Coverage
 958,300 square feet (22.0 acres)

Stormwater Ponds:
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 232,900 square feet (5.3 acres)

Buildings:
 0% of Parcel Coverage

Parcel A18: Proposed Boring Locations
 Historical Drawings - 5100 Set
 November 15, 2019

Figure
 6

Tradepoint Atlantic

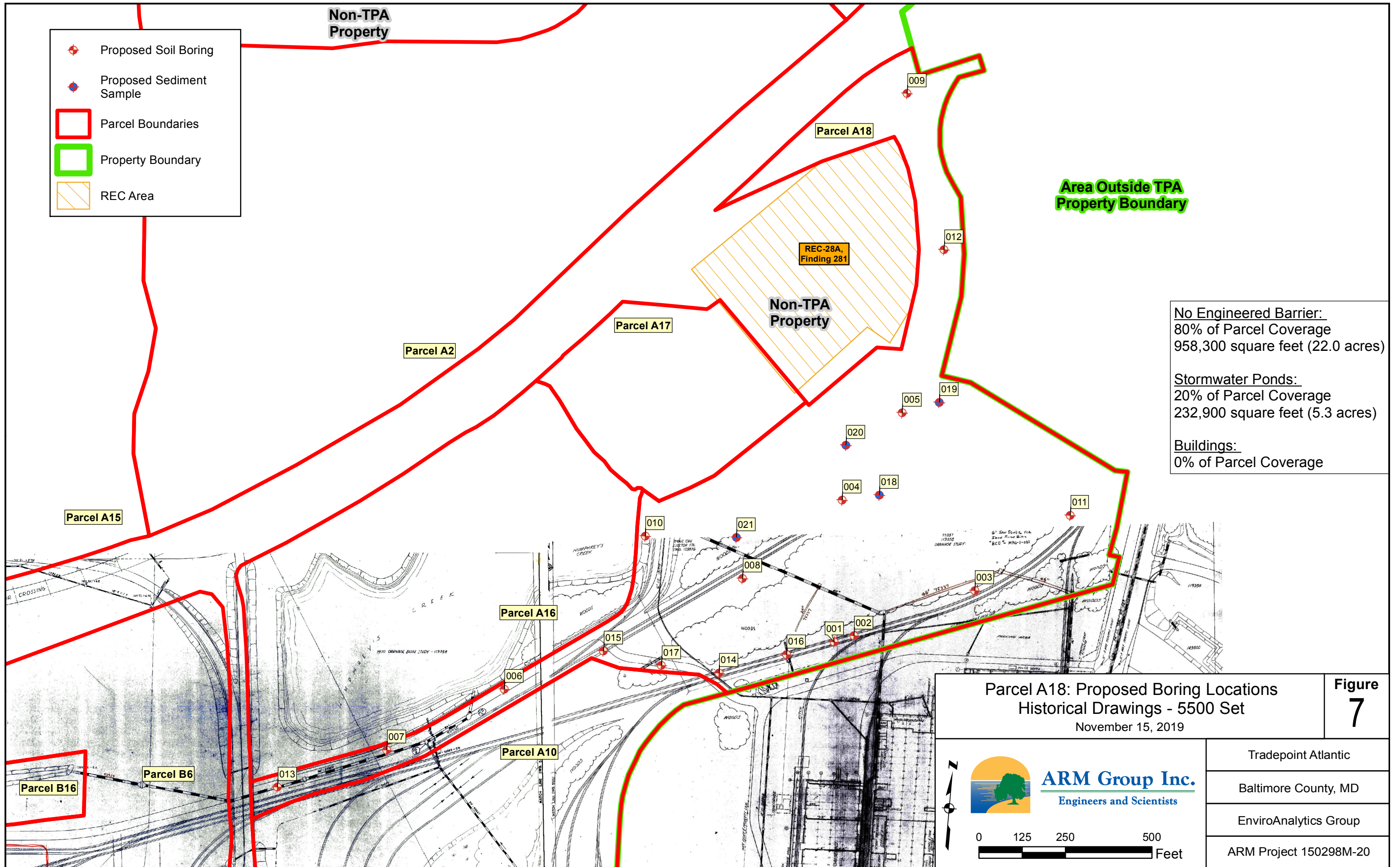
Baltimore County, MD

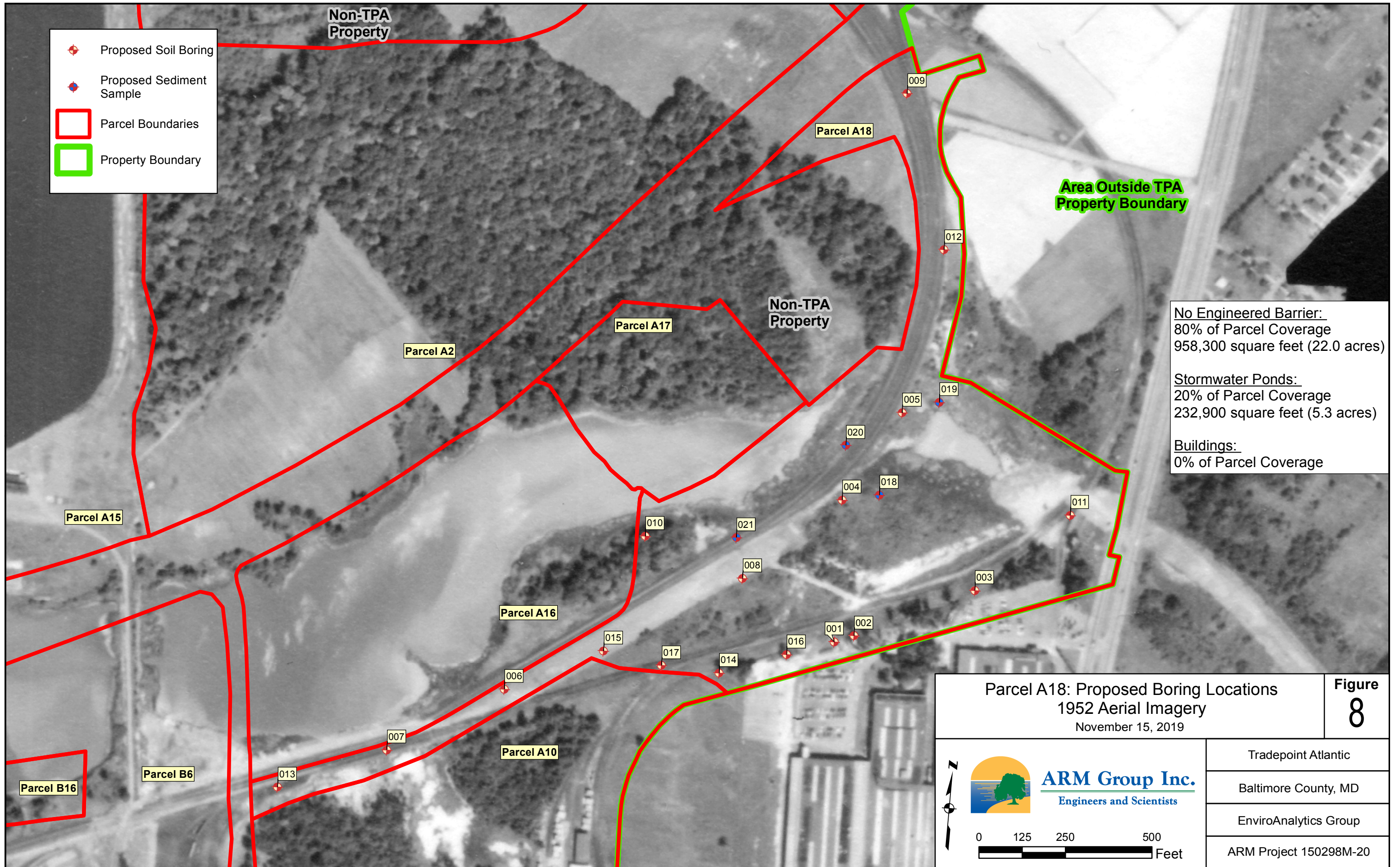
EnviroAnalytics Group

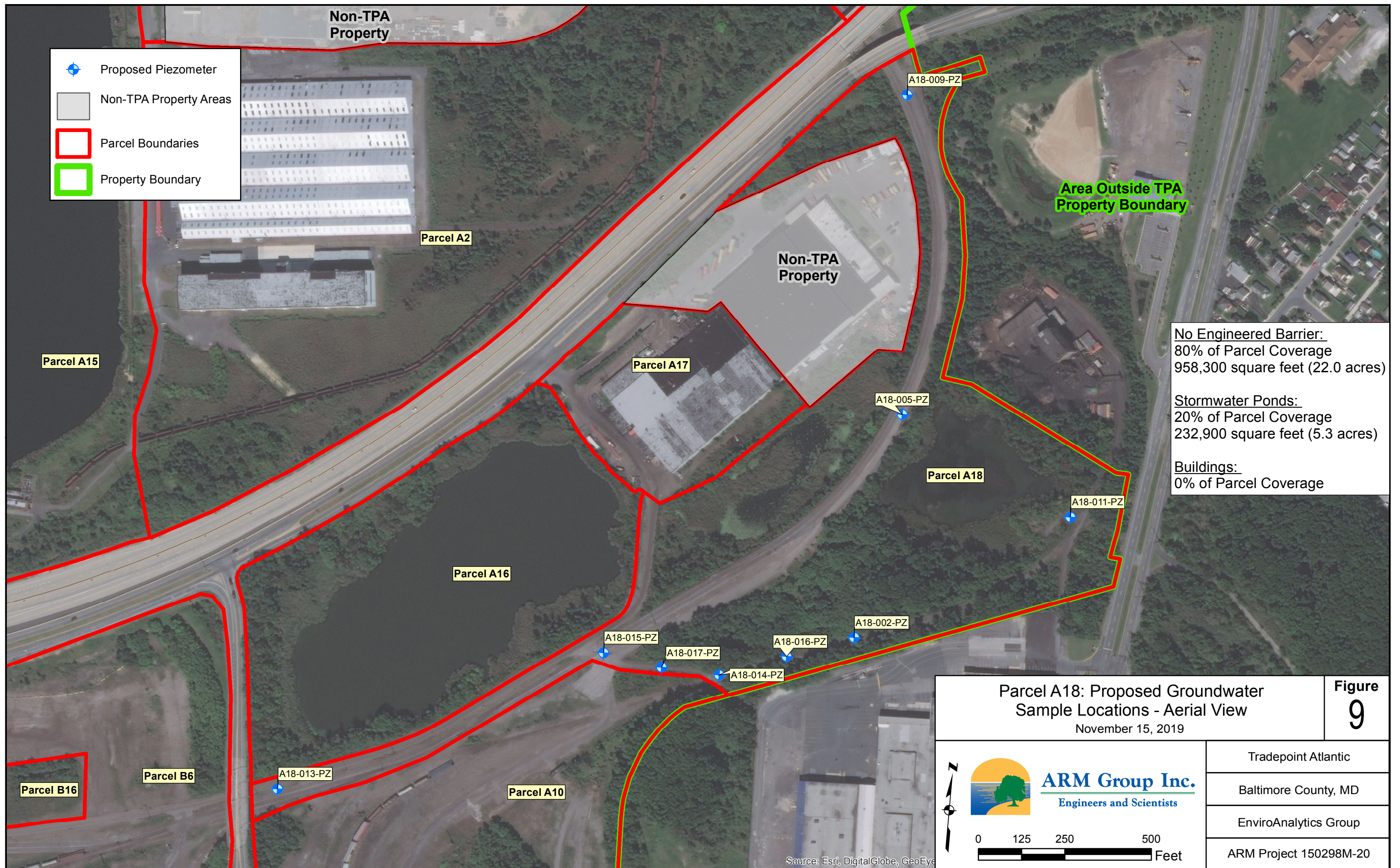
ARM Project 150298M-20





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0 125 250 500 Feet








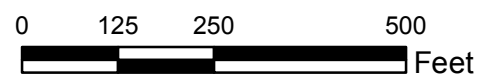
-  Proposed Piezometer
-  Non-TPA Property Areas
-  Parcel Boundaries
-  Property Boundary

No Engineered Barrier:
 80% of Parcel Coverage
 958,300 square feet (22.0 acres)

Stormwater Ponds:
 20% of Parcel Coverage
 232,900 square feet (5.3 acres)

Buildings:
 0% of Parcel Coverage

Parcel A18: Proposed Groundwater Sample Locations - Aerial View November 15, 2019		Figure 9
 ARM Group Inc. Engineers and Scientists	Tradepoint Atlantic	
	Baltimore County, MD	
	EnviroAnalytics Group	
	ARM Project 150298M-20	



Source: Esri, DigitalGlobe, GeoEye

APPENDIX D

**Parcel A18 Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland**

Table 1 - Soil/Sediment Sampling Summary

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 and Sediment Samples
Fly Dumping Area		Site Visit	Investigate potential impacts related to drums of unknown contents which appear to have been disposed of at the Site (potential leaks or releases).	2	A18-001* and A18-002*	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, O&G, PCBs (0-1')
Parcel A18 Coverage			Investigate potential impacts related to unknown historical activities, and characterize soil in areas not previously sampled.	13	A18-003 through A18-015	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, O&G, PCBs (0-1')
Parcel A10 CVOC Detections		MDE Requested	Investigate potential impacts related to the previous detections of CVOCs in groundwater in adjacent parcel A10.	2	A18-016 and A18-017	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, O&G, PCBs (0-1')
Stormwater Pond Areas		MDE Requested	Investigate potential impacts related to any historical activities which may have occurred in the retention basins (potential leaks or releases).	4	A18-018 through A18-021	Total depth of 12 inches.	Top 12" of sediment at each location	VOC, SVOC, Metals, DRO/GRO, Oil & Grease, PCBs
Total:				21				

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

No Engineered Barrier (16-40 acres): 1 boring per 1.5 acres with no less than 15 borings.

Engineered Barrier (N/A)

No Engineered Barrier (22.0 acres) = **15 borings required, 17 proposed (+4 Sediment)**

Stormwater Ponds (5.3 acres)

Building Footprints (0 acres)

VOCs - Volatile Organic Compounds (Target Compound List)

[^]VOCs are only collected if the PID reading exceeds 10 ppm

SVOCs - Semivolatile Organic Compounds (Target Compound List)

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

O&G - Oil and Grease

DRO/GRO - Diesel Range Organics/Gasoline Range Organics

PCBs - Polychlorinated Biphenyls

bgs - Below Ground Surface

*Sample Locations A18-001 and A18-002 may be shifted based on observations in the field to better target the Fly Dumping Area.

**Parcel A18 Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland**

Table 2 - Groundwater Sampling Summary

Source Area/ Description	REC & Finding/ SWMU/ AOC	Figure or Drawing of Reference	Condition of Existing Well	Number of Locations	Sample Locations	Boring Depth	Screen Interval	Analytical Parameters: Groundwater Samples
Fly Dumping Area		Site Visit	N/A	1	A18-002	Total depth of 7 feet below water table.	7 feet below water table to 3 feet above water table.	VOC, SVOC, Metals (dissolved), Cyanide (total), O&G, DRO/GRO
Parcel A18 Coverage			N/A	5	A18-005, A18-011, A18-013 through A18-015	Total depth of 7 feet below water table.	7 feet below water table to 3 feet above water table.	VOC, SVOC, Metals (dissolved), Cyanide (total), O&G, DRO/GRO
Parcel A10 CVOC Detections		MDE Requested	N/A	2	A18-016 and A18-017	Total depth of 7 feet below water table.	7 feet below water table to 3 feet above water table.	VOC, SVOC, Metals (dissolved), Cyanide (total), O&G, DRO/GRO
			Total:	8				

Field measurements include pH, DO, ORP, conductivity, temperature.
Metals analysis will include dissolved hexavalent chromium

VOCs - Volatile Organic Compounds (Target Compound List)
SVOCs - Semivolatile Organic Compounds (Target Compound List)
Metals - (Target Analyte List plus Hexavalent Chromium and Cyanide)
O&G - Oil and Grease
DRO/GRO - Diesel Range Organics/Gasoline Range Organics