

PHASE II INVESTIGATION REPORT

BALTIMORE COUNTY PROPERTY TRANSFER
AREA B: PARCEL B7
TRADEPOINT ATLANTIC
SPARROWS POINT, MARYLAND

Prepared For:



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1.0 INTRODUCTION

ARM Group LLC (ARM), on behalf of Tradepoint Atlantic, has completed a Phase II Investigation of a portion of the Tradepoint Atlantic property (formerly Sparrows Point Terminal, LLC) that has been designated within Area B: Parcel B7 as the Proposed Baltimore County Property Transfer (the Site). The Site is comprised of 22 acres of the approximately 3,100-acre former steel making facility (**Figure 1**). The Site is bounded to the south by the Jones Creek surface water body and the Pleasant Yacht Club (within Parcel B25), to the west by Wharf Road and the Sparrows Point Boulevard highway ramps (within Parcel B7), to the north by the off-property Sparrows Point Boulevard, and to the east by an off-property residential area and Jones Creek.

The Phase II Investigation was performed in accordance with procedures outlined in the approved Baltimore County Property Transfer Pre-Development Investigation Work Plan (dated April 15, 2019) and the associated Work Plan Update Letter (dated October 14, 2020). The Baltimore County Property Transfer Work Plan and associated Work Plan Update Letter were collectively approved by the Maryland Department of the Environment (MDE) and United States Environmental Protection Agency (USEPA) via email on October 16, 2020. This investigation also relied on data obtained from the combined Phase II Investigation of Parcel B7 and Parcel B25, which was conducted in accordance with the preceding Phase II Investigation Work Plan (dated May 22, 2018) that was approved via email on June 26, 2018. The investigations of the Site were implemented in compliance with requirements pursuant to the following:

- Administrative Consent Order (ACO) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the MDE effective September 12, 2014; and
- Settlement Agreement and Covenant Not to Sue (SA) between Tradepoint Atlantic (formerly Sparrows Point Terminal, LLC) and the USEPA effective November 25, 2014.

The Site is part of the acreage that was removed (Carveout Area) from inclusion in the Multimedia Consent Decree between Bethlehem Steel Corporation, the USEPA, and the MDE (effective October 8, 1997) as documented in correspondence received from the USEPA on September 12, 2014. Based on this agreement, the USEPA determined that no further investigation or corrective measures will be required under the terms of the Consent Decree for the Carveout Area. However, the SA reflects that the property within the Carveout Area will remain subject to the USEPA's Resource Conservation and Recovery Act (RCRA) Corrective Action authorities.

An application to enter the full Tradepoint Atlantic property (3,100 acres) into the MDE's Voluntary Cleanup Program (MDE-VCP) was submitted to the MDE and delivered on June 27, 2014. The property's current and anticipated future use is Tier 3 (Industrial), and plans for the property include demolition and redevelopment over the next several years.

1.1. SITE HISTORY

From the late 1800s until 2012, the production and manufacturing of steel was conducted at Sparrows Point. Iron and steel production operations and processes at Sparrows Point included raw material handling, coke production, sinter production, iron production, steel production, and semi-finished and finished product preparation. In 1970, Sparrows Point was the largest steel facility in the United States, producing hot and cold rolled sheets, coated materials, pipes, plates, and rod and wire. The steel making operations at Sparrows Point ceased in fall 2012.

The Site is mostly wooded in the western, northern, and eastern portions. The majority of the Site was formerly occupied by a golf course (c. 1952). There is no evidence to suspect that there were significant historical steel production activities conducted on the Site. The southern portion of the Site includes a small rail yard that was identified in a historical Phase I Environmental Site Assessment (ESA) conducted by Weaver Boos dated May 19, 2014. Based on a review of historical aerial images, the Phase I ESA concluded that fill materials (with unknown source and contents) may have been historically placed on the northern portion of the rail yard. Weaver Boos classified the materials as a Recognized Environmental Condition (REC 12B). The historical golf course and rail yard were investigated by this Phase II Investigation.

1.2. OBJECTIVE

The objective of this Phase II Investigation was to characterize the nature and extent of contamination at the Site. A summary table of the site investigation locations, including the sample identification numbers and the analyses performed, is provided as **Appendix A**. This report includes a summary of the work performed, including the environmental setting, site investigation methods, analytical results and data usability assessment, and findings and recommendations.

2.0 ENVIRONMENTAL SETTING

2.1. LAND USE AND SURFACE FEATURES

The Tradepoint Atlantic property consists of the former Sparrows Point steel mill. According to the Phase I ESA prepared by Weaver Boos dated May 19, 2014, the property is zoned Manufacturing Heavy-Industrial Major (MH-IM). Surrounding property zoning classifications (beyond Tradepoint Atlantic) include the following: Manufacturing Light (ML); Resource Conservation (RC); Density Residential (DR); Business Roadside (BR); Business Major (BM); Business Local (BL); and Residential Office (RO). Light industrial and commercial properties are located northeast of the property and northwest of the property across Bear Creek. Residential areas of Edgemere and Fort Howard are located northeast of the property across Jones Creek and to the southeast across Old Road Bay, respectively. Residential and commercial areas of Dundalk are located northwest of the property across Bear Creek.

Ground surface elevations at the Site range from approximately 0 to 20 feet above mean sea level (amsl). The elevations generally slope from the north to south and east to west across the Site. The rail yard in the southern portion of the Site is relatively flat and is positioned between approximately 10 and 12 feet amsl. The eastern shoreline slopes steeply downward to meet the surface water body of Jones Creek. According to Figure B-2 of the Stormwater Pollution Prevention Plan (SWPPP) Revision 8 dated April 30, 2020, surface water runoff from the Site is conveyed to the east toward Jones Creek. There are no permitted National Pollutant Discharge Elimination System (NPDES) outfalls located on the Site.

2.2. REGIONAL GEOLOGY

The Site is located within the Atlantic Coastal Plain Physiographic Province (Coastal Plain). The western boundary of the Coastal Plain is the “Fall Line”, which separates the Coastal Plain from the Piedmont Plateau Province. The Fall Line runs from northeast to southwest along the western boundary of the Chesapeake Bay, passing through Elkton (MD), Havre de Grace (MD), Baltimore City (MD), and Laurel (MD). The eastern boundary of the Coastal Plain is the off-shore Continental Shelf.

The unconsolidated sediments beneath the Site belong to the Talbot Formation (Pleistocene), which is then underlain by the Cretaceous formations which comprise the Potomac Group (Patapsco Formation, Arundel Formation, and the Patuxent Formation). The Potomac Group formations are comprised of unconsolidated sediments of varying thicknesses and types, which may be several hundred feet to several thousand feet thick. These unconsolidated formations may overlie deeper Mesozoic and/or Precambrian bedrock. Depth to bedrock is approximately 700 feet within the Site.

2.3. SITE GEOLOGY/HYDROGEOLOGY

The approximate shoreline of the Sparrows Point Peninsula in 1916 is shown on **Figure 2** (adapted from Figure 2-20 in the Description of Current Conditions (DCC) Report prepared by Rust Environment and Infrastructure dated January 1998). In general, the encountered subsurface geology included natural soils, which included fine-grained sediments (clays and silts) and coarse-grained sediments (sands), as well as non-native slag fill materials. Shallow groundwater was observed in soil cores at depths from approximately 5 to 19 feet below ground surface (bgs) across the Site; however, groundwater was not encountered at every boring location. Soil boring observation logs are provided in **Appendix B**. All Unified Soil Classification System (USCS) group symbols provided on the attached boring logs are from visual observations, and not from laboratory testing.

Groundwater was investigated at the Site via the installation of four temporary groundwater sample collection points (commonly referred to as piezometers). Sample locations where piezometers were installed within the Site included B7-053-PZ, B7-060-PZ, B7-064-PZ, and B7-065-PZ. Additionally, two permanent groundwater monitoring wells (SW-046-MWS and SW-047-MWS) installed during the preceding Area B Groundwater Phase II Investigation in 2015 were included in the site-specific sampling plan. **Figure 3** shows an aerial view of the groundwater locations which were installed and sampled to characterize groundwater conditions below the Site. A piezometer was originally specified to be installed at B7-032-SB; however, this location could not be installed due to significant access restrictions. B7-065-PZ was installed as a replacement for the originally planned location.

A localized potentiometric map for shallow groundwater has been included on **Figure 3**. The potentiometric map was generated during the Area B Groundwater Phase II Investigation and was originally reported to the MDE and USEPA within the Area B Groundwater Phase II Investigation Report (dated September 30, 2016). These historical elevation contours indicate that groundwater generally flows from northwest to southeast across the Site toward the shoreline of Jones Creek, which is the presumed discharge location for shallow groundwater.

3.0 SITE INVESTIGATION

A total of 66 soil samples (from 19 boring locations), and six groundwater samples (from five well/piezometer locations) were collected for analysis between October 1, 2018 and December 30, 2020 as part of this Phase II Investigation. The data collected in 2018 were derived from the preceding Phase II Investigation of the combined Parcels B7 and B25. Historical groundwater data from December 2015 were utilized for one monitoring well (SW-047-MWS) because the well was observed to have been destroyed and could not be resampled during this investigation.

This Phase II Investigation utilized methods and protocols that followed the procedures included in the Quality Assurance Project Plan (QAPP) dated April 5, 2016 which was approved by the agencies to support the investigation and remediation of the Tradepoint Atlantic property. Information regarding the project organization, field activities and sampling methods, sampling equipment, sample handling and management procedures, the selected laboratory and analytical methods, quality control and quality assurance procedures, investigation-derived waste (IDW) management methods, and reporting requirements are described in detail in the approved Work Plan(s) and the QAPP.

All site characterization activities were conducted under the property-wide Health and Safety Plan (HASP) provided as Appendix E of the approved Baltimore County Property Transfer Work Plan.

3.1. SAMPLE TARGET IDENTIFICATION

Previous activities within and around the buildings and facilities located on the Tradepoint Atlantic property may have been historical sources of environmental contamination. If present, source areas were identified as targets for sampling through a careful review of historical documents. When a sampling target was identified, a boring was placed at or next to its location using Geographic Information Systems (GIS) software (ArcMap Version 10.6).

Sampling targets included, as applicable, 1) Recognized Environmental Conditions (RECs) shown on the REC Location Map provided in Weaver Boos' Phase I ESA, 2) additional findings (non-RECs) from the Phase I ESA which were identified as potential environmental concerns, and 3) Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified from the DCC Report prepared by Rust Environment and Infrastructure. One REC (REC 12B – Rail Yard Fill Materials) was identified at the Site based on the Phase I ESA.

Four sets of historical drawings were also reviewed to identify potential sampling targets for the Site. These drawings included the 5000 Set (Plant Arrangement), the 5100 Set (Plant Index), the 5500 Set (Plant Sewer Lines), and a set of drawings indicating coke oven gas distribution drip leg locations. Drip legs are points throughout the distribution system where coke oven gas condensate was removed from the gas pipelines. The condensate from the drip legs was typically discharged to drums, although it is possible some spilled out of the drums and onto the ground. There were

no drip legs identified within the Site boundary. ARM also reviewed a list of former PCB-containing transformer equipment on the property via a historical PCB Inventory Map. There were no possible PCB-containing areas identified at the Site from the PCB Inventory Map.

A summary of the specific drawings covering the Site is presented in **Table 1**. Sampling target locations were identified if the historical drawings depicted industrial activities or a specific feature at a location that may have been a source of environmental contamination that potentially impacted the Site. A summary table of the investigation plan, along with the sampling plan targets, applicable boring identification numbers, and the analyses performed, has been provided as **Appendix A**. A total of 19 soil borings were proposed (and completed) to provide coverage of the Site during this Phase II Investigation.

During the completion of fieldwork, it was necessary to shift some borings from the approved locations given in the Work Plan, primarily due to equipment access restrictions due to standing water and dense vegetation (within wooded areas). **Table 2** provides the identification numbers of the field adjusted borings, the coordinates of the proposed and final locations, and the distance/direction of the field shifts.

3.2. SOIL INVESTIGATION

Continuous core soil borings were advanced at 19 locations across the Site to assess the presence or absence of soil contamination, and to assess the vertical distribution of any encountered contamination (**Figure 4**). The 19 continuous core soil borings were advanced to a maximum depth of 20 feet bgs using the Geoprobe[®] MC-7 Macrocore soil sampler (surface to 10 feet bgs) and the Geoprobe[®] D-22 Dual-Tube Sampler (depths >10 feet bgs). One soil boring (B7-032-SB) was completed using a hand auger rather than the Geoprobe[®] due to significant access restrictions. At each of the 19 boring locations, each soil core was visually inspected and screened with a hand-held photoionization detector (PID) prior to logging soil types. Soil boring logs have been included as **Appendix B**, and the PID calibration log has been included as **Appendix C**. The USCS group symbols provided on the attached boring logs are from visual observations.

In each boring, two shallow soil samples were collected from the 0 to 1 foot depth interval and the 1 to 2 foot depth interval. An underlying sample was collected from the 4 to 5 foot depth interval from each continuous core soil boring, but could be adjusted based on field observations. If the PID or other field observations indicated contamination to exist at a depth greater than 3 feet bgs but less than 9 feet bgs, and above the water table, the sample from the deeper 4 to 5 foot interval was shifted to the alternate depth interval. One additional set of samples was collected from the 9 to 10 foot depth interval if groundwater had not been encountered. The 10-foot bgs samples were held by the laboratory prior to analysis in accordance with the requirements given in the Baltimore County Property Transfer Work Plan. The project-specific requirements for the analysis of the 10-foot bgs samples are further described below. It should be noted that soil samples were not collected from a depth that was below the water table.

Soil sampling activities were conducted in accordance with the procedures and methods referenced in **Field Standard Operating Procedure (SOP) Numbers 008, 009, 012, and 013** provided in Appendix A of the QAPP. Sample containers, preservatives, and holding times for the sample analyses are listed in the QAPP Worksheet 19 & 30 – Sample Containers, Preservation, and Holding Times. Down-hole soil sampling equipment was decontaminated after soil sampling had been concluded at each location, according to the procedures and methods referenced in **Field SOP Number 016** provided in Appendix A of the QAPP.

Each soil sample collected during this investigation was submitted to Pace Analytical Services, Inc. (PACE) for analysis. As stated above, the 10-foot bgs samples were held prior to analysis in accordance with the Baltimore County Property Transfer Work Plan requirements. Excluding these deep samples, the remaining soil samples were analyzed for Target Compound List (TCL) semi-volatile organic compounds (SVOCs) and polynuclear aromatic hydrocarbons (PAHs) via USEPA Methods 8270 and 8270 SIM, Oil & Grease via USEPA Method 9071, total petroleum hydrocarbon (TPH) diesel range organics (DRO) and gasoline range organics (GRO) via USEPA Method 8015, Target Analyte List (TAL) Metals via USEPA Methods 6010 and 7471, hexavalent chromium via USEPA Method 7196, and cyanide via USEPA Method 9012. The shallow soil samples collected across the Site from the 0 to 1 foot bgs interval were analyzed for polychlorinated biphenyls (PCBs) via USEPA Method 8082. The soil samples collected from the 0 to 1 foot and 1 to 2 foot bgs intervals from across the Site were also analyzed for pesticides via USEPA Method 8081. Samples from any depth interval with a sustained PID reading above 10 ppm were also analyzed for TCL volatile organic compounds (VOCs) via USEPA Method 8260.

If the PID reading from the 9 to 10 foot bgs interval was less than 10 ppm (true for all 10-foot bgs samples collected during this investigation), all parameters were held by the laboratory pending the analysis of the overlying 0 to 1 and 4 to 5 foot bgs (or field adjusted interval) samples. If the preliminary laboratory results from the 4 to 5 foot bgs interval indicated exceedances of the Project Action Limits (PALs) for any constituents, the held sample from the 9 to 10 foot bgs interval was released to be analyzed for those constituents that had PAL exceedances in the overlying sample.

3.3. VISUAL SLAG FILL DELINEATION INVESTIGATION

A visual slag delineation investigation was conducted along the perimeter of the former rail yard in the southern portion of the Site to characterize the horizontal extent of surficial slag fill. The horizontal extents of the slag fill were delineated via the completion of nine soil borings to a depth of 5 feet bgs using a Geoprobe[®] MC-7 Macrocore soil sampler. Soil cores were visually screened and logged using standard techniques in accordance with the **Field SOP Number 012**.

Five soil borings were completed at the ostensible edge of the former rail yard. A paired soil boring was completed along a transect at a distance of approximately 50 feet into the wooded area beyond the former rail yard to delineate the presence of slag aggregate. Therefore, five transects were completed along the perimeter of the former rail yard to characterize the horizontal extent of slag

fill materials, as shown on **Figure 4**. The Baltimore County Property Transfer Work Plan proposed 10 visual slag delineation soil borings; however, due to accessibility one boring (T1-2) was unable to be completed. Soil boring logs from the nine successfully completed locations have been included in **Appendix B**. The USCS group symbols provided on the attached boring logs are from visual observations.

3.4. GROUNDWATER INVESTIGATION

Four shallow temporary groundwater piezometers (B7-053-PZ, B7-060-PZ, B7-064-PZ, and B7-065-PZ) and one groundwater monitoring well (SW-046-MWS) were successfully sampled in 2020 to characterize groundwater below the Site. A piezometer was originally specified to be installed at B7-032-SB; however, this location could not be installed due to significant access restrictions. B7-065-PZ was installed as a replacement for the originally planned location. The Baltimore County Property Transfer Work Plan proposed an additional sample to be collected from permanent groundwater monitoring well SW-047-MWS. However, during groundwater sampling activities, it was determined that SW-047-MWS had been destroyed (likely during recent construction activities on the highway ramps in the vicinity). Therefore, a groundwater sample could not be collected from SW-047-MWS during the 2020 groundwater sampling event. Groundwater data had previously been collected from SW-047-MWS on December 14, 2015 during the preceding Area B Groundwater Phase II Investigation. The historical data has been incorporated into this Phase II Investigation Report and is relied upon to provide characterization data in this portion of the Site. Additionally, due to the destruction of SW-047-MWS, two groundwater samples were collected from SW-046-MWS (on December 18 and December 30, 2020) in order to collect a valid duplicate sample to meet the property-wide quality assurance and quality control (QA/QC) requirements as defined by the QAPP. The results from both recent samples at SW-046-MWS are included and discussed in this Phase II Investigation Report. The locations where shallow groundwater samples were collected (from 2015 through 2020) are provided on **Figure 3**.

Piezometer installation activities were conducted in accordance with the procedures and methods referenced in **Field SOP Number 028**. The piezometers were installed at each location using the Geoprobe® DT22 Dual Tube sampling system. During the installation of each piezometer, soil types were logged and screened with a hand-held PID. The piezometer construction logs have been included as part of **Appendix B**. The monitoring wells SW-046-MWS and SW-047-MWS were installed in November 2015 as originally reported in the Area B Groundwater Phase II Investigation Report (dated September 30, 2016). The historical construction logs from these two shallow monitoring wells are also included in **Appendix B**.

Following the installation of each sample collection point, the 0-hour depth to water was documented and the collection point was checked for the presence of non-aqueous phase liquid (NAPL) using an oil-water interface probe in accordance with the methods referenced in **Field**

SOP Number 019 provided in Appendix A of the QAPP. After the installation of each sample collection point, down-hole equipment was decontaminated according to the procedures and methods referenced in **Field SOP Number 016** provided in Appendix A of the QAPP.

Groundwater samples were collected at each location in accordance with methods referenced in **Field SOP Number 006** provided in Appendix A of the QAPP; which employed the use of laboratory supplied sample containers and preservatives, a peristaltic pump, dedicated sample tubing, and a water quality multiparameter meter with a flow-through cell. Groundwater samples submitted for analysis of dissolved metals were filtered in the field with an in-line 0.45 micron filter. The sampling and purge logs have been included in **Appendix D**. Calibration of the multiparameter meter was performed before the start of each day of the sampling event. Documentation of the multiparameter meter calibration is included in **Appendix D**.

Groundwater samples were submitted to PACE to be analyzed for TCL-VOCs via USEPA Method 8260, TCL-SVOCs and PAHs via USEPA Methods 8270 and 8270 SIM, Oil & Grease via USEPA Method 1664, TPH-DRO/GRO via USEPA Methods 5030 and 8015, TAL-Dissolved Metals via USEPA Methods 6010 and 7470, dissolved hexavalent chromium via USEPA Method 7196, and total cyanide via USEPA Method 9012. The groundwater samples collected from the permanent wells were also submitted to PACE to be analyzed for total metals. The SVOC and PAH groundwater samples collected in 2020 were submitted to ALS Environmental (ALS) rather than PACE to be analyzed via USEPA Methods 8270 and 8270 SIM. The historical groundwater sample collected at SW-047-MWS was also analyzed for PCBs (with no detections) via USEPA Method 680. Sample containers, preservatives, and holding times for the sample analyses are listed in the QAPP Worksheet 19 & 30 – Sample Containers, Preservation, and Holding Times.

3.5. MANAGEMENT OF INVESTIGATION-DERIVED WASTE (IDW)

In accordance with **Field SOP Number 005** provided in Appendix A of the QAPP, IDW generated during this Phase II Investigation was containerized in 55-gallon (DOT-UN1A2) drums. The types of IDW that were generated during this Phase II Investigation included the following:

- soil cuttings generated from soil borings or the installation of groundwater sample points;
- purged groundwater;
- decontamination fluids; and
- used personal protective equipment

Following the completion of field activities, composite samples were gathered with aliquots from the Phase II IDW soil drums for waste characterization. Multiple composite soil samples were required because the investigation was performed in distinct phases (2018 through 2020) that each generated soil IDW from the Site. Following the analysis, the soil IDW from each investigation phase was characterized as non-hazardous. A list of all results from the soil waste characterization

procedure can be found in **Table 3**. IDW drums containing aqueous materials were characterized by preparing composite samples from randomly selected drums. The composite samples included aliquots from several individual drums that were chosen as a subset of the aqueous drums being staged on-site at the date of collection. Based on this analysis, the aqueous waste was also characterized as non-hazardous. A list of all results from the aqueous waste characterization procedure can be found in **Table 4**.

The project-specific IDW drum log from this Phase II Investigation is included as **Appendix E**. All IDW procedures were carried out in accordance with methods referenced in the QAPP Worksheet 21 – Field SOPs and Appendix A of the QAPP.

4.0 ANALYTICAL RESULTS

4.1. SOIL CONDITIONS

Soil analytical results were screened against PALs established in the property-wide QAPP (or other direct guidance from the agencies; i.e., TPH/Oil & Grease) to determine PAL exceedances. PALs are generally based on the USEPA's Regional Screening Levels (RSLs) for the Composite Worker exposure to soil. The Composite Worker is defined by the USEPA as a long-term receptor exposed during the workday who is a full-time employee that spends most of the workday conducting maintenance activities (which typically involve on-site exposures to surface soils) outdoors.

The analytical results for the detected parameters in soil are summarized and compared to the PALs in **Table 5** (Organics), **Table 6** (Pesticides), and **Table 7** (Inorganics). The laboratory Certificates of Analysis (including Chains of Custody) and Data Validation Reports (DVRs) have been included as electronic attachments. The DVRs contain a glossary of qualifiers for the final flags assigned to individual results in the attached summary tables.

4.1.1. Soil Conditions: Organic Compounds

Table 5 provides a summary of VOCs detected above the laboratory's method detection limits (MDLs) in the soil samples collected from across the Site. Only samples which exhibited PID readings greater than 10 ppm were analyzed for VOCs. There were no VOCs detected above their respective PALs.

Table 5 provides a summary of SVOCs detected above the laboratory's MDLs in the soil samples collected from across the Site. The PALs for relevant PAHs have been adjusted upward based on revised toxicity data published in the USEPA RSL Composite Worker Soil Table. Therefore, any soil exceedances for PAHs would be based on the adjusted PALs rather than those presented in the QAPP. There were no SVOCs detected above their respective PALs.

Shallow soil samples collected across the Site from the 0 to 1 foot bgs interval were analyzed for PCBs. **Table 5** provides a summary of PCBs detected above the laboratory's MDLs. There were no PCBs detected above their respective PALs.

Table 5 provides a summary of the TPH/Oil & Grease detections above the laboratory's MDLs in the soil samples collected from across the Site. There were no TPH/Oil & Grease detections above their respective PALs. Additionally, no physical evidence of NAPL was observed in any soil cores completed during this investigation.

4.1.2. Soil Conditions: Pesticides

Soil samples collected across the Site from the 0 to 1 foot bgs and 1 to 2 foot bgs intervals were analyzed for pesticides. Pesticides were required during this investigation because the agencies had previously expressed concern regarding the possible use of pesticides on the fairways and putting greens of the historical golf course. **Table 6** provides a summary of pesticides detected above the laboratory's MDLs. Although PALs were not specified for pesticides in the QAPP, the USEPA's Composite Worker RSLs for pesticides have been adopted as the PALs during this investigation. There were no pesticides detected above their respective PALs.

4.1.3. Soil Conditions: Inorganic Constituents

Table 7 provides a summary of inorganic constituents detected above the laboratory's MDLs in the soil samples collected from across the Site. Two metals (arsenic and manganese) were detected above their respective PALs in multiple soil samples. Arsenic was by far the most common PAL exceedance. Arsenic had a total of 58 PAL exceedances with a maximum detection of 22.1 mg/kg in B7-014-SB-2. Manganese had a total of four PAL exceedances with a maximum detection of 58,700 mg/kg in B7-003-SB-2. The inorganic PAL exceedances are shown on **Figure 5**.

4.1.4. Soil Conditions: Results Summary

Table 5 through **Table 7** provide summaries of the parameters detected in the soil samples submitted for laboratory analysis, and **Figure 5** presents the soil sample results that exceeded the PALs. PAL exceedances in soil within the Baltimore County Property Transfer area were limited to arsenic and manganese. Arsenic was detected above its PAL of 3 mg/kg in 58 soil samples (approximately 88% of the samples analyzed for this constituent) with a maximum detection of 22.1 mg/kg in B7-014-SB-2. Manganese was detected above the PAL of 26,000 mg/kg in four soil samples (approximately 7% of the samples analyzed for this constituent) with a maximum detection of 58,700 mg/kg in B7-003-SB-2. Organic compounds (VOCs, SVOCs, PCBs, and TPH/Oil & Grease) and pesticides were not detected above their respective PALs and are not considered to be significant soil contaminants at the Site.

Lead, PCBs, and TPH/Oil & Grease are subject to special requirements as designated by the agencies: lead results above 10,000 mg/kg are subject to additional delineation (and possible excavation), PCB results above 50 mg/kg are subject to delineation and excavation, and TPH/Oil & Grease results above 6,200 mg/kg should be evaluated for the potential presence and mobility of NAPL in any future development planning. There were no locations where concentrations of lead, PCBs, or TPH/Oil & Grease exceeded any of the specified thresholds. Additionally, no physical evidence of NAPL was observed in any soil cores completed during this investigation.

4.2. VISUAL SLAG FILL DELINEATION

A visual slag delineation investigation was conducted along the perimeter of the former rail yard in the southern portion of the Site to characterize the horizontal extent of surficial slag fill. A total of nine soil borings were completed to 5 feet bgs along five transects in the vicinity of the former rail yard. One planned boring (T1-2) was unable to be completed. Soil boring logs from the nine locations are included in **Appendix B**. The visual delineation results are summarized as follows:

Transect ID	Edge of Rail Yard Observed Slag Interval (ft bgs)	50-foot Step Out Boring Observed Slag Interval (ft bgs)
Transect 1	0 to 0.1	NA
Transect 2	(no slag observed)	(no slag observed)
Transect 3	0 to 2.3	(no slag observed)
Transect 4	0 to 4	0 to 1.2
Transect 5	0 to 4.5	2.6 to 2.7 and 4.1 to 4.2

NA indicates that a soil boring was unable to be completed at this location

The visual delineation investigation determined that slag fill material is largely absent in the soil column (above 5 feet bgs) at a distance of approximately 50 feet from the ostensible edge of the former rail yard. The locations of the visual delineation transect borings are shown on **Figure 4**. Among the soil borings completed directly within the former rail yard (B7-001-SB, B7-002-SB, B7-003-SB, B7-014-SB, B7-015-SB, B7-053-SB, and B7-054-SB), slag aggregate was observed primarily at depths from 0 to 2.5 feet bgs.

4.3. GROUNDWATER CONDITIONS

The analytical results for the detected parameters in groundwater are summarized and compared to the PALs in **Table 8** (Organics) and **Table 9** (Inorganics). The laboratory Certificates of Analysis (including Chains of Custody) and DVRs have been included as electronic attachments. The DVRs contain a glossary of qualifiers for the final flags assigned to individual results in the attached summary tables.

4.3.1. Groundwater Conditions: Organic Compounds

Table 8 provides a summary of VOCs identified in groundwater samples above the laboratory's MDLs. One VOC (chloroform) was identified above its PAL in one sample (SW-047-MWS) with a detection of 6.1 µg/L. The VOC PAL exceedance is shown on **Figure 6**.

Table 8 provides a summary of SVOCs identified in the groundwater samples above the laboratory's MDLs. Similar to the evaluation of soil data, the PALs for relevant PAHs have been adjusted upward based on revised toxicity data published in the USEPA RSL Resident Tapwater

Table. A total of five SVOCs (benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenz[a,h]anthracene, and indeno[1,2,3-c,d]pyrene) were identified above their respective PALs in one groundwater sample (B7-053-PZ) at concentrations of 0.64 µg/L, 0.73 µg/L, 0.8 µg/L, 0.13 µg/L, and 0.6 µg/L, respectively. The SVOC PAL exceedances are shown on **Figure 6**.

Table 8 provides a summary of the TPH/Oil & Grease detections in groundwater at the Site. TPH-GRO and Oil & Grease were not detected above the PAL at any sample locations. TPH-DRO was identified above the PAL in four groundwater locations with a maximum detection of 120 µg/L in SW-046-MWS. Each location was checked for the potential presence of NAPL using an oil-water interface probe prior to sampling. During these checks, NAPL was not detected in any of the groundwater sampling locations. The TPH-DRO PAL exceedances are shown on **Figure 6**.

4.3.2. Groundwater Conditions: Inorganic Constituents

Table 9 provides a summary of inorganic constituents detected above the MDLs in the groundwater samples collected from across the Site. Eight total and/or dissolved metals (aluminum, beryllium, hexavalent chromium, cobalt, iron, lead, manganese, and thallium) were detected above their respective aqueous PALs. The maximum detections for each metal were: 37,800 µg/L (B7-064-PZ), 6.6 µg/L (SW-047-MWS), 5 µg/L (SW-047-MWS), 228 µg/L (SW-046-MWS), 38,300 µg/L (B7-064-PZ), 28 µg/L (B7-064-PZ), 11,700 µg/L (SW-046-MWS), and 4 µg/L (SW-046-MWS), respectively. Beryllium, cobalt, and manganese had exceedances at multiple locations, but the remaining inorganic exceedances were identified at only single locations. The hexavalent chromium exceedance at SW-047-MWS (collected in December 2015) is suspect because the sample was collected for analysis of total hexavalent chromium rather than dissolved hexavalent chromium; USEPA Method 7196 is subject to colorimetric interferences when analyzing unfiltered samples and results for this compound have commonly been impacted by sample color. The inorganic PAL exceedances are shown on **Figure 6**. For simplicity, the figure does not include duplicate exceedances of total and dissolved metals at applicable sample locations. If both total and dissolved concentrations exceeded the PAL for a specific metal, the value for total metals is displayed on the figure.

4.3.3. Groundwater Conditions: Results Summary

Table 8 and **Table 9** provide summaries of the parameters detected in the groundwater samples submitted for laboratory analysis, and **Figure 6** presents the locations and aqueous results that exceeded the PALs. Aqueous PAL exceedances among the groundwater samples collected from the Site consisted of one VOC (chloroform), five SVOCs (benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, dibenz[a,h]anthracene, and indeno[1,2,3-c,d]pyrene), TPH-DRO, and eight total and/or dissolved metals (aluminum, beryllium, hexavalent chromium, cobalt, iron, lead, manganese, and thallium).

Groundwater data were screened to determine whether individual sample results may exceed the USEPA's Vapor Intrusion (VI) Screening Levels (Target Cancer Risk (TCR) of $1E-5$ and Target Hazard Quotient (THQ) of 1) as determined by the Vapor Intrusion Screening Level (VISL) Calculator (<https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-levels-visls>). The PALs specified in the QAPP are based upon drinking water use, which is not a potential exposure pathway for groundwater at the Site.

None of the aqueous results exceeded the individual VI TCR or THQ criteria as specified by the VISL Calculator. Following the initial screening, a cumulative VI risk assessment was also performed for each individual sample location, with the results separated by cancer risk versus non-cancer hazard. All compounds with detections (and corresponding VISLs) were included in the computation of the cumulative cancer risk, and all compounds with detections exceeding 10% of the THQ level were included in the evaluation of non-cancer hazard. None of the cumulative VI cancer risks were greater than $1E-5$, and there were no compounds above the 10% THQ level. The cumulative VI comparisons are provided in **Table 10**.

The presence and absence of groundwater impacts within the Site boundaries have been adequately described. Groundwater is not used on the Tradepoint Atlantic property (and is not proposed to be utilized). There were no concerns related to potential VI risks/hazards at the Site. Based on the relatively low-level analytical results identified during this investigation, there do not appear to be significant ongoing sources of groundwater contamination present.

5.0 DATA USABILITY ASSESSMENT

The approved property-wide QAPP specifies a process for evaluating data usability in the context of meeting project goals. Specifically, the goal of the Phase II Investigation is to determine if potentially hazardous substances or petroleum products (VOCs, SVOCs, PCBs, pesticides, metals, cyanide, or TPH/Oil & Grease) are present in Site media (soil and groundwater) at concentrations that could pose an unacceptable risk to Site receptors. Individual results are compared to the PALs established in the QAPP (i.e., the USEPA RSLs), or based on other direct guidance from the agencies, to identify the presence of PAL exceedances in each environmental medium.

Quality assurance and quality control (QA/QC) samples are collected during the field studies to evaluate field/laboratory variability. A summary of QA/QC samples associated with this investigation has been included as **Appendix F**. The QA/QC tracking log includes the entirety of the Parcel B7 Phase II Investigation, but identifies the samples that were collected outside of the Baltimore County Property Transfer boundary (which are not applicable for this evaluation). The following QA/QC samples were required by the QAPP to support the data validation:

- Trip Blank – at a rate of one per cooler with VOC samples per day
 - Soil – VOCs only
 - Water – VOCs only
- Blind Field Duplicate – at a rate of one per twenty samples
 - Soil – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Oil & Grease, PCBs, hexavalent chromium, and cyanide
 - Water – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Oil & Grease, hexavalent chromium, and cyanide
- Matrix Spike/Matrix Spike Duplicate – at a rate of one per twenty samples
 - Soil – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Oil & Grease, PCBs, and hexavalent chromium
 - Water – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Oil & Grease, and hexavalent chromium
- Field Blank and Equipment Blank – at a rate of one per twenty samples
 - Soil – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Oil & Grease, hexavalent chromium, and cyanide
 - Water – VOCs, SVOCs, Metals, TPH-DRO, TPH-GRO, Oil & Grease, hexavalent chromium, and cyanide

The QA/QC samples were collected and analyzed in accordance with the QAPP Worksheet 12 – Measurement Performance Criteria, QAPP Worksheet 20 – Field Quality Control, and QAPP Worksheet 28 – Analytical Quality Control and Corrective Action.

5.1. DATA VERIFICATION

A verification review was performed on documentation generated during sample collection and analysis. The verification included a review of field log books, field data sheets, and Chains of Custody to ensure that all planned samples were collected, and to ensure consistency with the field methods and decontamination procedures specified in the QAPP Worksheet 21 – Field SOPs and Appendix A of the QAPP. In addition, calibration logs were reviewed to ensure that field equipment was calibrated at the beginning of each day and re-checked as needed. The logs have been provided in **Appendix C** (PID calibration log) and **Appendix D** (multiparameter meter calibration logs). Documentation of the multiparameter meter end of the day calibration check was not recorded on December 11, 2020.

The laboratory deliverables were reviewed to ensure that all records specified in the QAPP as well as necessary signatures and dates are present. Sample receipt records were reviewed to ensure that the sample condition upon receipt was noted, and any missing/broken sample containers (if any) were noted and reported according to plan. The data packages were compared to the Chains of Custody to verify that results were provided for all collected samples. The data package case narratives were reviewed to ensure that all exceptions (if any) are described.

5.2. DATA VALIDATION

USEPA Stage 2B data validation was completed for a representative 30% (minimum) of the environmental sample analyses performed by PACE and ALS and supporting Level IV Data Package information by Environmental Data Quality Inc. (EDQI). The DVRs provided by EDQI have been included as electronic attachments. The 30% data validation requirement was evaluated independently for the soil and groundwater samples collected site-wide during the Parcel B7 Phase II Investigation, Parcel B25 Phase II Investigation, and the Baltimore County Property Transfer Pre-Development Investigation (B7-053-SB through B7-061-SB; B7-064-SB and B7-065-SB). Therefore, each individual dataset meets the validation requirement.

Sample analyses have undergone an analytical quality assurance review to ensure adherence to the required protocols. The Stage 2B review was performed as outlined in “Guide for Labeling Externally Validated Laboratory Analytical Data for Superfund Use”, EPA-540-R-08-005. Results have been validated or qualified according to general guidance provided in “USEPA National Functional Guidelines for Inorganic Superfund Data Review (ISM02.1)”, USEPA October 2013. Region III references this guidance for validation requirements. This document specifies procedures for validating data generated for Contract Laboratory Program (CLP) analyses. The approved property-wide QAPP dated April 5, 2016 and the quality control requirements specified in the methods and associated acceptance criteria were also used to evaluate the non-CLP data.

The PACE-Greensburg (PA) laboratory facility implements quality assurance and reporting requirements through the TNI certification program with the State of Pennsylvania; which is accepted by Maryland. Since late-January 2017, these requirements include the flagging of contaminants with a “B” qualifier when an analyte is detected in an associated laboratory method blank, regardless of the level of the contaminant detected in the sample. A method blank is analyzed at a rate of one blank for each 20 sample analytical batch. The USEPA has previously specified that results flagged with the “B” qualifier do not represent legitimate detections. They have also specified that results flagged with a “JB” qualifier are invalid, and any such results should be revised to display the “B” qualifier only.

Although elevated sample results may be “B” qualified by the laboratory as non-detects (due to low-level blank detections), EDQI corrects any erroneous “B” qualifiers during the data validation procedure to avoid under-reporting analytical detections. EDQI removes the “B” qualifiers for relevant samples according to the guidance given in the table below. Therefore, a result originally flagged with a “B” qualifier in the laboratory certificate may be reported as a legitimate detection without this qualifier. Likewise, a result originally flagged with a “JB” qualifier in the laboratory certificate may be reported as a “J” qualifier if the erroneous “B” qualifier can be eliminated, but would be reported as a “B” qualified non-detect result if the original “B” qualifier is legitimate.

Blank Result	Sample Result	Qualifying Action
Result less than RL	Result less than RL	Result is Qualified "B"
	Result greater than RL	Remove "B"
Result greater than RL	Result less than Blank Result	Result is Qualified "B"
	Result greater than Blank Result	Remove "B"

RL = Reporting Limit

As directed by EDQI, ARM has reviewed all non-validated laboratory reports (those which were not designated to be reviewed by EDQI) and applied the same validation corrections to any relevant “B” or “JB” qualified results. This review of the non-validated data ensures that any elevated detections of parameters, including those which may exceed the PALs, are not mistakenly reported as non-detect values simply because they did not undergo the formal validation procedure by EDQI. ARM has also revised the non-validated results to eliminate any laboratory-specific, non-standardized qualifiers (L2, 6c, ip, 4c, etc.), which are customarily removed by EDQI during the validation procedure.

5.3. DATA USABILITY

The data were evaluated with respect to the quality control elements of precision, bias, representativeness, comparability, completeness, and sensitivity relative to data quality indicators and performance measurement criteria outlined in QAPP Worksheet 12 – Measurement Performance Criteria. The following discussion details deviation from the performance measurement criteria, and the impact on data quality and usability.

The measurement performance criteria of precision and bias were evaluated in the data validation process as described in the DVRs provided as electronic attachments. Where appropriate, potential limitations in the results have been indicated through final data flags. These flags indicate whether particular data points were quantitative estimates, biased high/low, associated with blank contamination, etc. Individual data flags are provided with the results in the detection summary tables. A qualifier code glossary is included with each DVR provided by EDQI. Particular results may have been marked with the “R” flag if the result was deemed to be unreliable and was not included in any further data evaluation. The analytical soil and groundwater results that were rejected during data validation are provided in **Table 11**. A discussion of data completeness (the proportion of valid data) is included below.

Representativeness is a measure of how accurately and precisely the data describe the Site conditions. Representativeness of the samples submitted for analysis was ensured by adherence to standard sampling techniques and protocols, as well as appropriate sample preservation prior to analysis. Sampling was conducted in accordance with the QAPP Worksheet 21 – Field SOPs and Appendix A of the QAPP. Specific Field SOPs applicable to the assessment of representativeness include **Field SOP Numbers 006, 008, 009, 010, 011, 017, and 024**. Review of the field notes and laboratory sample receipt records indicated that sample collection at the Site was representative, with no significant deviations from the SOPs.

Comparability describes the degree of confidence in comparing two sets of data. Comparability is maintained across multiple datasets by the use of consistent sampling and analytical methods across multiple project phases. Comparability of sample results was ensured through the use of approved standard sampling and analysis methods outlined in the QAPP. QA/QC protocols help to maintain the comparability of datasets, and in this case were assessed via blind duplicates, blank samples, and spiked samples, where applicable. No significant deviations from the QAPP were noted in the dataset.

Sensitivity is a determination of whether the analytical methods and quantitation limits will satisfy the requirements of the project. The laboratory reports were reviewed to verify that reporting limits met the quantitation limits for specific analytes provided in QAPP Worksheet #15 – Project Action Limits and Laboratory-Specific Detection/Quantitation Limits. In general, the laboratory reporting limits met the detection and quantitation limits specified in the QAPP.

Completeness is expressed as a ratio of the number of valid data points to the total number of analytical data results. Non-usable (“R” flagged) data results were determined through the data validation process. The approved QAPP specifies that the completeness of data is assessed by professional judgement, but should be greater than or equal to 90%. Data completeness for each compound is provided in **Appendix G**. This evaluation of completeness includes only the representative 30% of sample results which were randomly selected for validation.

The only soil analyte with a completeness ratio below 90% was hexavalent chromium, with a total of 11 rejected results and a completeness ratio of 27%. Sufficient information is available in the groundwater dataset to evaluate the significance of hexavalent chromium at the Site. The only groundwater analyte with a completeness ratio below 90% was 3,3'-dichlorobenzidine, with only one rejected result (the sample collected from SW-047-MWS in December 2015) yielding a completeness ratio of 75%. Overall, the soil and groundwater data can be used as intended, and no significant data gaps were identified.

6.0 FINDINGS AND RECOMMENDATIONS

The objective of this Phase II Investigation was to characterize the nature and extent of contamination at the Site. During the Phase II Investigation, a total of 66 soil samples (from 19 boring locations) and six groundwater samples (from five well/piezometer locations) were collected and analyzed. Historical groundwater data from December 2015 was also incorporated for one monitoring well (SW-047-MWS). The sampling and analysis plan for the parcel was developed to target specific features that represented a potential release of hazardous substances and/or petroleum products to the environment, as well as providing general site coverage.

Soil samples were analyzed for VOCs, SVOCs, TPH-DRO/GRO, Oil & Grease, TAL-Metals, hexavalent chromium, cyanide, PCBs, and/or pesticides in accordance with the requirements of the project-specific soil sampling plan. Groundwater samples were analyzed for VOCs, SVOCs, TPH-DRO/GRO, Oil & Grease, TAL-Dissolved Metals, dissolved hexavalent chromium, and total cyanide. The groundwater samples collected from the permanent wells were also analyzed for total metals. An additional nine soil borings were completed to a maximum depth of 5 feet bgs to visually delineate surficial slag fill along the perimeter of the historical rail yard.

6.1. SOIL

The concentrations of constituents in the soil have been characterized by the Phase II Investigation to provide estimates of exposure point concentrations to support risk assessment.

PCB concentrations are below levels that would warrant delineation and evaluation of a removal remedy (50 mg/kg). Lead concentrations were also below the mandatory delineation threshold (10,000 mg/kg). Additionally, the TPH/Oil & Grease concentrations are below the threshold to be considered for the potential presence of NAPL and proximity to any future proposed utilities (6,200 mg/kg). No physical evidence of NAPL was observed in any soil cores completed during this investigation. No further action is required with respect to PCBs, lead, or TPH/Oil & Grease at the Site. Organic compounds (VOCs, SVOCs, PCBs, and TPH/Oil & Grease) and pesticides were not detected above their respective PALs and are not considered to be significant soil contaminants at the Site.

PAL exceedances in soil within the Baltimore County Property Transfer area were limited to arsenic and manganese. Arsenic was by far the most common PAL exceedance. Arsenic was detected above its PAL of 3 mg/kg in 58 total soil samples analyzed for this constituent with a maximum detection of 22.1 mg/kg in B7-014-SB-2. Manganese was detected above the PAL of 26,000 mg/kg in four soil samples with a maximum detection of 58,700 mg/kg in B7-003-SB-2. All four of the manganese PAL exceedances (and the maximum arsenic PAL exceedance) were identified within the shallow soil samples (top 2 feet) collected from the historical rail yard.

6.2. VISUAL SLAG FILL

The visual delineation investigation determined that slag fill material is largely absent in the soil column (above 5 feet bgs) at a distance of approximately 50 feet from the ostensible edge of the former rail yard. Transect 4 and Transect 5 had minor observations of slag fill present in the borings that were completed 50 feet from the edge of the former rail yard. A summary table of the slag interval observations is provided in Section 4.2, and the soil boring logs from the nine transect borings are included in **Appendix B**. Among the soil borings completed directly within the former rail yard (B7-001-SB, B7-002-SB, B7-003-SB, B7-014-SB, B7-015-SB, B7-053-SB, and B7-054-SB), slag aggregate was observed primarily at depths from 0 to 2.5 feet bgs. As noted above, all four of the manganese PAL exceedances (and the maximum arsenic PAL exceedance) were identified within the shallow soil samples (top 2 feet) collected from the historical rail yard.

6.3. GROUNDWATER

The concentrations of constituents in the groundwater have also been characterized by the Phase II Investigation to provide estimates of exposure point concentrations to support risk assessment.

Exceedances of the PALs in groundwater within the Baltimore County Property Transfer area consisted of one VOC in SW-047-MWS (chloroform detected at 6.1 µg/L), five SVOCs detected in a single groundwater sample B7-053-PZ (benz[a]anthracene at 0.64 µg/L, benzo[a]pyrene at 0.73 µg/L, benzo[b]fluoranthene at 0.8 µg/L, dibenz[a,h]anthracene at 0.13 µg/L, and indeno[1,2,3-c,d]pyrene at 0.6 µg/L), TPH-DRO with exceedances at four locations (with a maximum detection of 120 µg/L at SW-046-MWS), and eight total and/or dissolved metals (aluminum, beryllium, hexavalent chromium, cobalt, iron, lead, manganese, and thallium). The maximum detections for each metal were: 37,800 µg/L (B7-064-PZ), 6.6 µg/L (SW-047-MWS), 5 µg/L (SW-047-MWS), 228 µg/L (SW-046-MWS), 38,300 µg/L (B7-064-PZ), 28 µg/L (B7-064-PZ), 11,700 µg/L (SW-046-MWS), and 4 µg/L (SW-046-MWS), respectively. Beryllium, cobalt, and manganese had exceedances at multiple locations, but the remaining inorganic exceedances were identified at only single locations. The hexavalent chromium PAL exceedance identified at SW-047-MWS (from December 2015) is suspect because the sample was not field filtered; the results for total hexavalent chromium analyzed via USEPA Method 7196 have commonly been impacted by sample color (matrix interferences).

Each groundwater sample collection point was checked for the potential presence of NAPL using an oil-water interface probe prior to sampling. During these checks, NAPL was not detected at any of the groundwater sampling locations. All temporary groundwater sample collection points remaining at the Site will be properly abandoned in accordance with COMAR 26.04.04.34 through 36. Each location will be gauged a final time on the abandonment date using the oil-water interface probe in accordance with MDE guidance.

Groundwater is not used on the Tradepoint Atlantic property (and is not proposed to be utilized); therefore, there is no potential for direct human exposure. If future construction/excavation leads to potential construction worker exposures to groundwater, health and safety plans should be implemented to limit exposure risk. The groundwater data were screened to determine whether any cumulative (or individual) sample results exceeded the USEPA VI TCR (carcinogen) or THQ (non-carcinogen) Screening Levels. None of the individual sample results exceeded the VI TCR or THQ criteria. When the aqueous results were summed by sample location, none of the cumulative VI cancer risks exceeded $1E-5$, and none of the cumulative VI non-cancer HI values exceeded 1. There are no concerns related to potential VI risks/hazards at the Site.

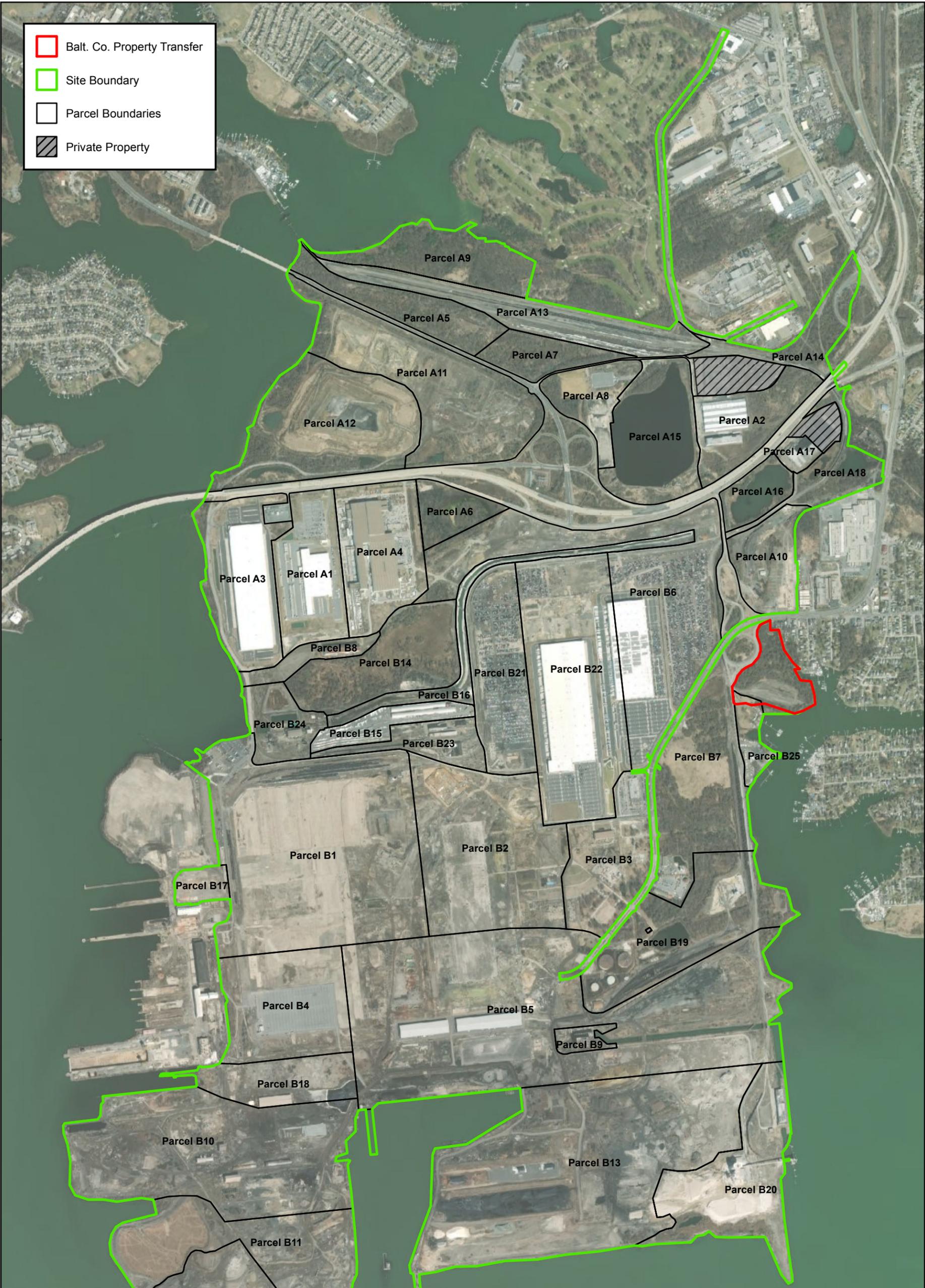
6.4. RECOMMENDATIONS

Sufficient remedial investigation data has been collected to evaluate the nature and extent of possible constituents of concern in the Baltimore County Property Transfer area. The presence and absence of soil and groundwater impacts at the Site have been adequately described and further investigation is not warranted to characterize overall conditions. No further action is recommended at this time. Any future proposed development will be presented in a project-specific Response and Development Work Plan.

7.0 REFERENCES

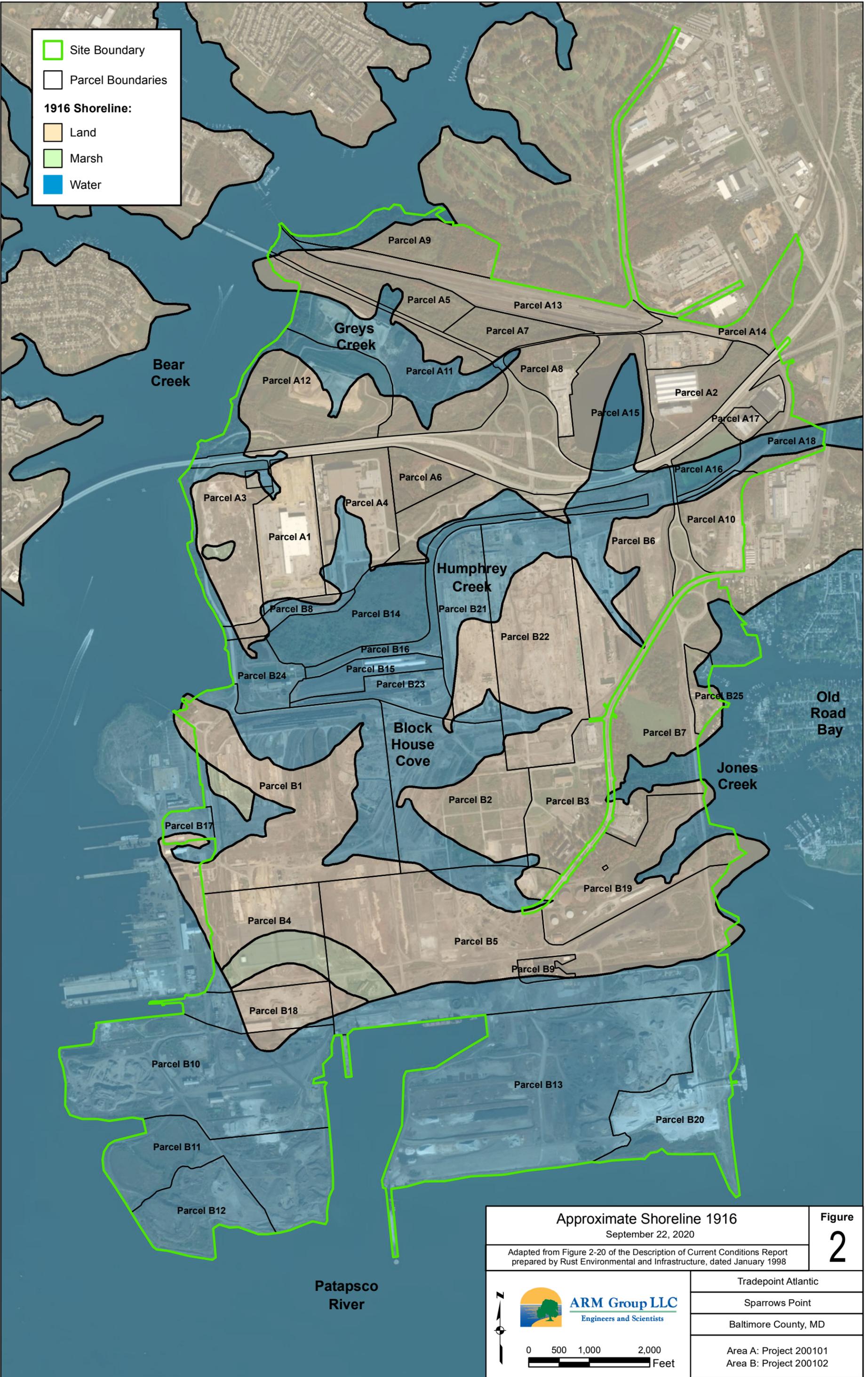
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FIGURES



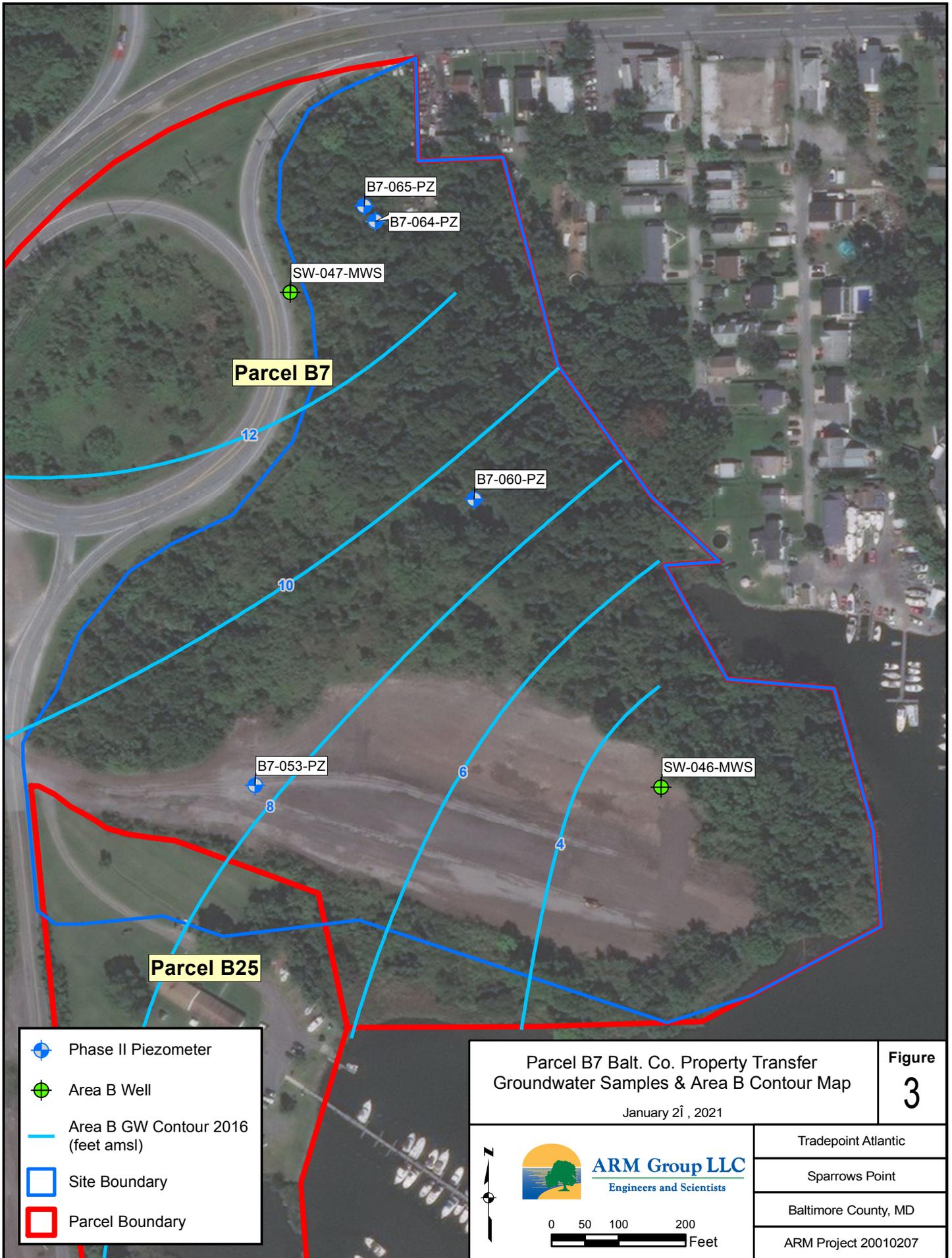
- Balt. Co. Property Transfer
- Site Boundary
- Parcel Boundaries
- Private Property

Tradepoint Atlantic Area A and Area B Parcels January 26, 2021		Figure 1
ARM Group LLC Engineers and Scientists		Tradepoint Atlantic Sparrows Point Baltimore County, MD
 		Area A: Project 200101 Area B: Project 200102



Site Boundary
 Parcel Boundaries
1916 Shoreline:
 Land
 Marsh
 Water

Approximate Shoreline 1916 September 22, 2020		Figure 2
Adapted from Figure 2-20 of the Description of Current Conditions Report prepared by Rust Environmental and Infrastructure, dated January 1998		
	Tradepoint Atlantic	
	Sparrows Point	
	Baltimore County, MD	
Area A: Project 200101 Area B: Project 200102		



-  Phase II Piezometer
-  Area B Well
-  Area B GW Contour 2016 (feet amsl)
-  Site Boundary
-  Parcel Boundary

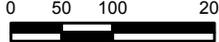
Parcel B7 Balt. Co. Property Transfer
 Groundwater Samples & Area B Contour Map
 January 21, 2021

Figure
3

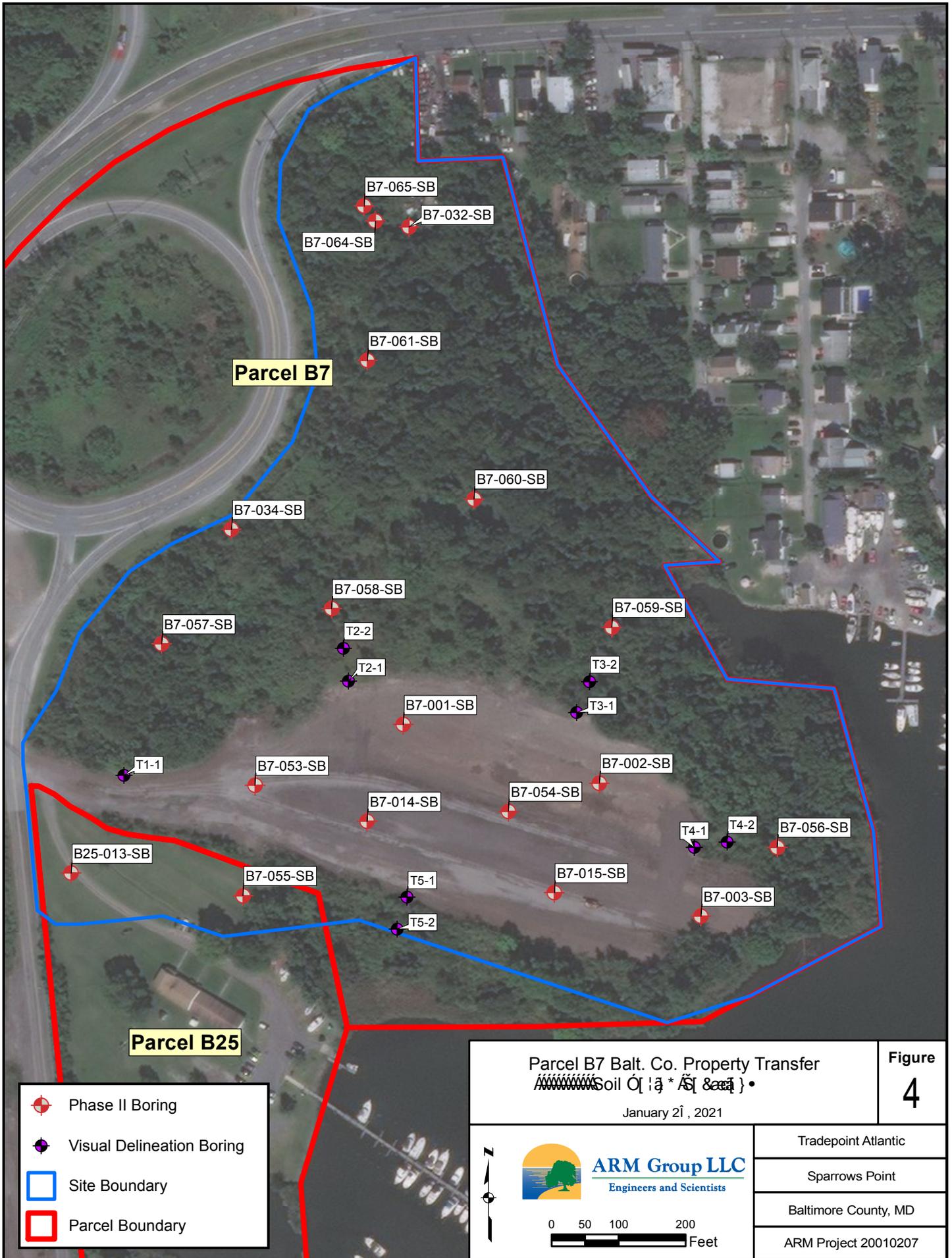




ARM Group LLC
Engineers and Scientists

0 50 100 200
 Feet

Tradepoint Atlantic
Sparrows Point
Baltimore County, MD
ARM Project 20010207



Parcel B7

Parcel B25

-  Phase II Boring
-  Visual Delineation Boring
-  Site Boundary
-  Parcel Boundary

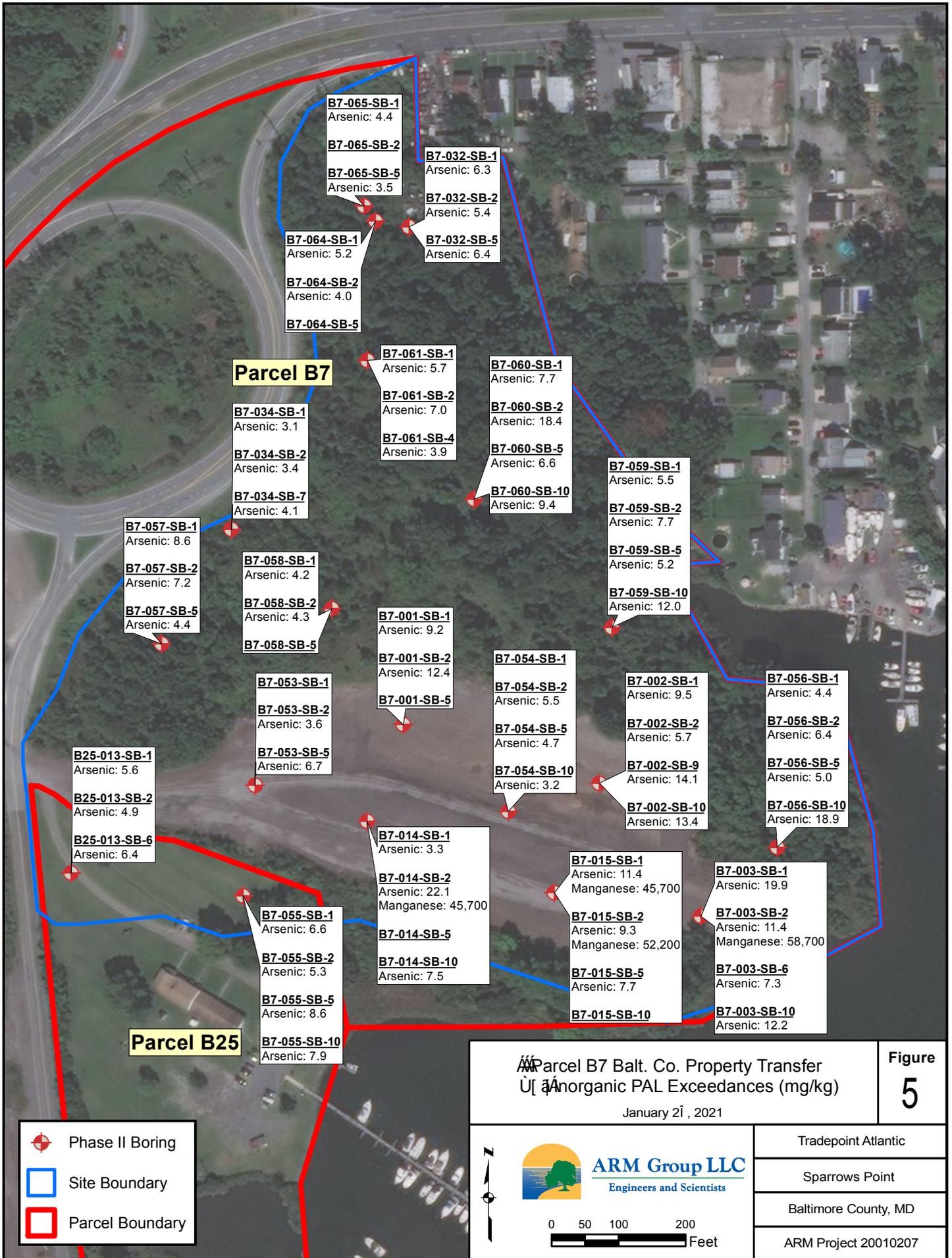
Parcel B7 Balt. Co. Property Transfer
 Soil Quality Assessment

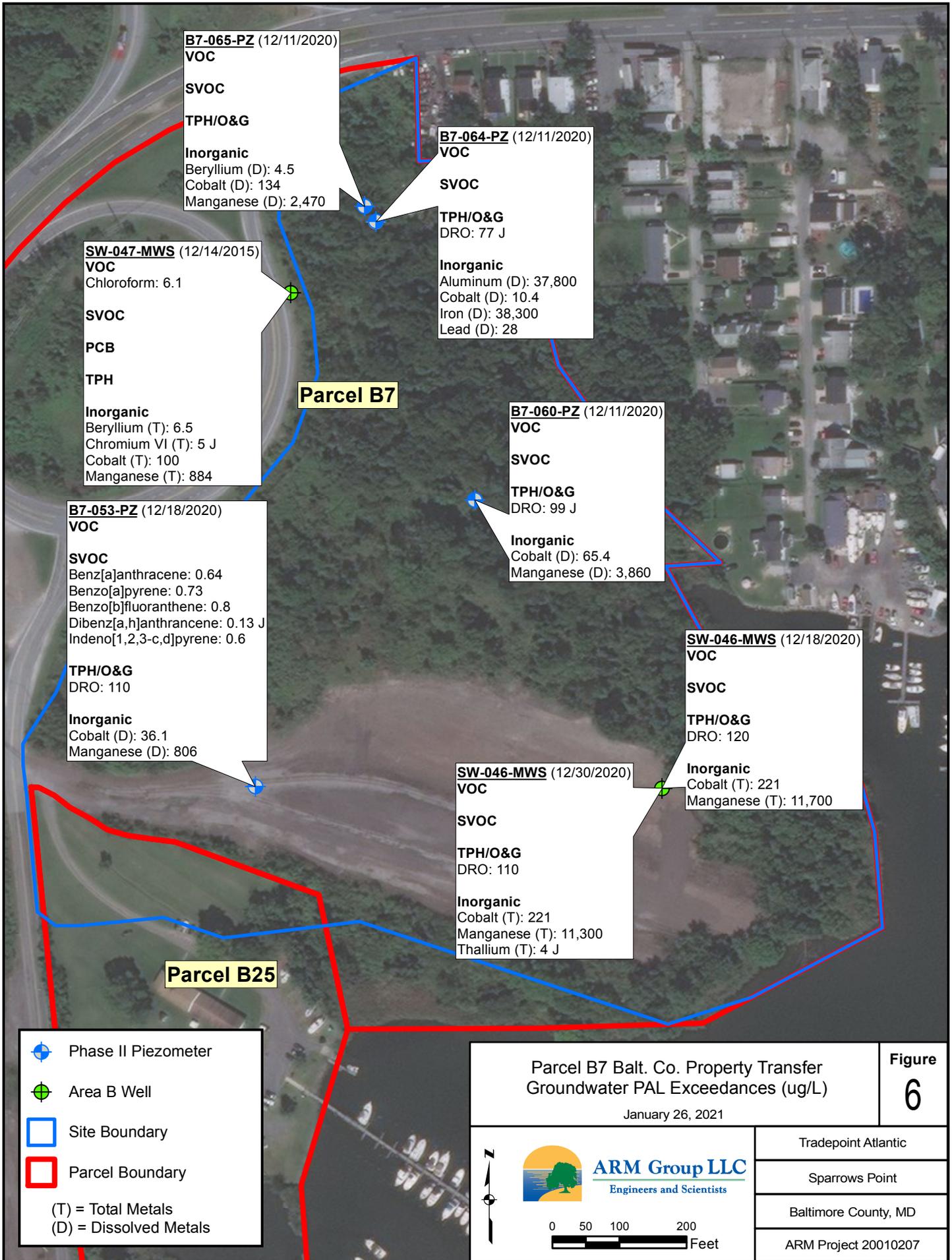
January 21, 2021

Figure 4



Tradepoint Atlantic
Sparrows Point
Baltimore County, MD
ARM Project 20010207





TABLES

**Table 1 - Parcel B7 Baltimore County Property Transfer
Historical Site Drawing Details**

<u>Set Name</u>	<u>Typical Features Shown</u>	<u>Drawing Number</u>	<u>Original Date Drawn</u>	<u>Latest Revision Date</u>
Plant Arrangement	Roads, water bodies, building/structure footprints, electric lines, above-ground pipelines (e.g.: steam, nitrogen, etc.)	5042	<i>Unknown</i>	3/11/1982
		5047	1/17/1966	3/11/1958
Plant Index	Roads, water bodies, demolished buildings/structures, electric lines, above-ground pipelines	5142	<i>Unknown</i>	11/10/2008
		5147	<i>Unknown</i>	11/10/2008
Plant Sewer Lines	Same as above plus trenches, sumps, underground piping (includes pipe materials)	5542	9/11/1959	3/18/1976
		5547	9/11/1959	3/15/1976

**Table 2 - Parcel B7 Baltimore County Property Transfer
Field Shifted Boring Locations**

<u>Location ID</u>	<u>Sample Target</u>	<u>Proposed Location*</u>		<u>Final Location*</u>		<u>Relocation Distance (ft.) & Direction</u>	
		<u>Northing</u>	<u>Easting</u>	<u>Northing</u>	<u>Easting</u>		
B7-032-SB	General Coverage/Historic Golf Course	570,378	1,464,596	570,341	1,464,572	44	SW
B7-057-SB	General Coverage/Historic Golf Course	569,718	1,464,074	569,718	1,464,203	129	E
B7-064-SB	MDE Request	570,344	1,464,636	570,349	1,464,522	114	NW
B7-065-SB	MDE Request	570,420	1,464,558	570,372	1,464,505	91	W

*Reported northings and eastings are not survey accurate. Coordinates are reported in NAD 1983 Maryland State Plane (US feet)

**Table 3 - Parcel B7 Baltimore County Property Transfer
Characterization Results for Solid IDW**

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (mg/L)</u>	<u>Laboratory Flag</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>
B7 IDW 1/6/21	1,1-Dichloroethene	0.017	U	0.7	no
	1,2-Dichloroethane	0.017	U	0.5	no
	1,4-Dichlorobenzene	0.017	U	7.5	no
	2,4,5-Trichlorophenol	0.1	U	400	no
	2,4,6-Trichlorophenol	0.1	U	2	no
	2,4-Dinitrotoluene	0.1	U	0.13	no
	2-Butanone (MEK)	0.035	U	200	no
	2-Methylphenol	0.1	U	200	no
	Arsenic	0.5	U	5	no
	Barium	10	U	100	no
	Benzene	0.017	U	0.5	no
	Cadmium	0.1	U	1	no
	Carbon tetrachloride	0.017	U	0.5	no
	Chlorobenzene	0.017	U	100	no
	Chloroform	0.017	U	6	no
	Chromium	0.5	U	5	no
	Hexachlorobenzene	0.1	U	0.13	no
	Hexachloroethane	0.1	U	3	no
	Lead	0.5	U	5	no
	Mercury	0.02	U	0.2	no
	Nitrobenzene	0.1	U	2	no
	Pentachlorophenol	0.5	U	100	no
	Selenium	0.1	U	1	no
	Silver	0.5	U	5	no
	Tetrachloroethene	0.017	U	0.7	no
	Trichloroethene	0.017	U	0.5	no
	Vinyl chloride	0.017	U	0.2	no

**Table 3 - Parcel B7 Baltimore County Property Transfer
Characterization Results for Solid IDW**

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (mg/L)</u>	<u>Laboratory Flag</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>
B7 WASTE 10/25/19	1,1-Dichloroethene	0.05	U	0.7	no
	1,2-Dichloroethane	0.05	U	0.5	no
	1,4-Dichlorobenzene	0.5	U	7.5	no
	2,4,5-Trichlorophenol	5	U	400	no
	2,4,6-Trichlorophenol	0.1	U	2	no
	2,4-Dinitrotoluene	0.1	U	0.13	no
	2-Butanone (MEK)	0.1	U	200	no
	2-Methylphenol	2	U	200	no
	3&4-Methylphenol(m&p Cresol)	2	U	200	no
	Arsenic	0.025	U	5	no
	Barium	0.35		100	no
	Benzene	0.05	U	0.5	no
	Cadmium	0.015	U	1	no
	Carbon tetrachloride	0.05	U	0.5	no
	Chlorobenzene	0.05	U	100	no
	Chloroform	0.05	U	6	no
	Chromium	0.025	U	5	no
	Hexachlorobenzene	0.1	U	0.13	no
	Hexachloroethane	0.2	U	3	no
	Lead	0.12	U	5	no
	Mercury	0.001	U	0.2	no
	Nitrobenzene	0.1	U	2	no
	Pentachlorophenol	5	U	100	no
	Selenium	0.04	U	1	no
	Silver	0.03	U	5	no
	Tetrachloroethene	0.05	U	0.7	no
	Trichloroethene	0.05	U	0.5	no
	Vinyl chloride	0.05	U	0.2	no

**Table 3 - Parcel B7 Baltimore County Property Transfer
Characterization Results for Solid IDW**

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (mg/L)</u>	<u>Laboratory Flag</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>
B7 waste 6/19/19	1,1-Dichloroethene	0.05	U	0.7	no
	1,2-Dichloroethane	0.05	U	0.5	no
	1,4-Dichlorobenzene	0.5	U	7.5	no
	2,4,5-Trichlorophenol	5	U	400	no
	2,4,6-Trichlorophenol	0.1	U	2	no
	2,4-Dinitrotoluene	0.1	U	0.13	no
	2-Butanone (MEK)	0.1	U	200	no
	2-Methylphenol	2	U	200	no
	3&4-Methylphenol(m&p Cresol)	2	U	200	no
	Arsenic	0.025	U	5	no
	Barium	0.44		100	no
	Benzene	0.05	U	0.5	no
	Cadmium	0.0021	J	1	no
	Carbon tetrachloride	0.05	U	0.5	no
	Chlorobenzene	0.0515	B	100	no
	Chloroform	0.05	U	6	no
	Chromium	0.0019	J	5	no
	Hexachlorobenzene	0.1	U	0.13	no
	Hexachloroethane	0.2	U	3	no
	Lead	0.12	U	5	no
	Mercury	0.001	U	0.2	no
	Nitrobenzene	0.1	U	2	no
	Pentachlorophenol	5	U	100	no
	Selenium	0.04	U	1	no
	Silver	0.03	U	5	no
	Tetrachloroethene	0.05	U	0.7	no
	Trichloroethene	0.05	U	0.5	no
	Vinyl chloride	0.05	U	0.2	no

J: The positive result for this analyte is a quantitative estimate.

B: This analytes was not detected substantially above the associated method blank or field blank.

U: The analyte was not detected in the sample. This numeric value represents the quantitation limit.

TCLP: Toxicity Characteristic Leaching Procedure

**Table 4 - Parcel B7 Baltimore County Property Transfer
Characterization Results for Liquid IDW**

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (mg/L)</u>	<u>Laboratory Flag</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>
B7 Liquid IDW 1/6/21	1,1-Dichloroethene	0.005	U	0.7	no
	1,2-Dichloroethane	0.005	U	0.5	no
	1,4-Dichlorobenzene	0.005	U	7.5	no
	2,4,5-Trichlorophenol	0.001	U	400	no
	2,4,6-Trichlorophenol	0.001	U	2	no
	2,4-Dinitrotoluene	0.001	U	0.13	no
	2-Butanone (MEK)	0.025	U	200	no
	2-Methylphenol	0.001	U	200	no
	4-Methylphenol	0.001	U	200	no
	Arsenic	0.019		5	no
	Benzene	0.001	U	0.5	no
	Cadmium	0.044		1	no
	Carbon tetrachloride	0.005	U	0.5	no
	Chlorobenzene	0.005	U	100	no
	Chloroform	0.005	U	6	no
	Chromium	0.066		5	no
	Hexachlorobenzene	0.001	U	0.13	no
	Hexachloroethane	0.001	U	3	no
	Lead	0.038		5	no
	Mercury	0.001	U	0.2	no
	Nitrobenzene	0.001	U	2	no
	Pentachlorophenol	0.005	U	100	no
	Selenium	0.0062		1	no
	Silver	0.005	U	5	no
	Tetrachloroethene	0.005	U	0.7	no
	Trichloroethene	0.005	U	0.5	no
Vinyl chloride	0.001	U	0.2	no	

**Table 4 - Parcel B7 Baltimore County Property Transfer
Characterization Results for Liquid IDW**

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (mg/L)</u>	<u>Laboratory Flag</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>
WASTE WATER 1247-1281 10/25/19	1,1-Dichloroethene	0.01	U	0.7	no
	1,2-Dichloroethane	0.01	U	0.5	no
	1,4-Dichlorobenzene	0.01	U	7.5	no
	2,4,5-Trichlorophenol	0.0024	U	400	no
	2,4,6-Trichlorophenol	0.00097	U	2	no
	2,4-Dinitrotoluene	0.00097	U	0.13	no
	2-Butanone (MEK)	0.1	U	200	no
	2-Methylphenol	0.0028		200	no
	3&4-Methylphenol(m&p Cresol)	0.0019	U	200	no
	Arsenic	0.0154		5	no
	Barium	0.242		100	no
	Benzene	0.394		0.5	no
	Cadmium	0.0062		1	no
	Carbon tetrachloride	0.01	U	0.5	no
	Chlorobenzene	0.01	U	100	no
	Chloroform	0.01	U	6	no
	Chromium	0.156		5	no
	Hexachlorobenzene	0.00097	U	0.13	no
	Hexachloroethane	0.00097	U	3	no
	Lead	0.129		5	no
	Mercury	0.00051		0.2	no
	Nitrobenzene	0.00097	U	2	no
	Pentachlorophenol	0.0024	U	100	no
	Selenium	0.008	U	1	no
	Silver	0.006	U	5	no
	Tetrachloroethene	0.01	U	0.7	no
	Trichloroethene	0.01	U	0.5	no
	Vinyl chloride	0.01	U	0.2	no

**Table 4 - Parcel B7 Baltimore County Property Transfer
Characterization Results for Liquid IDW**

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (mg/L)</u>	<u>Laboratory Flag</u>	<u>TCLP Limit (mg/L)</u>	<u>TCLP Exceedance</u>
Water Waste 10/31/18	1,1-Dichloroethene	0.001	U	0.7	no
	1,2-Dichloroethane	0.0014		0.5	no
	1,4-Dichlorobenzene	0.001	U	7.5	no
	2,4,5-Trichlorophenol	0.0025	U	400	no
	2,4,6-Trichlorophenol	0.00099	U	2	no
	2,4-Dinitrotoluene	0.00099	U	0.13	no
	2-Butanone (MEK)	0.01	U	200	no
	2-Methylphenol	0.00099	U	200	no
	3&4-Methylphenol(m&p Cresol)	0.00023	J	200	no
	Arsenic	0.005	U	5	no
	Barium	0.0677		100	no
	Benzene	0.0663		0.5	no
	Cadmium	0.003	U	1	no
	Carbon tetrachloride	0.001	U	0.5	no
	Chlorobenzene	0.001	U	100	no
	Chloroform	0.001	U	6	no
	Chromium	0.0249		5	no
	Hexachlorobenzene	0.00099	U	0.13	no
	Hexachloroethane	0.00099	U	3	no
	Lead	0.0103		5	no
	Mercury	0.0002	U	0.2	no
	Nitrobenzene	0.00099	U	2	no
	Pentachlorophenol	0.0025	U	100	no
	Selenium	0.008	U	1	no
	Silver	0.006	U	5	no
	Tetrachloroethene	0.001	U	0.7	no
	Trichloroethene	0.001	U	0.5	no
	Vinyl chloride	0.001	U	0.2	no

J: The positive result for this analyte is a quantitative estimate.

U: The analyte was not detected in the sample. This numeric value represents the quantitation limit.

TCLP: Toxicity Characteristic Leaching Procedure

**Table 5 - Parcel B7 Baltimore County Property Transfer
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B25-013-SB-1*	B25-013-SB-2*	B25-013-SB-6*	B7-001-SB-1*	B7-001-SB-2*	B7-001-SB-5*	B7-002-SB-1*	B7-002-SB-2*	B7-002-SB-9*	B7-003-SB-1*	B7-003-SB-2*	B7-003-SB-6*
			10/17/2018	10/17/2018	10/17/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018
Volatile Organic Compounds														
Acetone	mg/kg	670,000	0.013 U	0.0082 J	0.0094 U	N/A	0.21	N/A	N/A	N/A	0.01 U	0.012 U	0.01 U	0.022
Ethylbenzene	mg/kg	25	0.018	0.0018 J	0.0047 U	N/A	0.0048 U	N/A	N/A	N/A	0.005 U	0.0061 U	0.005 U	0.008 U
Xylenes	mg/kg	2,800	0.13	0.014	0.014 U	N/A	0.014 U	N/A	N/A	N/A	0.015 U	0.018 U	0.015 U	0.024 U
Semi-Volatile Organic Compounds[^]														
2-Methylnaphthalene	mg/kg	3,000	0.0049 J	0.0078 U	0.0079 U	0.019	0.028	0.0076 U	0.046	0.0073 U	0.0084 U	0.0092	0.06	0.028
Acenaphthene	mg/kg	45,000	0.008 U	0.0078 U	0.0079 U	0.01	0.041	0.0076 U	0.031	0.0073 U	0.0084 U	0.0041 J	0.048	0.039
Acenaphthylene	mg/kg	45,000	0.0016 J	0.0078 U	0.0079 U	0.0063 J	0.027	0.0076 U	0.0098	0.0073 U	0.0084 U	0.014	0.49	0.053
Anthracene	mg/kg	230,000	0.0012 J	0.0078 U	0.0079 U	0.014	0.13	0.0076 U	0.039	0.0073 U	0.0084 U	0.013	0.66	0.13
Benz[a]anthracene	mg/kg	21	0.0069 J	0.0018 J	0.0079 U	0.075	0.28	0.0076 U	0.22	0.0073 U	0.0084 U	0.06	2	0.24
Benzaldehyde	mg/kg	120,000	0.078 U	0.077 U	0.077 U	0.072 U	0.027 J	0.075 U	0.071 U	0.073 U	0.083 U	0.073 U	0.74 U	0.08 U
Benzo[a]pyrene	mg/kg	2.1	0.007 J	0.0011 J	0.0079 U	0.098	0.24	0.0076 U	0.34	0.0073 U	0.0084 U	0.077	1.4	0.2
Benzo[b]fluoranthene	mg/kg	21	0.014	0.002 J	0.0079 U	0.21	0.46	0.0076 U	0.49	0.0073 U	0.0084 U	0.13	2.2	0.28
Benzo[g,h,i]perylene	mg/kg		0.0052 J	0.0078 U	0.0079 U	0.054	0.099	0.0076 U	0.17	0.0073 U	0.0084 U	0.047	0.47	0.054
Benzo[k]fluoranthene	mg/kg	210	0.013	0.0019 J	0.0079 U	0.19	0.14	0.0076 U	0.16	0.0073 U	0.0084 U	0.05	0.89	0.12
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.078 U	0.077 U	0.077 U	0.03 J	0.093	0.075 U	0.071 U	0.073 U	0.083 U	0.073 U	0.74 U	0.08 U
Caprolactam	mg/kg	400,000	0.2 U	0.19 U	0.19 U	0.18 U	0.19 U	0.19 U	0.18 U	0.18 U	0.21 U	0.18 U	1.9 U	0.2 U
Carbazole	mg/kg		0.078 U	0.077 U	0.077 U	0.072 U	0.075 U	0.075 U	0.02 J	0.073 U	0.083 U	0.073 U	0.74 U	0.08 U
Chrysene	mg/kg	2,100	0.0077 J	0.0009 J	0.0079 U	0.098	0.31	0.0076 U	0.25	0.0073 U	0.0084 U	0.08	1.4	0.22
Dibenz[a,h]anthracene	mg/kg	2.1	0.008 U	0.0078 U	0.0079 U	0.021	0.045	0.0076 U	0.068	0.0073 U	0.0084 U	0.019	0.22	0.026
Di-n-butylphthalate	mg/kg	82,000	0.078 U	0.077 U	0.077 U	0.072 U	0.031 J	0.075 U	0.071 U	0.073 U	0.083 U	0.073 U	0.74 U	0.08 U
Di-n-octylphthalate	mg/kg	8,200	0.078 U	0.077 U	0.077 U	0.057 J	0.059 J	0.056 J	0.057 J	0.054 J	0.062 J	0.055 J	0.74 U	0.08 U
Fluoranthene	mg/kg	30,000	0.012	0.0017 J	0.0079 U	0.079	0.33	0.0076 U	0.22	0.0073 U	0.0084 U	0.06	4.7	0.81
Fluorene	mg/kg	30,000	0.008 U	0.0078 U	0.0079 U	0.0036 J	0.024	0.0076 U	0.01	0.0073 U	0.0084 U	0.002 J	0.25	0.035
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.0045 J	0.0078 U	0.0079 U	0.062	0.12	0.0076 U	0.2	0.0073 U	0.0084 U	0.053	0.61	0.07
Naphthalene	mg/kg	8.6	0.0098	0.0078 U	0.0079 U	0.022	0.017	0.0076 U	0.061	0.0073 U	0.0084 U	0.024	0.22	0.062
Phenanthrene	mg/kg		0.0063 J	0.00086 J	0.0079 U	0.065	0.26	0.0012 J	0.15	0.0073 U	0.0084 U	0.034	2.9	0.18
Pyrene	mg/kg	23,000	0.01	0.0017 J	0.0079 U	0.069	0.25	0.0076 U	0.2	0.0073 U	0.0084 U	0.051	3.6	0.55
PCBs														
Aroclor 1248	mg/kg	0.94	0.02 U	N/A	N/A	0.045	N/A	N/A	0.027	N/A	N/A	0.018 U	N/A	N/A
Aroclor 1254	mg/kg	0.97	0.02 U	N/A	N/A	0.019 U	N/A	N/A	0.018 U	N/A	N/A	0.13	N/A	N/A
Aroclor 1260	mg/kg	0.99	0.02 U	N/A	N/A	0.064	N/A	N/A	0.058	N/A	N/A	0.018 U	N/A	N/A
Aroclor 1268	mg/kg		0.014 J	N/A	N/A	0.019 U	N/A	N/A	0.044	N/A	N/A	0.032	N/A	N/A
PCBs (total)	mg/kg	0.97	0.18 U	N/A	N/A	0.11 J	N/A	N/A	0.13 J	N/A	N/A	0.16 J	N/A	N/A
TPH/Oil & Grease														
Diesel Range Organics	mg/kg	6,200	17.4	5.4 J	7.8 U	42.9	42.8	7.6 U	76.8	7.4 U	8.5 U	16.4	55.6	84.6
Gasoline Range Organics	mg/kg	6,200	4 J	11.5 U	9.8 U	13 U	12.2 U	12.5 U	10.8 U	10.1 U	10.7 U	11.9 U	14 U	10.1 U
Oil & Grease	mg/kg	6,200	770	527	557	184	280	369	288	424	467	248	526	906

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

[^]PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method blank or field blank.

**Table 5 - Parcel B7 Baltimore County Property Transfer
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B7-014-SB-1*	B7-014-SB-2*	B7-014-SB-5*	B7-014-SB-10*	B7-015-SB-1*	B7-015-SB-2*	B7-015-SB-5*	B7-015-SB-10*	B7-032-SB-1*	B7-032-SB-2*	B7-032-SB-5*	B7-034-SB-1*
			10/1/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018	12/21/2020	12/21/2020
Volatile Organic Compounds														
Acetone	mg/kg	670,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	mg/kg	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	mg/kg	2,800	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Semi-Volatile Organic Compounds[^]														
2-Methylnaphthalene	mg/kg	3,000	0.019	0.0023 J	0.0079 U	0.0085 U	0.008	0.0018 J	0.008 U	0.0077 U	0.005 J	0.0094	0.0084 U	0.0032 J
Acenaphthene	mg/kg	45,000	0.0099	0.00094 J	0.0079 U	0.0085 U	0.0014 J	0.0075 U	0.008 U	0.0077 U	0.0013 J	0.0022 J	0.0084 U	0.0013 J
Acenaphthylene	mg/kg	45,000	0.011	0.0044 J	0.0079 U	0.0085 U	0.019	0.0039 J	0.008 U	0.0077 U	0.0024 J	0.0056 J	0.0084 U	0.0066 J
Anthracene	mg/kg	230,000	0.017	0.004 J	0.0079 U	0.0085 U	0.022	0.0097	0.008 U	0.0077 U	0.0035 J	0.0097	0.0084 U	0.0087
Benz[a]anthracene	mg/kg	21	0.08	0.019	0.0012 J	0.0085 U	0.088	0.034	0.008 U	0.0077 U	0.019	0.043	0.0084 U	0.032
Benzaldehyde	mg/kg	120,000	0.074 U	0.072 U	0.077 U	0.085 U	0.072 U	0.073 U	0.08 U	0.076 U	0.82 U	0.079 U	0.083 U	0.081 U
Benzo[a]pyrene	mg/kg	2.1	0.11	0.019	0.0079 U	0.0085 U	0.078	0.021	0.008 U	0.0077 U	0.024	0.047	0.0084 U	0.026
Benzo[b]fluoranthene	mg/kg	21	0.14	0.042	0.0012 J	0.0085 U	0.14	0.039	0.008 U	0.0077 U	0.061	0.11	0.0084 U	0.039
Benzo[g,h,i]perylene	mg/kg		0.1	0.015	0.0079 U	0.0085 U	0.059	0.015	0.008 U	0.0077 U	0.011	0.01	0.0084 U	0.0089
Benzo[k]fluoranthene	mg/kg	210	0.059	0.038	0.0079 U	0.0085 U	0.056	0.014	0.008 U	0.0077 U	0.055	0.096	0.0084 U	0.016
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.074 U	0.072 U	0.077 U	0.085 U	0.072 U	0.073 U	0.08 U	0.076 U	0.23 J	0.02 J	0.025 J	0.081 U
Caprolactam	mg/kg	400,000	0.18 U	0.18 U	0.19 U	0.21 U	0.18 U	0.18 U	0.2 U	0.19 U	2 U	0.2 U	0.028 J	0.2 U
Carbazole	mg/kg		0.074 U	0.072 U	0.077 U	0.085 U	0.072 U	0.073 U	0.08 U	0.076 U	0.82 U	0.079 U	0.083 U	0.081 U
Chrysene	mg/kg	2,100	0.097	0.021	0.0079 U	0.0085 U	0.094	0.038	0.008 U	0.0077 U	0.026	0.051	0.0084 U	0.03
Dibenz[a,h]anthracene	mg/kg	2.1	0.029	0.0039 J	0.0079 U	0.0085 U	0.018	0.0056 J	0.008 U	0.0077 U	0.0036 J	0.0044 J	0.0084 U	0.0032 J
Di-n-butylphthalate	mg/kg	82,000	0.074 U	0.072 U	0.077 U	0.085 U	0.072 U	0.073 U	0.08 U	0.076 U	0.82 U	0.026 J	0.048 J	0.081 U
Di-n-octylphthalate	mg/kg	8,200	0.056 B	0.054 B	0.058 J	0.063 J	0.055 J	0.056 J	0.06 J	0.057 J	0.82 U	0.079 U	0.083 U	0.059 J
Fluoranthene	mg/kg	30,000	0.11	0.03	0.0079 U	0.0085 U	0.14	0.049	0.008 U	0.0077 U	0.027	0.087	0.0084 U	0.05
Fluorene	mg/kg	30,000	0.0057 J	0.00069 J	0.0079 U	0.0085 U	0.0025 J	0.00084 J	0.008 U	0.0077 U	0.0014 J	0.0034 J	0.0084 U	0.0014 J
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.09	0.012	0.0079 U	0.0085 U	0.051	0.016	0.008 U	0.0077 U	0.0094	0.011	0.0084 U	0.0098
Naphthalene	mg/kg	8.6	0.031	0.0046 J	0.0079 U	0.0081 J	0.013	0.004 J	0.008 U	0.0077 U	0.0067 J	0.0066 J	0.0029 J	0.0032 J
Phenanthrene	mg/kg		0.063	0.011	0.0079 U	0.0085 U	0.041	0.027	0.008 U	0.0077 U	0.013	0.059	0.0084 U	0.03
Pyrene	mg/kg	23,000	0.091	0.026	0.0079 U	0.0085 U	0.13	0.043	0.008 U	0.0077 U	0.027	0.079	0.0084 U	0.05
PCBs														
Aroclor 1248	mg/kg	0.94	0.019 U	0.018 U	0.019 U	0.022 U	0.018 U	0.018 U	0.02 U	0.019 U	0.21 U	N/A	N/A	0.02 U
Aroclor 1254	mg/kg	0.97	0.089	0.018 U	0.019 U	0.022 U	0.018 U	0.018 U	0.02 U	0.019 U	0.21 U	N/A	N/A	0.02 U
Aroclor 1260	mg/kg	0.99	0.019 U	0.018 U	0.019 U	0.022 U	0.018 U	0.018 U	0.02 U	0.019 U	0.21 U	N/A	N/A	0.02 U
Aroclor 1268	mg/kg		0.019 U	0.018 U	0.019 U	0.022 U	0.018 U	0.018 U	0.02 U	0.019 U	0.21 U	N/A	N/A	0.02 U
PCBs (total)	mg/kg	0.97	0.089 J	0.16 U	0.17 U	0.19 U	0.16 U	0.17 U	0.18 U	0.18 U	0.21 U	N/A	N/A	0.18 U
TPH/Oil & Grease														
Diesel Range Organics	mg/kg	6,200	15.7	7.5	7.9 U	8.5 U	6.2 J	7.5	8.1 U	7.8 U	195	28.8	11.7 J	9.8
Gasoline Range Organics	mg/kg	6,200	13.4 U	12.6 U	10.1 U	11.8 U	16.1 U	11.4 U	9.8 U	9.5 U	15 U	13.4 U	12.4 U	10.6 U
Oil & Grease	mg/kg	6,200	916	325	570	768	279	299	797	493	1,090	315 J	500 U	364

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

[^]PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method blank or field blank.

**Table 5 - Parcel B7 Baltimore County Property Transfer
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B7-034-SB-2*	B7-034-SB-7*	B7-053-SB-1	B7-053-SB-2	B7-053-SB-5	B7-054-SB-1	B7-054-SB-2	B7-054-SB-5	B7-055-SB-1*	B7-055-SB-2*	B7-055-SB-5*	B7-056-SB-1
			10/2/2018	10/2/2018	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/8/2020	12/8/2020	12/8/2020
Volatile Organic Compounds														
Acetone	mg/kg	670,000	N/A	0.0088 U	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	mg/kg	25	N/A	0.0044 U	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	mg/kg	2,800	N/A	0.013 U	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Semi-Volatile Organic Compounds^														
2-Methylnaphthalene	mg/kg	3,000	0.0023 J	0.0077 U	0.0069 J	0.0021 J	0.0081 U	0.0016 J	0.0029 J	0.012	0.0023 J	0.0018 J	0.0085 U	0.024
Acenaphthene	mg/kg	45,000	0.0078 U	0.0077 U	0.007 J	0.0077 U	0.0081 U	0.0017 J	0.002 J	0.0012 J	0.0083 U	0.0081 U	0.0085 U	0.0087
Acenaphthylene	mg/kg	45,000	0.0049 J	0.0077 U	0.0076	0.002 J	0.0081 U	0.047	0.0025 J	0.0028 J	0.0027 J	0.0079 J	0.0085 U	0.31
Anthracene	mg/kg	230,000	0.0033 J	0.0077 U	0.011	0.0032 J	0.0081 U	0.027	0.0046 J	0.0031 J	0.0016 J	0.0021 J	0.0085 U	0.098
Benz[a]anthracene	mg/kg	21	0.015	0.0077 U	0.038	0.013	0.0081 U	0.073	0.018	0.011	0.01	0.0096	0.0085 U	0.3
Benzaldehyde	mg/kg	120,000	0.078 U	0.076 U	0.071 U	0.077 U	0.081 U	0.071 U	0.079 U	0.08 U	0.081 U	0.08 U	0.084 U	0.078 U
Benzo[a]pyrene	mg/kg	2.1	0.014	0.0077 U	0.045	0.013	0.0081 U	0.088	0.018	0.012	0.013	0.02	0.0085 U	0.68
Benzo[b]fluoranthene	mg/kg	21	0.028	0.0077 U	0.081	0.026	0.0081 U	0.24	0.032	0.023	0.021	0.032	0.0085 U	1.3
Benzo[g,h,i]perylene	mg/kg		0.005 J	0.0077 U	0.034	0.0092	0.0081 U	0.17	0.011	0.0086	0.0096	0.026	0.0085 U	0.22
Benzo[k]fluoranthene	mg/kg	210	0.026	0.0077 U	0.08	0.026	0.0081 U	0.23 J	0.032	0.023	0.021	0.032	0.0085 U	1.3
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.078 U	0.076 U	0.035 B	0.041 B	0.037 B	0.028 B	0.041 B	0.038 B	0.081 U	0.08 U	0.084 U	0.032 B
Caprolactam	mg/kg	400,000	0.19 U	0.19 U	0.18 U	0.19 U	0.2 U	0.18 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U
Carbazole	mg/kg		0.078 U	0.076 U	0.071 U	0.077 U	0.081 U	0.071 U	0.079 U	0.08 U	0.081 U	0.08 U	0.084 U	0.078 U
Chrysene	mg/kg	2,100	0.013	0.0077 U	0.041	0.013	0.0081 U	0.11	0.019	0.013	0.011	0.011	0.0085 U	0.33
Dibenz[a,h]anthracene	mg/kg	2.1	0.0017 J	0.0077 U	0.0089	0.0034 J	0.0081 U	0.041	0.0041 J	0.003 J	0.0035 J	0.0074 J	0.0085 U	0.1
Di-n-butylphthalate	mg/kg	82,000	0.078 U	0.076 U	0.045 B	0.06 B	0.051 B	0.037 B	0.046 B	0.048 B	0.042 J	0.053 J	0.034 J	0.04 B
Di-n-octylphthalate	mg/kg	8,200	0.058 J	0.057 J	0.071 U	0.077 U	0.081 U	0.071 U	0.079 U	0.08 U	0.081 U	0.08 U	0.084 U	0.078 UJ
Fluoranthene	mg/kg	30,000	0.023	0.0077 U	0.066	0.02	0.0081 U	0.1	0.036	0.02	0.013	0.011	0.0085 U	0.48
Fluorene	mg/kg	30,000	0.0078 U	0.0077 U	0.0061 J	0.0013 J	0.0081 U	0.0025 J	0.0021 J	0.0028 J	0.0083 U	0.0081 U	0.0085 U	0.023
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.0053 J	0.0077 U	0.031	0.0084	0.0081 U	0.14	0.011	0.0079 J	0.0084	0.022	0.0085 U	0.26
Naphthalene	mg/kg	8.6	0.0055 J	0.0077 U	0.011	0.0035 J	0.0081 U	0.007 J	0.0048 J	0.0068 J	0.0027 J	0.0044 J	0.0085 U	0.057
Phenanthrene	mg/kg		0.0098	0.0077 U	0.029	0.0081	0.0081 U	0.021	0.022	0.0088	0.0062 J	0.005 J	0.0085 U	0.19
Pyrene	mg/kg	23,000	0.019	0.0077 U	0.061	0.018	0.0081 U	0.13	0.033	0.019	0.013	0.0096	0.0085 U	0.44
PCBs														
Aroclor 1248	mg/kg	0.94	N/A	N/A	0.092 U	N/A	N/A	0.089 U	N/A	N/A	0.021 U	N/A	N/A	0.098 U
Aroclor 1254	mg/kg	0.97	N/A	N/A	0.092 U	N/A	N/A	0.089 U	N/A	N/A	0.021 U	N/A	N/A	0.098 U
Aroclor 1260	mg/kg	0.99	N/A	N/A	0.092 U	N/A	N/A	0.089 U	N/A	N/A	0.021 U	N/A	N/A	0.098 U
Aroclor 1268	mg/kg		N/A	N/A	0.092 U	N/A	N/A	0.089 U	N/A	N/A	0.021 U	N/A	N/A	0.098 U
PCBs (total)	mg/kg	0.97	N/A	N/A	0.092 U	N/A	N/A	0.089 U	N/A	N/A	0.021 U	N/A	N/A	0.098 U
TPH/Oil & Grease														
Diesel Range Organics	mg/kg	6,200	5.8 J	7.9 U	16.3	64.9	16.4 U	221	20.5	49.9	12.4 J	16 U	16.5 U	60.7
Gasoline Range Organics	mg/kg	6,200	11.9 U	8.9 U	11.8 U	9.4 U	10.1 U	8.2 U	9.9 U	10.3 U	12.2 U	8.9 U	11.6 U	10 U
Oil & Grease	mg/kg	6,200	378	325	219 U	314	495 U	189 J	224 J	492 U	500 U	492 U	504 U	226 J

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

^PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method blank or field blank.

**Table 5 - Parcel B7 Baltimore County Property Transfer
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B7-056-SB-2	B7-056-SB-5	B7-057-SB-1*	B7-057-SB-2*	B7-057-SB-5*	B7-058-SB-1	B7-058-SB-2	B7-058-SB-5	B7-059-SB-1	B7-059-SB-2	B7-059-SB-5	B7-060-SB-1*
			12/7/2020	12/7/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020
Volatile Organic Compounds														
Acetone	mg/kg	670,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	mg/kg	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	mg/kg	2,800	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Semi-Volatile Organic Compounds^														
2-Methylnaphthalene	mg/kg	3,000	0.0078	0.0075 U	0.057	0.038	0.019	0.0027 J	0.0082 U	0.0078 U	0.008 U	0.008 J	0.008 U	0.079
Acenaphthene	mg/kg	45,000	0.0011 J	0.0075 U	0.069	0.011	0.0068 J	0.0016 J	0.0082 U	0.0078 U	0.008 U	0.0022 J	0.008 U	0.032
Acenaphthylene	mg/kg	45,000	0.023	0.0021 J	0.2	0.19	0.14	0.014	0.0082 U	0.0078 U	0.0011 J	0.0075 J	0.008 U	0.25
Anthracene	mg/kg	230,000	0.011	0.002 J	0.38	0.14	0.055	0.0068 J	0.0082 U	0.0078 U	0.00078 J	0.017	0.008 U	0.17
Benz[a]anthracene	mg/kg	21	0.037	0.016	0.95	0.66	0.29	0.048	0.0082 U	0.0078 U	0.0033 J	0.038	0.008 U	0.78
Benzaldehyde	mg/kg	120,000	1.5 U	0.074 U	0.077 U	0.087 U	0.079 U	0.078 U	0.08 U	0.078 U	0.079 U	0.092 U	0.08 U	0.85 U
Benzo[a]pyrene	mg/kg	2.1	0.059	0.018	0.81	0.8	0.44	0.05	0.0082 U	0.0078 U	0.0032 J	0.037	0.008 U	0.91
Benzo[b]fluoranthene	mg/kg	21	0.11	0.029	1.5	1.5	0.77	0.096	0.0082 U	0.0078 U	0.0057 J	0.062	0.008 U	1.5
Benzo[g,h,i]perylene	mg/kg		0.041	0.01	0.35	0.37	0.25	0.024	0.0082 U	0.0078 U	0.002 J	0.016	0.008 U	0.58
Benzo[k]fluoranthene	mg/kg	210	0.11	0.029	1.3	1.3	0.7	0.095	0.0082 U	0.0078 U	0.0057 J	0.062	0.008 U	1.5
bis(2-Ethylhexyl)phthalate	mg/kg	160	1.5 U	0.036 B	0.077 U	0.087 U	0.079 U	0.042 B	0.032 B	0.023 B	0.035 B	0.044 B	0.033 B	0.85 U
Caprolactam	mg/kg	400,000	3.8 U	0.19 U	0.19 U	0.22 U	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.23 U	0.2 U	2.1 U
Carbazole	mg/kg		1.5 U	0.074 U	0.043 J	0.036 J	0.079 U	0.078 U	0.08 U	0.078 U	0.079 U	0.092 U	0.08 U	0.85 U
Chrysene	mg/kg	2,100	0.042	0.015	0.88	0.67	0.32	0.061	0.0082 U	0.0078 U	0.003 J	0.038	0.008 U	0.77
Dibenz[a,h]anthracene	mg/kg	2.1	0.014	0.0031 J	0.13	0.14	0.085	0.0097	0.0082 U	0.0078 U	0.008 U	0.0072 J	0.008 U	0.22
Di-n-butylphthalate	mg/kg	82,000	1.5 U	0.042 B	0.043 J	0.043 J	0.036 J	0.049 B	0.036 B	0.03 B	0.042 B	0.055 B	0.04 B	0.85 U
Di-n-ocetylphthalate	mg/kg	8,200	1.5 U	0.074 U	0.077 U	0.087 U	0.079 U	0.078 UJ	0.08 U	0.078 U	0.079 U	0.092 U	0.08 U	0.85 U
Fluoranthene	mg/kg	30,000	0.086	0.025	2.1	0.99	0.34	0.15	0.0082 U	0.0078 U	0.0043 J	0.072	0.008 U	1.3
Fluorene	mg/kg	30,000	0.0038 J	0.0075 U	0.097	0.021	0.011	0.0058 J	0.0082 U	0.0078 U	0.008 U	0.0027 J	0.008 U	0.038
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.04	0.0096	0.36	0.38	0.25	0.024	0.0082 U	0.0078 U	0.002 J	0.018	0.008 U	0.62
Naphthalene	mg/kg	8.6	0.016	0.0029 J	0.16	0.25	0.19	0.0045 J	0.0082 U	0.0078 U	0.0034 J	0.038	0.008 U	0.64
Phenanthrene	mg/kg		0.031	0.0064 J	1.1	0.32	0.1	0.11	0.0082 U	0.0078 U	0.0018 J	0.033	0.00072 J	0.54
Pyrene	mg/kg	23,000	0.075	0.024	1.7	0.84	0.31	0.11	0.0082 U	0.0078 U	0.0037 J	0.056	0.008 U	0.95
PCBs														
Aroclor 1248	mg/kg	0.94	N/A	N/A	0.097 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A	0.11 U
Aroclor 1254	mg/kg	0.97	N/A	N/A	0.097 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A	0.11 U
Aroclor 1260	mg/kg	0.99	N/A	N/A	0.097 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A	0.11 U
Aroclor 1268	mg/kg		N/A	N/A	0.097 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A	0.11 U
PCBs (total)	mg/kg	0.97	N/A	N/A	0.097 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A	0.11 U
TPH/Oil & Grease														
Diesel Range Organics	mg/kg	6,200	44.8	13.2 B	772	54.4	30.3	19	12.2 B	10.4 B	20.3	28.2	10.4 B	52.7
Gasoline Range Organics	mg/kg	6,200	9.5 U	9 U	11.3 U	13.2 U	11.8 U	10.5 U	10.5 U	9.5 U	10.4 U	11.7 U	10.5 U	12 U
Oil & Grease	mg/kg	6,200	464 U	226 U	483 U	534 U	243 J	480 U	247 U	235 U	482 U	550 U	243 U	233 J

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

^PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method blank or field blank.

**Table 5 - Parcel B7 Baltimore County Property Transfer
Summary of Organics Detected in Soil**

Parameter	Units	PAL	B7-060-SB-2*	B7-060-SB-5*	B7-061-SB-1*	B7-061-SB-2*	B7-061-SB-4*	B7-064-SB-1*	B7-064-SB-2*	B7-064-SB-5*	B7-065-SB-1*	B7-065-SB-2*	B7-065-SB-5*
			12/8/2020	12/8/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Volatile Organic Compounds													
Acetone	mg/kg	670,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	mg/kg	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes	mg/kg	2,800	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Semi-Volatile Organic Compounds[^]													
2-Methylnaphthalene	mg/kg	3,000	0.037	0.0016 J	0.008 U	0.008 U	0.0079 U	0.0078 U	0.0078 U	0.0079 U	0.008 U	0.0084 U	0.0022 J
Acenaphthene	mg/kg	45,000	0.041	0.0077 U	0.008 U	0.008 U	0.0079 U	0.0015 J	0.0078 U	0.0079 U	0.00075 J	0.0084 U	0.0013 J
Acenaphthylene	mg/kg	45,000	0.091	0.0011 J	0.008 U	0.008 U	0.0079 U	0.0022 J	0.0078 U	0.0079 U	0.0022 J	0.0084 U	0.0079 U
Anthracene	mg/kg	230,000	0.14	0.0011 J	0.00084 J	0.008 U	0.0079 U	0.0027 J	0.0078 U	0.0079 U	0.0013 J	0.0084 U	0.0079 U
Benz[a]anthracene	mg/kg	21	0.48	0.008	0.0049 J	0.008 U	0.0079 U	0.017	0.0078 U	0.0079 U	0.012	0.0084 U	0.0079 U
Benzaldehyde	mg/kg	120,000	0.84 U	0.076 U	0.079 U	0.08 U	0.079 U	0.078 U	0.077 U	0.078 U	0.08 U	0.083 U	0.078 U
Benzo[a]pyrene	mg/kg	2.1	0.5	0.0083	0.0043 J	0.008 U	0.0079 U	0.019	0.0078 U	0.0079 U	0.014	0.0084 U	0.0079 U
Benzo[b]fluoranthene	mg/kg	21	0.79	0.013	0.0051 J	0.008 U	0.0079 U	0.031	0.0078 U	0.0079 U	0.023	0.0084 U	0.0079 U
Benzo[g,h,i]perylene	mg/kg		0.26	0.0062 J	0.0026 J	0.008 U	0.0079 U	0.011	0.0078 U	0.0079 U	0.0079 J	0.0084 U	0.0079 U
Benzo[k]fluoranthene	mg/kg	210	0.79	0.013	0.0022 J	0.008 U	0.0079 U	0.028	0.0078 U	0.0079 U	0.021	0.0084 U	0.0079 U
bis(2-Ethylhexyl)phthalate	mg/kg	160	0.84 U	0.076 U	0.079 U	0.08 U	0.079 U	0.078 U	0.077 U	0.078 U	0.08 U	0.083 U	0.078 U
Caprolactam	mg/kg	400,000	2.1 U	0.19 U	0.2 U	0.2 U	0.2 U	0.2 U	0.19 U	0.2 U	0.2 U	0.21 U	0.2 U
Carbazole	mg/kg		0.2 J	0.076 U	0.079 U	0.08 U	0.079 U	0.078 U	0.077 U	0.078 U	0.08 U	0.083 U	0.078 U
Chrysene	mg/kg	2,100	0.46	0.008	0.0046 J	0.008 U	0.0079 U	0.019	0.00042 J	0.0079 U	0.014	0.0084 U	0.0079 U
Dibenz[a,h]anthracene	mg/kg	2.1	0.1	0.0018 J	0.008 U	0.008 U	0.0079 U	0.0033 J	0.0078 U	0.0079 U	0.0026 J	0.0084 U	0.0079 U
Di-n-butylphthalate	mg/kg	82,000	0.84 U	0.045 J	0.037 J	0.036 J	0.032 J	0.037 J	0.042 J	0.048 J	0.04 J	0.046 J	0.039 J
Di-n-ocetylphthalate	mg/kg	8,200	0.84 U	0.076 U	0.079 U	0.08 U	0.079 U	0.078 U	0.077 U	0.078 U	0.08 U	0.083 U	0.078 U
Fluoranthene	mg/kg	30,000	0.9	0.013	0.007 J	0.008 U	0.0079 U	0.034	0.0078 U	0.0079 U	0.023	0.00079 J	0.00072 J
Fluorene	mg/kg	30,000	0.049	0.0077 U	0.008 U	0.008 U	0.0079 U	0.0078 U	0.0078 U	0.0079 U	0.008 U	0.0084 U	0.0079 U
Indeno[1,2,3-c,d]pyrene	mg/kg	21	0.28	0.0053 J	0.0021 J	0.008 U	0.0079 U	0.0091	0.0078 U	0.0079 U	0.0073 J	0.0084 U	0.0079 U
Naphthalene	mg/kg	8.6	0.18	0.0021 J	0.008 U	0.008 U	0.0079 U	0.0021 J	0.0078 U	0.0079 U	0.008 U	0.0084 U	0.0053 J
Phenanthrene	mg/kg		0.49	0.0057 J	0.0039 J	0.008 U	0.0079 U	0.018	0.0078 U	0.0079 U	0.0093	0.0084 U	0.0011 J
Pyrene	mg/kg	23,000	0.71	0.012	0.0072 J	0.008 U	0.0079 U	0.031	0.0078 U	0.0079 U	0.02	0.0084 U	0.0079 U
PCBs													
Aroclor 1248	mg/kg	0.94	N/A	N/A	0.021 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A
Aroclor 1254	mg/kg	0.97	N/A	N/A	0.021 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A
Aroclor 1260	mg/kg	0.99	N/A	N/A	0.021 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A
Aroclor 1268	mg/kg		N/A	N/A	0.021 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A
PCBs (total)	mg/kg	0.97	N/A	N/A	0.021 U	N/A	N/A	0.02 U	N/A	N/A	0.02 U	N/A	N/A
TPH/Oil & Grease													
Diesel Range Organics	mg/kg	6,200	91.8	12.9 J	10.7 J	16 U	10 J	15.3 U	15.4 U	15.4 U	15.6 U	16.9 U	15.4 U
Gasoline Range Organics	mg/kg	6,200	10.6 U	9.1 U	9.5 U	9.1 U	9.5 U	9.4 U	9.3 U	8.6 U	9.9 U	10.8 U	11.1 U
Oil & Grease	mg/kg	6,200	509 U	140 J	480 U	486 U	479 U	474 U	468 U	476 U	487 U	512 U	476 U

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

[^]PAH compounds were analyzed via SIM

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method blank or field blank.

**Table 6 - Parcel B7 Baltimore County Property Transfer
Summary of Pesticides Detected in Soil**

Parameter	Units	PAL	B25-013-SB-1*	B25-013-SB-2*	B7-001-SB-1*	B7-001-SB-2*	B7-002-SB-1*	B7-002-SB-2*	B7-003-SB-1*
			10/17/2018	10/17/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018
Pesticides									
4,4'-DDE	mg/kg	9.3	0.004 U	0.0039 U	0.0022 J	0.0029 J	0.0035 U	0.0037 U	0.0022 J
4,4'-DDT	mg/kg	8.5	0.004 U	0.0039 U	0.0038	0.0413	0.0031 J	0.0037 U	0.0096
Aldrin	mg/kg	0.18	0.002 U	0.002 U	0.0018 U	0.0015 J	0.0018 U	0.0018 U	0.0018 U
alpha-BHC	mg/kg	0.36	0.0028	0.002 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0018 U
alpha-Chlordane^	mg/kg	7.7	0.00037 J	0.002 U	0.0018 U	0.00077 J	0.0018 U	0.0018 U	0.00051 J
Dieldrin	mg/kg	0.14	0.0008 J	0.0039 U	0.0027 J	0.0155	0.0025 J	0.0037 U	0.0068
Endosulfan I [†]	mg/kg	7,000	0.002 U	0.002 U	0.00065 J	0.0019	0.0018 U	0.0018 U	0.0014 J
Endosulfan II [†]	mg/kg	7,000	0.004 U	0.0039 U	0.0015 J	0.0106	0.001 J	0.0037 U	0.0027 J
Endosulfan sulfate	mg/kg	4,900	0.004 U	0.0039 U	0.0016 J	0.011	0.0035 U	0.0037 U	0.0016 J
Endrin	mg/kg	250	0.004 U	0.0039 U	0.0036 U	0.03	0.0032 J	0.0037 U	0.0056
Endrin aldehyde	mg/kg		0.004 U	0.0039 U	0.0021 J	0.0037 U	0.0021 J	0.0037 U	0.0021 J
Endrine ketone	mg/kg		0.0016 J	0.0039 U	0.0056	0.0263	0.0066	0.0037 U	0.0037 U
gamma-BHC (Lindane)	mg/kg	2.5	0.002 U	0.002 U	0.0018 U	0.0021	0.00082 J	0.0018 U	0.0018 J
gamma-Chlordane^	mg/kg	7.7	0.002 U	0.002 U	0.0018 U	0.0095	0.0018 U	0.0018 U	0.0039
Heptachlor	mg/kg	0.63	0.002 U	0.002 U	0.0018 U	0.0012 J	0.0005 J	0.0018 U	0.00092 J
Heptachlor epoxide	mg/kg	0.33	0.002 U	0.002 U	0.0018 U	0.0075	0.0018 U	0.0018 U	0.0018 U
Methoxychlor	mg/kg	4,100	0.0199 U	0.0196 U	0.0064 J	0.0079 J	0.0042 J	0.0184 U	0.0031 J

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

*indicates non-validated data

^The USEPA RSL for Chlordane (technical mixture) was used as the PAL for both alpha- and gamma-Chlordane

†The USEPA RSL for Endosulfan was used as the PAL for both Endosulfan I and II

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

**Table 6 - Parcel B7 Baltimore County Property Transfer
Summary of Pesticides Detected in Soil**

Parameter	Units	PAL	B7-003-SB-2*	B7-014-SB-1*	B7-014-SB-2*	B7-015-SB-1*	B7-015-SB-2*	B7-032-SB-1*	B7-032-SB-2*
			10/2/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018	12/21/2020	12/21/2020
Pesticides									
4,4'-DDE	mg/kg	9.3	0.0038	0.0038 U	0.0036 U	0.0036 U	0.0037 U	0.0414 U	0.0199 U
4,4'-DDT	mg/kg	8.5	0.0054	0.0088	0.0036 U	0.0036 U	0.0037 U	0.0414 U	0.0199 U
Aldrin	mg/kg	0.18	0.0019 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0207 U	0.0099 U
alpha-BHC	mg/kg	0.36	0.0019 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0207 U	0.0099 U
alpha-Chlordane^	mg/kg	7.7	0.0011 J	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0492	0.0029 J
Dieldrin	mg/kg	0.14	0.0043	0.0045	0.0036 U	0.00074 J	0.0037 U	0.0157 J	0.0199 U
Endosulfan I [†]	mg/kg	7,000	0.0019 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0207 U	0.0099 U
Endosulfan II [†]	mg/kg	7,000	0.0014 J	0.0018 J	0.0036 U	0.0036 U	0.0037 U	0.0414 U	0.0199 U
Endosulfan sulfate	mg/kg	4,900	0.0013 J	0.0038 U	0.0036 U	0.0036 U	0.0037 U	0.0414 U	0.0199 U
Endrin	mg/kg	250	0.0038	0.0035 J	0.0036 U	0.0036 U	0.0037 U	0.0414 U	0.0199 U
Endrin aldehyde	mg/kg		0.0037 U	0.0038 U	0.0036 U	0.0036 U	0.0037 U	0.0414 U	0.0199 U
Endrine ketone	mg/kg		0.0047	0.0038 U	0.00034 J	0.0012 J	0.00072 J	0.0414 U	0.0199 U
gamma-BHC (Lindane)	mg/kg	2.5	0.0025	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0207 U	0.0099 U
gamma-Chlordane^	mg/kg	7.7	0.0039	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0725	0.0099 U
Heptachlor	mg/kg	0.63	0.0018 J	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0207 U	0.0099 U
Heptachlor epoxide	mg/kg	0.33	0.0019 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0104 J	0.0099 U
Methoxychlor	mg/kg	4,100	0.017 J	0.0189 U	0.0179 U	0.0181 U	0.0185 U	0.207 U	0.0993 U

Detections in bold

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^The USEPA RSL for Chlordane (technical mixture) was used as the PAL for both alpha- and gamma-Chlordane

†The USEPA RSL for Endosulfan was used as the PAL for both Endosulfan I and II

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

**Table 6 - Parcel B7 Baltimore County Property Transfer
Summary of Pesticides Detected in Soil**

Parameter	Units	PAL	B7-034-SB-1*	B7-034-SB-2*	B7-053-SB-1	B7-053-SB-2	B7-054-SB-1	B7-054-SB-2
			10/2/2018	10/2/2018	12/7/2020	12/7/2020	12/7/2020	12/7/2020
Pesticides								
4,4'-DDE	mg/kg	9.3	0.004 U	0.004 U	0.0184 U	0.0038 U	0.0177 U	0.0039 U
4,4'-DDT	mg/kg	8.5	0.004 U	0.004 U	0.0184 UJ	0.0038 UJ	0.0177 UJ	0.0039 UJ
Aldrin	mg/kg	0.18	0.002 U	0.002 U	0.0092 U	0.0019 U	0.0089 U	0.002 U
alpha-BHC	mg/kg	0.36	0.002 U	0.002 U	0.0092 U	0.0019 U	0.0089 U	0.002 U
alpha-Chlordane^	mg/kg	7.7	0.002 U	0.00047 J	0.0092 U	0.0019 U	0.0089 U	0.002 U
Dieldrin	mg/kg	0.14	0.004 U	0.004 U	0.0184 U	0.0038 U	0.0177 U	0.0039 U
Endosulfan I [†]	mg/kg	7,000	0.002 U	0.002 U	0.0092 U	0.0019 U	0.0089 U	0.002 U
Endosulfan II [†]	mg/kg	7,000	0.004 U	0.004 U	0.0184 U	0.0038 U	0.0177 U	0.0039 U
Endosulfan sulfate	mg/kg	4,900	0.004 U	0.004 U	0.0184 U	0.0038 U	0.0177 U	0.0039 U
Endrin	mg/kg	250	0.004 U	0.004 U	0.0184 U	0.0038 U	0.0177 U	0.0039 U
Endrin aldehyde	mg/kg		0.004 U	0.004 U	0.0184 U	0.0038 U	0.0177 U	0.0039 U
Endrine ketone	mg/kg		0.004 U	0.00076 J	0.0184 U	0.0038 U	0.0177 U	0.0039 U
gamma-BHC (Lindane)	mg/kg	2.5	0.002 U	0.002 U	0.0092 U	0.0019 U	0.0089 U	0.002 U
gamma-Chlordane^	mg/kg	7.7	0.002 U	0.0011 J	0.0092 U	0.0019 U	0.0089 U	0.002 U
Heptachlor	mg/kg	0.63	0.002 U	0.002 U	0.0092 U	0.0019 U	0.0089 U	0.002 U
Heptachlor epoxide	mg/kg	0.33	0.002 U	0.002 U	0.0092 U	0.0019 U	0.0089 U	0.002 U
Methoxychlor	mg/kg	4,100	0.0202 U	0.02 U	0.0918 UJ	0.0192 UJ	0.0887 UJ	0.0196 UJ

Detections in bold

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^The USEPA RSL for Chlordane (technical mixture) was used as the PAL for both alpha- and gamma-Chlordane

†The USEPA RSL for Endosulfan was used as the PAL for both Endosulfan I and II

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

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**Table 6 - Parcel B7 Baltimore County Property Transfer
Summary of Pesticides Detected in Soil**

Parameter	Units	PAL	B7-055-SB-1*	B7-055-SB-2*	B7-056-SB-1	B7-056-SB-2	B7-057-SB-1*	B7-057-SB-2*
			12/8/2020	12/8/2020	12/7/2020	12/7/2020	12/10/2020	12/10/2020
Pesticides								
4,4'-DDE	mg/kg	9.3	0.0041 U	0.02 U	0.0196 U	0.019 U	0.0194 U	0.0028 J
4,4'-DDT	mg/kg	8.5	0.0041 U	0.02 U	0.0196 UJ	0.019 UJ	0.0194 U	0.0216 U
Aldrin	mg/kg	0.18	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
alpha-BHC	mg/kg	0.36	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
alpha-Chlordane^	mg/kg	7.7	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
Dieldrin	mg/kg	0.14	0.0041 U	0.02 U	0.0196 U	0.019 U	0.0194 U	0.0216 U
Endosulfan I [†]	mg/kg	7,000	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
Endosulfan II [†]	mg/kg	7,000	0.0041 U	0.02 U	0.0196 U	0.019 U	0.0194 U	0.0216 U
Endosulfan sulfate	mg/kg	4,900	0.0041 U	0.02 U	0.0196 U	0.019 U	0.0194 U	0.0216 U
Endrin	mg/kg	250	0.0041 U	0.02 U	0.0196 U	0.019 U	0.0194 U	0.0216 U
Endrin aldehyde	mg/kg		0.0041 U	0.02 U	0.0196 U	0.019 U	0.0194 U	0.0216 U
Endrine ketone	mg/kg		0.0041 U	0.02 U	0.0196 U	0.019 U	0.0194 U	0.0216 U
gamma-BHC (Lindane)	mg/kg	2.5	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
gamma-Chlordane^	mg/kg	7.7	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
Heptachlor	mg/kg	0.63	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
Heptachlor epoxide	mg/kg	0.33	0.0021 U	0.01 U	0.0098 U	0.0095 U	0.0097 U	0.0108 U
Methoxychlor	mg/kg	4,100	0.0205 U	0.0998 U	0.0979 UJ	0.0952 UJ	0.097 U	0.108 U

Detections in bold

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†The USEPA RSL for Endosulfan was used as the PAL for both Endosulfan I and II

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J: The positive result reported for this analyte is a quantitative estimate.

**Table 6 - Parcel B7 Baltimore County Property Transfer
Summary of Pesticides Detected in Soil**

Parameter	Units	PAL	B7-058-SB-1	B7-058-SB-2	B7-059-SB-1	B7-059-SB-2	B7-060-SB-1*	B7-060-SB-2*
			12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/8/2020	12/8/2020
Pesticides								
4,4'-DDE	mg/kg	9.3	0.0039 U	0.0041 U	0.004 U	0.0045 U	0.0429 U	0.021 U
4,4'-DDT	mg/kg	8.5	0.0039 UJ	0.0041 UJ	0.004 UJ	0.0045 UJ	0.0429 U	0.021 U
Aldrin	mg/kg	0.18	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
alpha-BHC	mg/kg	0.36	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
alpha-Chlordane^	mg/kg	7.7	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
Dieldrin	mg/kg	0.14	0.0039 U	0.0041 U	0.004 U	0.0045 U	0.0429 U	0.021 U
Endosulfan I [†]	mg/kg	7,000	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
Endosulfan II [†]	mg/kg	7,000	0.0039 U	0.0041 U	0.004 U	0.0045 U	0.0429 U	0.021 U
Endosulfan sulfate	mg/kg	4,900	0.0039 U	0.0041 U	0.004 U	0.0045 U	0.0429 U	0.021 U
Endrin	mg/kg	250	0.0039 U	0.0041 U	0.004 U	0.0045 U	0.0429 U	0.021 U
Endrin aldehyde	mg/kg		0.0039 U	0.026	0.004 U	0.0045 U	0.0429 U	0.021 U
Endrine ketone	mg/kg		0.0039 U	0.0041 U	0.004 U	0.0045 U	0.0429 U	0.021 U
gamma-BHC (Lindane)	mg/kg	2.5	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
gamma-Chlordane^	mg/kg	7.7	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
Heptachlor	mg/kg	0.63	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
Heptachlor epoxide	mg/kg	0.33	0.002 U	0.002 U	0.002 U	0.0022 U	0.0214 U	0.0105 U
Methoxychlor	mg/kg	4,100	0.0196 UJ	0.0204 UJ	0.0202 UJ	0.0225 UJ	0.214 U	0.105 U

Detections in bold

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*indicates non-validated data

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†The USEPA RSL for Endosulfan was used as the PAL for both Endosulfan I and II

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UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

**Table 6 - Parcel B7 Baltimore County Property Transfer
Summary of Pesticides Detected in Soil**

Parameter	Units	PAL	B7-061-SB-1*	B7-061-SB-2*	B7-064-SB-1*	B7-064-SB-2*	B7-065-SB-1*	B7-065-SB-2*
			12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Pesticides								
4,4'-DDE	mg/kg	9.3	0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
4,4'-DDT	mg/kg	8.5	0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
Aldrin	mg/kg	0.18	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
alpha-BHC	mg/kg	0.36	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
alpha-Chlordane^	mg/kg	7.7	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
Dieldrin	mg/kg	0.14	0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
Endosulfan I [†]	mg/kg	7,000	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
Endosulfan II [†]	mg/kg	7,000	0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
Endosulfan sulfate	mg/kg	4,900	0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
Endrin	mg/kg	250	0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
Endrin aldehyde	mg/kg		0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
Endrine ketone	mg/kg		0.0039 U	0.004 U	0.0039 U	0.0039 U	0.004 U	0.0042 U
gamma-BHC (Lindane)	mg/kg	2.5	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
gamma-Chlordane^	mg/kg	7.7	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
Heptachlor	mg/kg	0.63	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
Heptachlor epoxide	mg/kg	0.33	0.0019 U	0.002 U	0.002 U	0.0019 U	0.002 U	0.0021 U
Methoxychlor	mg/kg	4,100	0.0195 U	0.02 U	0.0196 U	0.0194 U	0.0198 U	0.0209 U

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

*indicates non-validated data

^The USEPA RSL for Chlordane (technical mixture) was used as the PAL for both alpha- and gamma-Chlordane

†The USEPA RSL for Endosulfan was used as the PAL for both Endosulfan I and II

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B25-013-SB-1*	B25-013-SB-2*	B25-013-SB-6*	B7-001-SB-1*	B7-001-SB-2*	B7-001-SB-5*
			10/17/2018	10/17/2018	10/17/2018	10/2/2018	10/2/2018	10/2/2018
Metals								
Aluminum	mg/kg	1,100,000	11,400	16,200	18,800	5,860	6,510	4,960
Antimony	mg/kg	470	2.8 U	2.7 U	2.8 U	2.5 U	2.6 U	2.6 U
Arsenic	mg/kg	3	5.6	4.9	6.4	9.2	12.4	2.2 U
Barium	mg/kg	220,000	170	43.9	46.2	63.4	174	13.2
Beryllium	mg/kg	2,300	0.85 J	0.65 J	0.68 J	0.42 J	0.27 J	0.88 U
Cadmium	mg/kg	980	0.6 J	1.3 U	1.4 U	1.3 U	0.76 J	1.3 U
Chromium	mg/kg	120,000	120	26.1	67.3	903	844	5.3
Chromium VI	mg/kg	6.3	1.2 U	1.2 U	1.2 U	0.77 J	1.1 U	1.1 U
Cobalt	mg/kg	350	6.7	6.6	6.2	5.3	6.1	2.8 J
Copper	mg/kg	47,000	26.2	12.6	8.3	60.5	84	4.4 U
Iron	mg/kg	820,000	30,600	25,900	20,000	215,000	189,000	3,670
Lead	mg/kg	800	66.7	13.2	12.1	63.5	291	3.9
Manganese	mg/kg	26,000	4,070	168	99.6	22,500	20,200	39.4
Mercury	mg/kg	350	0.078 J	0.11 U	0.11 U	0.021 J	0.41	0.0073 J
Nickel	mg/kg	22,000	15.5	13.3	64.4	26.7	39.2	3.1 J
Vanadium	mg/kg	5,800	189	36.4	39.7	2,410	471	14.2
Zinc	mg/kg	350,000	300	38.4	27	142	414	8.4
Other								
Cyanide	mg/kg	150	0.25 J	1.1 U	1.2 U	0.45 J	1.5	1.1 U

Detections in bold

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J: The positive result reported for this analyte is a quantitative estimate.

J-: The positive result reported for this analyte is a quantitative estimate, but may be biased low.

B: This analyte was not detected substantially above the level of the associated method or field blank.

R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-002-SB-1*	B7-002-SB-2*	B7-002-SB-9*	B7-002-SB-10	B7-003-SB-1*	B7-003-SB-2*
			10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018	10/2/2018
Metals								
Aluminum	mg/kg	1,100,000	8,300	14,800	21,500	N/A	12,100	14,200
Antimony	mg/kg	470	2.4 U	2.6 U	2.8 U	N/A	2.6 U	2.5 U
Arsenic	mg/kg	3	9.5	5.7	14.1	13.4	19.9	11.4
Barium	mg/kg	220,000	85	38.7	97.4	N/A	142	176
Beryllium	mg/kg	2,300	0.64 J	0.45 J	1.7	N/A	1.5	1.3
Cadmium	mg/kg	980	1.2 U	1.3 U	1.4 U	N/A	1.3 U	1.3 U
Chromium	mg/kg	120,000	1,040	33.2	45.5	N/A	379	1,270
Chromium VI	mg/kg	6.3	0.7 J	1.1 U	0.65 J	N/A	1.1 U	1.1 U
Cobalt	mg/kg	350	8.3	5.8	8	N/A	32.9	9
Copper	mg/kg	47,000	292	8.3	29.4	N/A	191	133
Iron	mg/kg	820,000	223,000	21,800	53,200	N/A	299,000	158,000
Lead	mg/kg	800	281	15.8	22.9	N/A	79.1	32
Manganese	mg/kg	26,000	19,500	287	177	N/A	9,650	58,700
Mercury	mg/kg	350	0.035 J	0.019 J	0.13 U	N/A	0.028 J	0.019 J
Nickel	mg/kg	22,000	54.9	12.6	19.5	N/A	97.4	73.5
Vanadium	mg/kg	5,800	1,790	43.1	57.5	N/A	558	4,020
Zinc	mg/kg	350,000	180	37.8	80.3	N/A	207	68.1
Other								
Cyanide	mg/kg	150	0.49 J	1.1 U	1.3 U	N/A	0.34 J	0.14 J

Detections in bold

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J: The positive result reported for this analyte is a quantitative estimate.

J-: The positive result reported for this analyte is a quantitative estimate, but may be biased low.

B: This analyte was not detected substantially above the level of the associated method or field blank.

R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-003-SB-6*	B7-003-SB-10	B7-014-SB-1*	B7-014-SB-2*	B7-014-SB-5*	B7-014-SB-10*
			10/2/2018	10/2/2018	10/1/2018	10/1/2018	10/1/2018	10/1/2018
Metals								
Aluminum	mg/kg	1,100,000	19,800	N/A	38,700	27,100	14,000	18,400
Antimony	mg/kg	470	10.3	N/A	2.7 U	2.5 U	2.8 U	3.1 U
Arsenic	mg/kg	3	7.3	12.2	3.3	22.1	2.3 U	7.5
Barium	mg/kg	220,000	103	N/A	422	406	50.7	64.4
Beryllium	mg/kg	2,300	0.98	N/A	4.2	2.4	0.58 J	1
Cadmium	mg/kg	980	1.4 U	N/A	1.3 U	1.2 U	1.4 U	1.5 U
Chromium	mg/kg	120,000	43.9	N/A	149	2,440	20.5	37.8
Chromium VI	mg/kg	6.3	1.2 U	N/A	1.1 U	1.1 U	0.65 J	1.2 J
Cobalt	mg/kg	350	16.6	N/A	9.9	4.1 U	6.5	7.8
Copper	mg/kg	47,000	27.9	N/A	50.6	35.8	8.1	14.5
Iron	mg/kg	820,000	27,200	N/A	110,000	98,200	12,900	32,400
Lead	mg/kg	800	52.1	N/A	87.3	9.1	9.3	12
Manganese	mg/kg	26,000	773	N/A	7,530	45,700	90.4	127
Mercury	mg/kg	350	2.6	N/A	0.011 J	0.0068 J	0.11 U	0.12 U
Nickel	mg/kg	22,000	32.9	N/A	14	5.2 J	14.4	18.5
Vanadium	mg/kg	5,800	48.7	N/A	244	1,850	22.8	41.1
Zinc	mg/kg	350,000	91.2	N/A	83.3	54.6	36.4	55.9
Other								
Cyanide	mg/kg	150	0.25 J	N/A	0.97	0.48 J	0.95 U	1.3 U

Detections in bold

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R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-015-SB-1*	B7-015-SB-2*	B7-015-SB-5*	B7-015-SB-10*	B7-032-SB-1*	B7-032-SB-2*
			10/1/2018	10/1/2018	10/1/2018	10/1/2018	12/21/2020	12/21/2020
Metals								
Aluminum	mg/kg	1,100,000	16,300	17,600	14,700	20,200	8,410	11,100
Antimony	mg/kg	470	2.6 U	2.7 U	2.9 U	2.7 U	3.1 U	2.8 U
Arsenic	mg/kg	3	11.4	9.3	7.7	2.2 U	6.3	5.4
Barium	mg/kg	220,000	277	353	87.5	62.9	61.5	78.5
Beryllium	mg/kg	2,300	1.3	1.9	0.69 J	0.72 J	1.2	0.52 J
Cadmium	mg/kg	980	1.3 U	1.3 U	1.4 U	1.3 U	1.2 J	0.44 J
Chromium	mg/kg	120,000	1,950	1,670	26.1	32.7	38.6	22.6
Chromium VI	mg/kg	6.3	1.1 U	1.1 U	1.2 U	1.2 U	1.3 U	1.2 U
Cobalt	mg/kg	350	3.1 J	1.6 J	9.5	10.3	8.9	5.7
Copper	mg/kg	47,000	44.1	38.4	8.6	9	36	20.4
Iron	mg/kg	820,000	138,000	124,000	23,600	15,700	26,900	14,900
Lead	mg/kg	800	30.9	22.9	11.7	10.6	107	66.4
Manganese	mg/kg	26,000	45,700	52,200	204	150	322	237
Mercury	mg/kg	350	0.025 J	0.11 U	0.0076 J	0.12 U	0.095 J	0.11 J
Nickel	mg/kg	22,000	12	9.2	14.1	18.5	22.9	12.6
Vanadium	mg/kg	5,800	3,130	3,410	35.6	31.8	44.5	32.5
Zinc	mg/kg	350,000	90.2	53.1	36.4	54.9	203	165
Other								
Cyanide	mg/kg	150	0.26 J	0.35 J	1.1 U	0.93 U	0.27 J	0.18 J

Detections in bold

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**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-032-SB-5*	B7-034-SB-1*	B7-034-SB-2*	B7-034-SB-7*	B7-053-SB-1	B7-053-SB-2
			12/21/2020	10/2/2018	10/2/2018	10/2/2018	12/7/2020	12/7/2020
Metals								
Aluminum	mg/kg	1,100,000	21,200	20,000	15,100	16,400	31,900	13,400
Antimony	mg/kg	470	2.9 U	2.8 U	2.8 U	2.7 U	2.7 UJ	2.7 UJ
Arsenic	mg/kg	3	6.4	3.1	3.4	4.1	2.2 UJ	3.6
Barium	mg/kg	220,000	83.5	222	115	67.9	350 J	61.2 J
Beryllium	mg/kg	2,300	1	1.4	0.77 J	0.57 J	4.8	0.5 J
Cadmium	mg/kg	980	1.4 U	0.48 J	1.4 U	1.3 U	0.35 J	1.4 U
Chromium	mg/kg	120,000	24.9	28	30.2	20.1	22.3 J	20.5 J
Chromium VI	mg/kg	6.3	1.2 U	1.2 U	1.2 U	1.2 U	1.1 R	1.2 R
Cobalt	mg/kg	350	5.4	5.2	5.7	5	4.4 U	5.7
Copper	mg/kg	47,000	10.4	16.8	13.7	4.4 J	3.1 J	12.2
Iron	mg/kg	820,000	16,300	14,400	14,600	14,100	4,480 J	17,900 J
Lead	mg/kg	800	15.7	37.1	31.7	9.7	5.8	20.9
Manganese	mg/kg	26,000	54.4	1,650	584	25.2	2,370 J	243 J
Mercury	mg/kg	350	0.12 U	0.14	0.91	0.12 U	0.1 U	0.14
Nickel	mg/kg	22,000	14.6	21.2	19.8	11	1.6 J	12.2
Vanadium	mg/kg	5,800	30.5	72.1	46.3	25.1	39.9 J	32.8 J
Zinc	mg/kg	350,000	26.3	77.2	63.9	25.8	5.9	48
Other								
Cyanide	mg/kg	150	1.3 U	0.15 J	1.2 U	1.1 U	0.37 J	0.25 J

Detections in bold

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R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-053-SB-5	B7-054-SB-1	B7-054-SB-2	B7-054-SB-5	B7-054-SB-10*	B7-055-SB-1*
			12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/8/2020
Metals								
Aluminum	mg/kg	1,100,000	16,600	15,700	12,000	15,000	N/A	13,600
Antimony	mg/kg	470	2.9 UJ	2.5 UJ	3 UJ	3 UJ	N/A	3 U
Arsenic	mg/kg	3	6.7	2.1 UJ	5.5	4.7	3.2	6.6
Barium	mg/kg	220,000	34.3 J	314 J	63.8 J	123 J	N/A	111
Beryllium	mg/kg	2,300	0.65 J	2	0.58 J	0.6 J	N/A	1.1
Cadmium	mg/kg	980	1.4 U	0.54 J	1.5 U	1.5 U	N/A	0.38 J
Chromium	mg/kg	120,000	26.7 J	445 J	19.8 J	27.4 J	N/A	29
Chromium VI	mg/kg	6.3	0.79 B	0.8 B	1.2 R	1.2 R	N/A	1.3 U
Cobalt	mg/kg	350	6.2	3.2 J	8.4	5.3	N/A	5.6
Copper	mg/kg	47,000	13.1	24.2	16.3	14.2	N/A	19
Iron	mg/kg	820,000	16,200 J	55,900 J	13,200 J	16,800 J	N/A	21,000
Lead	mg/kg	800	11.4	30.7	42.9	10.4	N/A	38.5
Manganese	mg/kg	26,000	67.9 J	25,900 J	195 J	84.9 J	N/A	1,140
Mercury	mg/kg	350	0.022 J	0.11 U	0.2	0.12 U	N/A	0.041 J
Nickel	mg/kg	22,000	13.9	5.3 J	14	13.1	N/A	12.9
Vanadium	mg/kg	5,800	33.1 J	1,230 J	28 J	34.5 J	N/A	58.6
Zinc	mg/kg	350,000	43.5	91.3	81.3	41.4	N/A	153
Other								
Cyanide	mg/kg	150	0.17 J	0.38 J	0.19 J	0.16 J	N/A	1.1 U

Detections in bold

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J-: The positive result reported for this analyte is a quantitative estimate, but may be biased low.

B: This analyte was not detected substantially above the level of the associated method or field blank.

R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-055-SB-2*	B7-055-SB-5*	B7-055-SB-10*	B7-056-SB-1	B7-056-SB-2	B7-056-SB-5
			12/8/2020	12/8/2020	12/8/2020	12/7/2020	12/7/2020	12/7/2020
Metals								
Aluminum	mg/kg	1,100,000	12,400	16,900	N/A	15,800	13,100	8,770
Antimony	mg/kg	470	3 U	3 U	N/A	2.7 UJ	2.8 UJ	2.6 UJ
Arsenic	mg/kg	3	5.3	8.6	7.9	4.4	6.4	5
Barium	mg/kg	220,000	71.1	38.2	N/A	99.4 J	49.2 J	46.6 J
Beryllium	mg/kg	2,300	0.64 J	0.9 J	N/A	0.92	0.63 J	0.47 J
Cadmium	mg/kg	980	1.5 U	1.5 U	N/A	0.36 J	1.4 U	1.3 U
Chromium	mg/kg	120,000	23.9	30.5	N/A	39.6 J	33.9 J	12.8 J
Chromium VI	mg/kg	6.3	1.3 U	1.3	N/A	1.2 R	1.2 R	1.1 R
Cobalt	mg/kg	350	5.4	6.6	N/A	5.4	4.8	5.1
Copper	mg/kg	47,000	14.4	15.6	N/A	14.7	13.9	12.2
Iron	mg/kg	820,000	16,000	36,200	N/A	18,500 J	24,500 J	9,650 J
Lead	mg/kg	800	37.1	12.3	N/A	29.6	27.5	27.8
Manganese	mg/kg	26,000	261	75.1	N/A	1,120 J	263 J	78.7 J
Mercury	mg/kg	350	0.056 J	0.12 U	N/A	0.04 J	0.011 J	0.52
Nickel	mg/kg	22,000	11.9	15.7	N/A	12.7	13.2	10.1
Vanadium	mg/kg	5,800	27.1	41.7	N/A	72.7 J	35.7 J	16.1 J
Zinc	mg/kg	350,000	67.9	46.8	N/A	68.3	48.3	40.9
Other								
Cyanide	mg/kg	150	0.14 J	1 U	N/A	0.19 J	1.1 U	0.13 J

Detections in bold

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R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-056-SB-10*	B7-057-SB-1*	B7-057-SB-2*	B7-057-SB-5*	B7-058-SB-1	B7-058-SB-2
			12/7/2020	12/10/2020	12/10/2020	12/10/2020	12/7/2020	12/7/2020
Metals								
Aluminum	mg/kg	1,100,000	N/A	14,300	22,700	16,700	13,200	13,200
Antimony	mg/kg	470	N/A	2.8 U	3.2 U	2.9 U	2.9 UJ	3.1 UJ
Arsenic	mg/kg	3	18.9	8.6	7.2	4.4	4.2	4.3
Barium	mg/kg	220,000	N/A	71.4	87.7	138	47.7 J	27.6 J
Beryllium	mg/kg	2,300	N/A	0.88 J	1.4	1.2	0.44 J	0.25 J
Cadmium	mg/kg	980	N/A	0.52 J	0.48 J	0.65 J	1.4 U	1.5 U
Chromium	mg/kg	120,000	N/A	49.7	78.9	89.9	20.3 J	21.3 J
Chromium VI	mg/kg	6.3	N/A	1.2 U	1.3 U	1.2 U	1.2 R	0.86 B
Cobalt	mg/kg	350	N/A	10	16.7	15.2	6	3.8 J
Copper	mg/kg	47,000	N/A	41.8	26.2	22.2	10.5	7.9
Iron	mg/kg	820,000	N/A	34,000	37,700	25,200	16,200 J	17,000 J
Lead	mg/kg	800	N/A	74.1	47.7	82.3	19.1	8.2
Manganese	mg/kg	26,000	N/A	719	1,220	2,250	200 J	80.3 J
Mercury	mg/kg	350	N/A	0.66	0.092 J	0.22	0.043 J	0.013 J
Nickel	mg/kg	22,000	N/A	32.6	67.2	78.7	12.1	8.5 J
Vanadium	mg/kg	5,800	N/A	86.2	72.1	101	28.8 J	27.1 J
Zinc	mg/kg	350,000	N/A	191	137	181	62.8	21.9
Other								
Cyanide	mg/kg	150	N/A	0.31 J	0.68 J	1.1	0.16 J	0.17 J

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

J-: The positive result reported for this analyte is a quantitative estimate, but may be biased low.

B: This analyte was not detected substantially above the level of the associated method or field blank.

R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-058-SB-5	B7-059-SB-1	B7-059-SB-2	B7-059-SB-5	B7-059-SB-10*	B7-060-SB-1*
			12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/7/2020	12/8/2020
Metals								
Aluminum	mg/kg	1,100,000	8,340	7,880	17,200	16,400	N/A	13,700
Antimony	mg/kg	470	2.8 UJ	3 UJ	3.4 UJ	2.9 UJ	N/A	3.2 U
Arsenic	mg/kg	3	2.3 J-	5.5	7.7	5.2	12	7.7
Barium	mg/kg	220,000	18.7 J	29.3 J	77.1 J	43.1 J	N/A	86.2
Beryllium	mg/kg	2,300	0.15 J	0.3 J	0.49 J	0.5 J	N/A	0.96 J
Cadmium	mg/kg	980	1.4 U	1.5 U	1.7 U	1.4 U	N/A	0.6 J
Chromium	mg/kg	120,000	8.8 J	28.8 J	129 J	25.6 J	N/A	61.7
Chromium VI	mg/kg	6.3	1.2 R	1.2 R	1.4 R	0.87 B	N/A	1.3 U
Cobalt	mg/kg	350	2.1 J	3.9 J	8.9	5.4	N/A	11.4
Copper	mg/kg	47,000	3.6 J	11.4	35.5	11.4	N/A	48.7
Iron	mg/kg	820,000	6,920 J	24,700 J	44,100 J	20,600 J	N/A	32,000
Lead	mg/kg	800	4	11.8	45.3	10.6	N/A	103
Manganese	mg/kg	26,000	33.4 J	174 J	222 J	89.8 J	N/A	1,100
Mercury	mg/kg	350	0.11 U	0.016 J	0.041 J	0.12 U	N/A	0.69
Nickel	mg/kg	22,000	5.8 J	19.3	40.1	14	N/A	40.4
Vanadium	mg/kg	5,800	12 J	36.1 J	54.1 J	35.5 J	N/A	83.2
Zinc	mg/kg	350,000	15.8	32.3	73.4	32.8	N/A	229
Other								
Cyanide	mg/kg	150	0.15 J	0.27 J	0.22 J	0.17 J	N/A	0.45 J

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

J-: The positive result reported for this analyte is a quantitative estimate, but may be biased low.

B: This analyte was not detected substantially above the level of the associated method or field blank.

R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-060-SB-2*	B7-060-SB-5*	B7-060-SB-10*	B7-061-SB-1*	B7-061-SB-2*	B7-061-SB-4*
			12/8/2020	12/8/2020	12/8/2020	12/10/2020	12/10/2020	12/10/2020
Metals								
Aluminum	mg/kg	1,100,000	18,200	11,600	N/A	14,300	21,200	16,000
Antimony	mg/kg	470	3 U	2.7 U	N/A	2.9 U	2.8 U	2.8 U
Arsenic	mg/kg	3	18.4	6.6	9.4	5.7	7	3.9
Barium	mg/kg	220,000	153	57	N/A	62.7	75.4	65.9
Beryllium	mg/kg	2,300	1.4	0.62 J	N/A	0.59 J	0.66 J	0.51 J
Cadmium	mg/kg	980	0.85 J	1.4 U	N/A	0.36 J	1.4 U	1.4 U
Chromium	mg/kg	120,000	109	18.6	N/A	25.7	26.3	12.5
Chromium VI	mg/kg	6.3	1.3 U	1.2 U	N/A	1.2 U	1.2 U	1.2 U
Cobalt	mg/kg	350	36.3	8.4	N/A	6.3	4.8	3 J
Copper	mg/kg	47,000	560	14.1	N/A	18.5	11.6	5
Iron	mg/kg	820,000	311,000	16,000	N/A	19,600	19,300	15,800
Lead	mg/kg	800	51.2	27	N/A	42.2	10.7	10.8
Manganese	mg/kg	26,000	1,650	187	N/A	221	51.9	19.6
Mercury	mg/kg	350	0.15	0.061 J	N/A	0.12 U	0.12 U	0.12 U
Nickel	mg/kg	22,000	99.4	12.3	N/A	13.4	12.1	8.4 J
Vanadium	mg/kg	5,800	115	27.7	N/A	35.4	30.8	18.5
Zinc	mg/kg	350,000	123	58.8	N/A	106	23.3	15.3
Other								
Cyanide	mg/kg	150	0.32 J	1.2 U	N/A	1 U	0.14 J	1.1 U

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

J-: The positive result reported for this analyte is a quantitative estimate, but may be biased low.

B: This analyte was not detected substantially above the level of the associated method or field blank.

R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 7 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Soil**

Parameter	Units	PAL	B7-064-SB-1*	B7-064-SB-2*	B7-064-SB-5*	B7-065-SB-1*	B7-065-SB-2*	B7-065-SB-5*
			12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020	12/10/2020
Metals								
Aluminum	mg/kg	1,100,000	15,600	19,300	11,900	14,700	24,300	11,600
Antimony	mg/kg	470	2.8 U	2.7 U	2.9 U	2.9 U	3.1 U	2.8 U
Arsenic	mg/kg	3	5.2	4	2.4 U	4.4	2.8	3.5
Barium	mg/kg	220,000	50.8	74.3	33.1	47.1	103	45.7
Beryllium	mg/kg	2,300	0.34 J	0.53 J	0.28 J	0.31 J	0.62 J	0.31 J
Cadmium	mg/kg	980	1.4 U	1.4 U	1.5 U	1.5 U	1.5 U	1.4 U
Chromium	mg/kg	120,000	18.6	18.7	16	17.6	24.3	11.9
Chromium VI	mg/kg	6.3	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.2 U
Cobalt	mg/kg	350	4.6 J	4.2 J	2.7 J	3.6 J	4.6 J	2.7 J
Copper	mg/kg	47,000	8.8	9.2	6.5	8.1	8.7	7.2
Iron	mg/kg	820,000	18,200	25,800	6,650	14,200	11,100	12,500
Lead	mg/kg	800	10.9	11.5	8	9.4	10.1	8.3
Manganese	mg/kg	26,000	71.8	28.4	22.9	45.9	28.1	17.6
Mercury	mg/kg	350	0.018 J	0.12 U	0.11 U	0.11 U	0.13 U	0.11 U
Nickel	mg/kg	22,000	9.6	9.3	8.6 J	9.4 J	11.6	9.4
Vanadium	mg/kg	5,800	29.3	25.1	15.4	25.3	21.1	13.3
Zinc	mg/kg	350,000	35.2	26.4	21.5	29.6	30.2	17.2
Other								
Cyanide	mg/kg	150	0.16 J	1.1 U	1 U	1.2 U	0.15 J	0.15 J

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

J-: The positive result reported for this analyte is a quantitative estimate, but may be biased low.

B: This analyte was not detected substantially above the level of the associated method or field blank.

R: The result for this analyte is unreliable. Additional data is needed to confirm or disprove the presence of this analyte in the sample.

**Table 8 - Parcel B7 Baltimore County Property Transfer
Summary of Organics Detected in Groundwater**

Parameter	Units	PAL	B7-053-PZ*	B7-060-PZ	B7-064-PZ	B7-065-PZ	SW-046-MWS*	SW-046-MWS*	SW-047-MWS
			12/18/2020	12/11/2020	12/11/2020	12/11/2020	12/18/2020	12/30/2020	12/14/2015
Volatile Organic Compounds									
1,2-Dichloroethene (Total)	µg/L	70	2 U	2 U	2 U	2 U	2 U	2 U	0.58 J
Acetone	µg/L	14,000	12.3	10 U	10 UJ				
Chloroform	µg/L	0.22	1 U	1 U	1 U	1 U	1 U	1 U	6.1
cis-1,2-Dichloroethene	µg/L	70	1 U	1 U	1 U	1 U	1 U	1 U	0.58 J
Methyl tert-butyl ether (MTBE)	µg/L	14	1 U	0.68 J	1 U	1 U	10.4	9.7	1 U
Semi-Volatile Organic Compounds[^]									
1,4-Dioxane	µg/L	0.46	0.5 U	0.098 U	0.1 U	0.016 J	0.033 J	0.049 J	0.1 U
2-Methylnaphthalene	µg/L	36	0.091 J	0.098 U	0.01 J	0.098 U	0.095 U	0.094 U	0.1 U
Acenaphthene	µg/L	530	0.11 J	0.098 U	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Anthracene	µg/L	1,800	0.34 J	0.098 U	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Benz[a]anthracene	µg/L	0.03	0.64	0.02 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Benzo[a]pyrene	µg/L	0.2	0.73	0.023 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Benzo[b]fluoranthene	µg/L	0.25	0.8	0.023 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Benzo[g,h,i]perylene	µg/L		0.56	0.021 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Benzo[k]fluoranthene	µg/L	2.5	0.69	0.024 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Chrysene	µg/L	25	0.84	0.024 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Dibenz[a,h]anthracene	µg/L	0.025	0.13 J	0.069 U	0.07 U	0.068 U	0.066 U	0.066 U	0.1 U
Diethylphthalate	µg/L	15,000	15 U	2.9 U	1.7 J	2.9 U	2.8 U	2.8 U	1 U
Dimethylphthalate	µg/L		15 U	2.9 U	0.42 J	2.9 U	2.8 U	2.8 U	N/A
Di-n-butylphthalate	µg/L	900	15 U	2.9 U	0.54 J	0.44 J	2.8 U	2.8 U	1 U
Fluoranthene	µg/L	800	1.4	0.041 J	0.1 U	0.011 J	0.095 U	0.094 U	0.1 U
Fluorene	µg/L	290	0.086 J	0.098 U	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Indeno[1,2,3-c,d]pyrene	µg/L	0.25	0.6	0.022 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
Phenanthrene	µg/L		0.63	0.027 J	0.015 J	0.013 J	0.095 U	0.094 U	0.1 U
Pyrene	µg/L	120	1.2	0.034 J	0.1 U	0.098 U	0.095 U	0.094 U	0.1 U
TPH/Oil & Grease									
Diesel Range Organics	µg/L	47	110	99 J	77 J	100 UJ	120	110	65 B

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

[^]PAH compounds and 1,4-dioxane (2020) were analyzed via SIM.

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

UJ: This analyte was not detected in the sample. The actual quantitation/detection limit may be higher than reported.

J: The positive result reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method blank or field blank.

**Table 9 - Parcel B7 Baltimore County Property Transfer
Summary of Inorganics Detected in Groundwater**

Parameter	Units	PAL	B7-053-PZ*	B7-060-PZ	B7-064-PZ	B7-065-PZ	SW-046-MWS*	SW-046-MWS*	SW-047-MWS
			12/18/2020	12/11/2020	12/11/2020	12/11/2020	12/18/2020	12/30/2020	12/14/2015
Metals									
Aluminum	µg/L	20,000	N/A	N/A	N/A	N/A	126	154	2,810
Barium	µg/L	2,000	N/A	N/A	N/A	N/A	22.5	20.1	44.3
Beryllium	µg/L	4	N/A	N/A	N/A	N/A	0.49 J	0.59 J	6.5
Cadmium	µg/L	5	N/A	N/A	N/A	N/A	1.3 J	1 J	1.5 J
Chromium	µg/L	100	N/A	N/A	N/A	N/A	1.4 J	1.6 J	1.6 J
Chromium VI	µg/L	0.035	N/A	N/A	N/A	N/A	N/A	N/A	5 J
Cobalt	µg/L	6	N/A	N/A	N/A	N/A	221	221	100
Copper	µg/L	1,300	N/A	N/A	N/A	N/A	5 U	5 U	7.9
Iron	µg/L	14,000	N/A	N/A	N/A	N/A	6,680	6,720	83.2 B
Manganese	µg/L	430	N/A	N/A	N/A	N/A	11,700	11,300	884
Mercury	µg/L	2	N/A	N/A	N/A	N/A	0.2 U	0.2 U	0.03 J
Nickel	µg/L	390	N/A	N/A	N/A	N/A	89.6	85.3	99.4 J
Thallium	µg/L	2	N/A	N/A	N/A	N/A	10 U	4 J	10 U
Vanadium	µg/L	86	N/A	N/A	N/A	N/A	5 U	0.82 J	1 B
Zinc	µg/L	6,000	N/A	N/A	N/A	N/A	133	128	130
Dissolved Metals									
Aluminum, Dissolved	µg/L	20,000	224	180	37,800	3,280	109	110	2,860
Arsenic, Dissolved	µg/L	10	3.6 J	5 U	7	5 U	5 U	5 U	4.5 J
Barium, Dissolved	µg/L	2,000	34.6	13.6	154	48	22.8	20.5	42.9
Beryllium, Dissolved	µg/L	4	0.68 J	0.31 J	1.2	4.5	0.4 J	0.23 J	6.6
Cadmium, Dissolved	µg/L	5	2 B	1.1 J	0.68 J	1.7 J	1.2 B	1 J	1.4 B
Chromium, Dissolved	µg/L	100	1.1 J	1.1 J	58.6	2 J	1.5 J	1.5 J	0.98 B
Cobalt, Dissolved	µg/L	6	36.1	65.4	10.4	134	219	228	105
Copper, Dissolved	µg/L	1,300	5 U	5 U	26.9	10	5 U	5 U	7.8
Iron, Dissolved	µg/L	14,000	1,070	2,650	38,300	465	6,410	6,330	30.4 B
Lead, Dissolved	µg/L	15	5 U	5 U	28	7.7	5 U	5 U	5 U
Manganese, Dissolved	µg/L	430	806	3,860	241	2,470	11,700	11,700	850 J
Nickel, Dissolved	µg/L	390	48.3	64.4	33.2	104	91.2	87.4	106 J
Vanadium, Dissolved	µg/L	86	9	5 U	60.3	5 U	5 U	0.58 J	0.81 B
Zinc, Dissolved	µg/L	6,000	69.6	50.9	86.2	144	135	131	134 J
Other									
Cyanide	µg/L	200	10 U	11	10 U	10 U	7.4 J	7.9 J	10 U

Detections in bold

Values in red indicate an exceedance of the Project Action Limit (PAL)

N/A indicates that the parameter was not analyzed for this sample

*indicates non-validated data

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

J: The positive result reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method blank or field blank.

**Table 10 - Parcel B7 Baltimore County Property Transfer
Cumulative Vapor Intrusion Criteria Comparison**

				B7-053-PZ 12/18/2020		B7-060-PZ 12/11/2020		B7-064-PZ 12/11/2020		B7-065-PZ 12/11/2020	
Parameter	Type	Organ Systems	VI Screening Criteria	Conc. (ug/L)	Risk/Hazard						
Cancer Risk											
1,4-Dioxane	SVOC		130,000	0.5 U	0	0.098 U	0	0.1 U	0	0.016 J	1.2E-12
Naphthalene	SVOC		200	0.5 U	0	0.098 U	0	0.1 U	0	0.098 U	0
Chloroform	VOC		36	1 U	0	1 U	0	1 U	0	1 U	0
Methyl tert-butyl ether (MTBE)	VOC		20,000	1 U	0	0.68 J	3.4E-10	1 U	0	1 U	0
Cumulative Vapor Intrusion Risk =				0		3E-10		0		1E-12	
Non-Cancer Hazard											
Cumulative Vapor Intrusion Non-Cancer Hazard =				0		0		0		0	

				SW-046-MWS 12/18/2020		SW-046-MWS 12/30/2020		SW-047-MWS 12/14/2015	
Parameter	Type	Organ Systems	VI Screening Criteria	Conc. (ug/L)	Risk/Hazard	Conc. (ug/L)	Risk/Hazard	Conc. (ug/L)	Risk/Hazard
Cancer Risk									
1,4-Dioxane	SVOC		130,000	0.033 J	2.5E-12	0.049 J	3.8E-12	0.1 U	0
Naphthalene	SVOC		200	0.095 U	0	0.094 U	0	0.045 B	0
Chloroform	VOC		36	1 U	0	1 U	0	6.1	1.7E-06
Methyl tert-butyl ether (MTBE)	VOC		20,000	10.4	5.2E-09	9.7	4.9E-09	1 U	0
Cumulative Vapor Intrusion Risk =				5E-09		5E-09		2E-06	
Non-Cancer Hazard									
Cumulative Vapor Intrusion Non-Cancer Hazard =				0		0		0	

Highlighted values indicate an exceedance of the cumulative vapor intrusion criteria:

TCR > 1E-05

THI > 1

Conc. = Concentration

U: This analyte was not detected in the sample. The numeric value represents the sample quantitation/detection limit.

J: The positive value reported for this analyte is a quantitative estimate.

B: This analyte was not detected substantially above the level of the associated method or field blank.

**Table 11 - Parcel B7 Baltimore County Property Transfer
Rejected Analytical Results**

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (mg/kg)</u>	<u>PAL (mg/kg)</u>	<u>Exceeds PAL?</u>
B7-053-SB-1	Chromium VI	1.1	6.3	no
B7-053-SB-2	Chromium VI	1.2	6.3	no
B7-054-SB-2	Chromium VI	1.2	6.3	no
B7-054-SB-5	Chromium VI	1.2	6.3	no
B7-056-SB-1	Chromium VI	1.2	6.3	no
B7-056-SB-2	Chromium VI	1.2	6.3	no
B7-056-SB-5	Chromium VI	1.1	6.3	no
B7-058-SB-1	Chromium VI	1.2	6.3	no
B7-058-SB-5	Chromium VI	1.2	6.3	no
B7-059-SB-1	Chromium VI	1.2	6.3	no
B7-059-SB-2	Chromium VI	1.4	6.3	no

<u>Sample ID</u>	<u>Parameter</u>	<u>Result (ug/L)</u>	<u>PAL (ug/L)</u>	<u>Exceeds PAL?</u>
SW-047-MWS	3,3'-Dichlorobenzidine	1	0.12	Yes

"

"

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APPENDIX A

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**Parcel B7 Baltimore County Property Transfer Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland**

Table 1 - Soil Samples

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
Yacht Club Rail Yard Fill Materials	REC 12B, Finding 247	REC Location Map	During the Phase I ESA site visit conducted by Weaver Boos, several piles of fill soil or debris was observed along a small rail yard. The source and contents of these fill materials are unknown as well as their extent into the subsurface.	3	B7-001 through B7-003	Total depth of 20 feet or groundwater.	0-1', 1-2', 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'), Pesticides (0-1' and 1-2')
Scrap Storage Yard		Drawing 5042	Investigate potential impacts related to any historical activities which may have occurred in the vicinity of the Scrap Storage Yard (potential leaks or releases).	2	B7-014 and B7-015	Total depth of 20 feet or groundwater.	0-1', 1-2', 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'), Pesticides (0-1' and 1-2')
Parcel B7 Coverage/Historic Golf Course		1952 Aerial Imagery	Investigate potential impacts related to the historic golf course and any historical activities which may have occurred on the Site (potential leaks or releases).	2	B7-032 and B7-034	Total depth of 20 feet or groundwater.	0-1', 1-2', 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'), Pesticides (0-1' and 1-2')
Former Rail Yard (Fill Materials)		Drawing 5042	Investigate potential impacts related to any historical activities which may have occurred in the vicinity of the former Rail Yard (potential leaks or releases).	2	B7-053 and B7-054	Total depth of 20 feet or groundwater.	0-1', 1-2', 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'), Pesticides (0-1' and 1-2')

**Parcel B7 Baltimore County Property Transfer Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland**

Table 1 - Soil Samples

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
General Coverage/ Historic Golf Course		Current/ 1952 Aerial Imagery	Investigate potential impacts related to the historic golf course and any historical activities which may have occurred on the Site (potential leaks or releases).	7	B7-055 through B7-061	Total depth of 20 feet or groundwater.	0-1', 1-2', 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'), Pesticides (0-1' and 1-2')
MDE Request/ Possible Adjacent Property Migration			Investigate potential impacts related to any historical activities which may have occurred on adjacent property (potential leaks or releases migrations).	2	B7-064 and B7-065	Total depth of 20 feet or groundwater.	0-1', 1-2', 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'), Pesticides (0-1' and 1-2')
Parcel B25 Coverage			Investigate potential impacts related to the historic golf course and any historical activities which may have occurred on the Site (potential leaks or releases).	1	B25-013	Total depth of 20 feet or groundwater.	0-1', 1-2', 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'), Pesticides (0-1' and 1-2')
			Total:	19				

VOC - Volatile Organic Compounds (Target Compound List)
SVOCs - Semivolatile Organic Compounds (Target Compound List)
Metals - (Target Analyte List plus Hexavalent Chromium and Cyanide)
DRO/GRO - Diesel Range Organics/Gasoline Range Organics
O&G - Oil & Grease
PCBs - Polychlorinated Biphenyls
[^]VOCs are only collected if the PID reading exceeds 10 ppm
bgs - Below Ground Surface

**Parcel B7 Baltimore County Property Transfer Sampling Plan Summary
Former Sparrows Point Steel Mill
Sparrows Point, Maryland**

Table 2 - Groundwater Samples

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
Former Rail Yard (Fill Materials)		Drawing 5042	N/A	1	B7-053	Total depth of 7 feet below the water table.	7 feet below water table to 3 feet above water table.	VOC, SVOC, Metals (dissolved), Cyanide (total), O&G, DRO/GRO
General Coverage/ Historic Golf Course		Current/ 1952 Aerial Imagery	N/A	1	B7-060	Total depth of 7 feet below the water table.	7 feet below water table to 3 feet above water table.	VOC, SVOC, Metals (dissolved), Cyanide (total), O&G, DRO/GRO
MDE Request/ Possible Adjacent Property Migration			N/A	2	B7-064 and B7-065	Total depth of 7 feet below the water table.	7 feet below water table to 3 feet above water table.	VOC, SVOC, Metals (dissolved), Cyanide (total), O&G, DRO/GRO
Area B GW Well: Former Rail Yard (Fill Materials)	REC 12B, Finding 247	Drawing 5042	Good	1	SW-046-MWS	15.5 feet bgs	5.5 to 15.5 feet bgs	VOC, SVOC, Metals (dissolved and total), Cyanide (total), O&G, DRO/GRO
Area B GW Well: General Coverage			Destroyed	1	SW-047-MWS*	16.5 feet bgs	6.5 to 16.5 feet bgs	VOC, SVOC, Metals (dissolved and total), Cyanide (total), PCBs, DRO/GRO
			Total:	6				

* Groundwater samples collected from SW-047-MWS in 2015 were used to complete groundwater sampling data for the Baltimore County Property Transfer Site.

VOC - Volatile Organic Compounds (Target Compound List)
 SVOCs - Semivolatile Organic Compounds (Target Compound List)
 Metals - (Target Analyte List plus Hexavalent Chromium and Cyanide)
 DRO/GRO - Diesel Range Organics/Gasoline Range Organics
 O&G - Oil & Grease
 PCBs - Polychlorinated Biphenyls
 bgs - Below Ground Surface

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APPENDIX B

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Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : Allied
 Driller : Lou Davis
 Drilling Equipment : Geoprobe 7822DT

Date : 10/2/18
 Weather : Sunny 80s
 Northing (US ft) : 569597.09
 Easting (US ft) : 1464563.28

Boring ID: B7-001-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		5.5	B7-001-SB-1	(0-2.5') Non-native SAND with SLAG GRAVEL, fine to coarse, medium dense, dark brown, dry, no plasticity, no cohesion	SW/GW	
		21.3	B7-001-SB-2			
	100	184.7		(2.5-3') SILT with SAND, hard, light grayish brown, dry, no plasticity, no cohesion	ML	
		1.7		(3-5.8') SILTY SAND grading to SAND, medium to coarse, very pale brown to pale brown, moist to very moist, no plasticity, no cohesion	SM/SW	
		0.1	B7-001-SB-5			
5		2.0		(5.8-17.6') CLAY with trace SAND, hard grading to soft, very pale brown with reddish yellow mottling then gray from 13-17.6' bgs, dry grading to very moist, low plasticity, cohesive	CL	
	100	0.8				
		1.2				
		3.1				
		2.7				
		0.5				
10		0.0		(17.6-20') SAND, medium dense, very pale brown to yellowish red, wet, no plasticity, no cohesion	SW	
	90	0.1				
		0.1				
		0.0				
15		0.0				
	70	0.0				
		0.0				
		0.0				
20		0.0				
End of boring						

Boring terminated at 20' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : Allied
 Driller : Lou Davis
 Drilling Equipment : Geoprobe 7822DT

Date : 10/2/18
 Weather : Sunny 80s
 Northing (US ft) : 569509.59
 Easting (US ft) : 1464856.34

Boring ID: B7-002-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-002-SB-1	(0-1') SLAG, SAND and GRAVEL-sized, loose, dark brown, dry, no plasticity, no cohesion	SW/GW	
	96	0.0	B7-002-SB-2	(1-13') CLAY with SAND then CLAY, hard, light brown then pale brown with some reddish yellow mottling, dry, low plasticity, cohesive	CL	
		0.0				
		0.0				
5		11.6				
	100	0.1				
		5.5				
		17.3	B7-002-SB-9			
		6.3	B7-002-SB-10			
10		0.0				
	90	0.0				
		0.0				
		0.0		(13-14.8') SILT grading to SILT with SAND, soft, light gray, low plasticity, cohesive	ML	
15		0.0				
	50	-		(14.8-20') SAND, medium to coarse, medium dense, very pale brown grading to yellowish red, wet, no plasticity, no cohesion	SW	Wet at 14.8' bgs
		-				
		0.0				
		0.0				
20		0.0				
End of boring						

Boring terminated at 20' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : Allied
 Driller : Lou Davis
 Drilling Equipment : Geoprobe 7822DT

Date : 10/2/18
 Weather : Sunny 80s

Northing (US ft) : 569310.63
 Easting (US ft) : 1465008.07

Boring ID: B7-003-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B7-003-SB-1	(0-2.2) SLAG, SAND and GRAVEL-sized, fine to very coarse, loose, brown, dry, no plasticity, no cohesion	SW/GW	
		22.2	B7-003-SB-2			
92		38.6		(2.2-19') CLAY, hard to very firm, brownish gray grading to very pale brown with reddish yellow mottling, dry to trace moist, low plasticity, cohesive	CL	
		1.2				
		1.0				
5		19.0	B7-003-SB-6			
		3.6				
	100	7.2				
		2.0				
		0.5	B7-003-SB-10			
10		-				
		1.9				
	80	0.8				
		0.6				
		1.4				
15		0.0				
		2.6				
	96	1.4				
		0.0				
		0.0				
20				(19-20') SAND, medium to coarse, medium dense, yellowish red, wet, no plasticity, no cohesion	SW	Wet at 19' bgs
				End of boring		

Boring terminated at 20' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : Allied
 Driller : Lou Davis
 Drilling Equipment : Geoprobe 7822DT

Date : 10/1/18
 Weather : Sunny 80s
 Northing (US ft) : 569452.48
 Easting (US ft) : 1464509.50

Boring ID: B7-014-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-014-SB-1	(0-2.3') SLAG, SAND and GRAVEL-sized, medium dense, brown to dark brown, dry grading to wet, no plasticity, no cohesion	GW	Thin SAND layer at 7.5' bgs
		1.3	B7-014-SB-2			
	92	0.9		(2.3-5') CLAY with SAND, hard, brownish gray grading to gray, dry, low plasticity, cohesive	CL	
		0.1				
		0.0	B7-014-SB-5			
5		0.0		(5-19') CLAY with SAND, hard, pale brown with reddish yellow mottling, moist, low plasticity, cohesive		
	100	0.3				
		0.2				
		0.1	B7-014-SB-10			
		0.0				
10		-		(19-20') SAND, fine to medium, yellowish red, wet, no plasticity, no cohesion	CL	Wet at 19' bgs
	34	-				
		0.0				
		0.0				
15		0.0				
	100	0.0				
		0.0				
20		0.0				
End of boring						

Boring terminated at 20' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : Allied
 Driller : Lou Davis
 Drilling Equipment : Geoprobe 7822DT

Date : 10/1/18
 Weather : Sunny 80s
 Northing (US ft) : 569345.71
 Easting (US ft) : 1464789.02

Boring ID: B7-015-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS		
0		-	B7-015-SB-1	(0-2.2') SLAG, GRAVEL-sized, with SAND, fine to coarse, dense, dark brown with gray, dry grading to wet, no plasticity, no cohesion	GW	No water encountered		
		0.4	B7-015-SB-2					
	82	2.8		(2.2-4.5') SILT with some SAND, very firm to hard, brownish gray and light brown, dry to moist, low plasticity, cohesive	ML			
		0.0		(4.5-9.8') CLAY with SAND, very firm to hard, gray and light brown then light brown from 8.5-9.8' bgs, dry to moist, low plasticity, cohesive	CL			
5		0.0	B7-015-SB-5					
	96	0.0						
		0.3		(9.8-10') SAND, fine to medium, yellowish red, wet, no plasticity, no cohesion	SW			
		0.0	B7-015-SB-10					
10		0.0					(10-20') CLAY, soft then hard, very pale brown grading to pale brown with reddish yellow mottling, dry, low plasticity, cohesive	CL
	100	0.0						
		0.0						
		0.0		(10-20') CLAY, soft then hard, very pale brown grading to pale brown with reddish yellow mottling, dry, low plasticity, cohesive	CL			
15		-						
		-						
	100	0.0						
		0.0		(10-20') CLAY, soft then hard, very pale brown grading to pale brown with reddish yellow mottling, dry, low plasticity, cohesive	CL			
		0.0						
20		0.0						
End of boring								

Boring terminated at 20' bgs due to Work Plan.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : J. Barna
 Checked by : M. Hritz, E.I.T.
 Drilling Company : ARMGroup LLC
 Driller : J. Barna/R. Clancy
 Drilling Equipment : Hand auger

Date : 12/21/20
 Weather : Sunny 40s

Northing (US ft) : 570341
 Easting (US ft) : 1464572

Boring ID: B7-032-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS	
0				(0-0.5') CLAY with SAND grading to CLAYEY SAND, loose, light gray, moist	CL/SC		
		0.0	B7-032-SB-1	(0.5-2') CLAYEY SAND, loose, moist, light gray	SC		
		0.0	B7-032-SB-2				
100		0.0		(2-5') CLAY with SAND, moist, light brown and gray, low plasticity, cohesive	CL		
		0.0	B7-032-SB-5				
5			End of boring				Wet at 5' bgs

Boring terminated at 5' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : Allied
 Driller : Lou Davis
 Drilling Equipment : Geoprobe 7822DT

Date : 10/2/18
 Weather : Sunny 80s
 Northing (US ft) : 569888.77
 Easting (US ft) : 1464306.99

Boring ID: B7-034-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.1	B7-034-SB-1	(0-0.9') SILT with some SAND and light amount of ORGANIC matter, firm, brown, moist, low plasticity, cohesive	ML	Wet at 6.8' bgs
		0.0	B7-034-SB-2	(0.9-6.8') CLAY, hard, light brownish gray and reddish yellow mottling, dry, low plasticity, cohesive	CL	
90		7.1				
		5.3				
		5.5				
5		-				
		57.9	B7-034-SB-7	(6.8-8.5') SAND, dense, reddish yellow and light brownish gray, wet, no plasticity, no cohesion	SW	
88		0.6				
		1.6		(8.5-10') CLAY with some SAND, hard, reddish yellow and light grayish brown mottling, moist, low plasticity, cohesive	CL	
10		0.9				
End of boring						

Boring terminated at 10' bgs due to water



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Soil Boring Installation Date : 12/07/2020
 Piezometer Installation Date : 12/07/2020
 Casing/Riser/Screen Type : PVC
 Borehole Diameter : 2.25"
 Riser/Screen Diameter : 1"
 Northing (US ft) : 569506.43
 Easting (US ft) : 1464341.91
 48-Hr DTW : 2.90' TOC
 No LNAPL or DNAPL detected at 0 or 48 hours

Boring ID: B7-053-SB/PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B7-053-SB-1	(0-1.5') SLAG, GRAVEL-sized, fine to coarse, medium dense, light gray and light grayish brown, dry to moist, non-plastic, non-cohesive	GW	<p>1" PVC Riser Bentonite Seal Sand Pack 1" PVC Screen End Cap</p>
	90	1.3	B7-053-SB-2	(1.5-2.2') CLAY with SAND, hard, brown with black grading to light grayish brown, dry, low plasticity, cohesive	CL	
		1.1		(2.2-3') CLAYEY SAND, medium dense, light grayish brown with reddish yellow, dry, non-plastic, non-cohesive	SC	
		0.0		(3-4') SAND with CLAY, very fine to medium, medium dense, reddish yellow and light grayish brown, very moist, non-plastic, non-cohesive	SW-SC	
5		0.0	B7-053-SB-5	(4-5') CLAY with trace SAND, hard, light brownish gray and reddish yellow, moist, low plasticity, cohesive	CL	
		0.0		(5-7.5') SLAG, GRAVEL-sized, fine to coarse, with SAND and CLAY lenses, medium dense, grayish brown and light brown, wet, non-plastic, non-cohesive	GW/SW	
10		0.0		(7.5-13') CLAY, soft to firm, light brown with some reddish yellow, very moist to wet, low plasticity, cohesive	CL	
	50	0.0				
		0.0				
		0.0				
15				End of Boring		Wet at 5' bgs

Boring terminated at 13' bgs due to water and piezometer installation
 TOC: Top of PVC casing
 DTW: Depth to water
 bgs: Below ground surface

Riser Stickup: 1.90' ags
 Riser: 0 - 3' bgs
 Screen: 3 - 13' bgs [Slot Size: 0.010"]
 Sand Pack: 2 - 13' bgs [Grain Size: WG #2]
 Bentonite Seal: 0 - 2' bgs [Grain Size: bentonite chips]



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/07/2020
 Weather : Cloudy, 40's

Northing (US ft) : 569467.68
 Easting (US ft) : 1464720.39

Boring ID: B7-054-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-054-SB-1	(0-0.7') SLAG, SAND and GRAVEL-sized, medium dense, light gray and brown, very moist, no plasticity, no cohesion	GW/SW	
1		0.9	B7-054-SB-2	(0.7-5') CLAY, hard, brownish gray, dry, low plasticity, cohesive	CL	
2	100	1.0				
3		1.3				
4		0.0	B7-054-SB-5			
5		0.0		(5-19') CLAY, very firm, brownish gray, low plasticity, cohesive, trace SAND and SILT	CL	
6	100	0.0				
7		0.0				
8		0.0				
9		0.0				
10		0.0	B7-054-SB-10			
11		0.0				
12	100	0.0				
13		0.0				
14		0.0				
15		0.2				
16		0.0				
17	100	0.0				
18		0.0				
19		0.0		(19-20') SAND, very fine to medium, medium dense, reddish yellow, wet, non-plastic, non-cohesive	SW	Wet at 19' bgs
20		0.0		End of Boring		
21						

Total Borehole Depth: 20' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/08/2020
 Weather : Sunny, 30s

Northing (US ft) : 569341.76
 Easting (US ft) : 1464324.00

Boring ID: B7-055-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-055-SB-1	(0-0.8') SILT with some ORGANIC matter, soft, dark brown, moist, low plasticity, cohesive	ML	No water encountered
1		0.0	B7-055-SB-2	(0.8-5') CLAY with SAND grading to CLAY, firm grading to hard, reddish yellow and very pale brown, moist grading to dry, low plasticity, cohesive	CL	
2	100	0.0				
3		0.0				
4		0.0				
5		0.0	B7-055-SB-5			
6		-		(5-6.7') SILT with trace SAND, hard, grayish brown, dry, low plasticity, cohesive	ML	
7	90	0.0		(6.7-10') CLAY with trace SAND, hard, reddish yellow and very pale brown, dry, low plasticity, cohesive	CL	
8		0.0				
9		0.0	B7-055-SB-10			
10		-		(10-20') CLAY, firm then soft at 14' bgs, reddish yellow then gray at 14' bgs, moist then very moist at 14' bgs, low plasticity, cohesive	CL	
11		0.0				
12	92	0.0				
13		0.0				
14		0.0				
15		0.0				
16		0.0				
17	100	0.0				
18		0.0				
19		0.0				
20		0.0				
21				End of Boring		

Total Borehole Depth: 20' bgs due to Work Plan.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/07/2020
 Weather : Cloudy, 40s

Northing (US ft) : 569413.98
 Easting (US ft) : 1465121.86

Boring ID: B7-056-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-056-SB-1	(0-0.6') SLAG, GRAVEL-sized, fine to coarse, light gray and gray, dry, non-plastic, non-cohesive	GW	
1		0.0	B7-056-SB-2	(0.6-3.5') CLAY with trace GRAVEL, hard, light grayish brown, dry, low plasticity, cohesive	CL	
2	100	0.0				
3		0.0				
4		0.0	B7-056-SB-5	(3.5-5.4') SILT with SAND, hard, brown, dry, low plasticity, cohesive	ML	
5		-				
6		0.0		(5.4-10.7') CLAY with SAND, very firm to soft, dry to moist, low plasticity, cohesive	CL	
7	84	0.0				
8		0.0				
9		0.0	B7-056-SB-10			
10		-				
11		-		(10.7-18.2') CLAY, soft to firm, light grayish brown, very moist, low plasticity, cohesive	CL	
12	70	0.0				
13		0.0				
14		0.0				
15		0.0				
16		0.0				
17	100	0.0				
18		0.0				
19		0.0		(18.2-20') SAND, very fine to medium, medium dense, reddish yellow and yellowish red, wet, non-plastic, non-cohesive	SW	Wet at 18.2' bgs
20		0.0				
21				End of Boring		

Total Borehole Depth: 20' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/10/2020
 Weather : Sunny, 40s

Northing (US ft) : 569717.90
 Easting (US ft) : 1464202.81

Boring ID: B7-057-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-057-SB-1	(0-2.3') SILT with SAND and CLAY, firm, brown, dry, non-plastic, non-cohesive	ML	Wet at 5' bgs
1		0.0	B7-057-SB-2			
2	94	0.0		(2.3-5') SLAG, CLAYEY SAND and GRAVEL-sized, medium dense, brown and gray, moist, non-plastic, non-cohesive	SC/GC	
3		0.0				
4		0.0	B7-057-SB-5			
5		0.0		(5-5.7') SLAG, SAND and GRAVEL-sized, loose, gray, wet, non-plastic, non-cohesive	GW	
6		0.0		(5.7-10') CLAYEY SAND, medium dense, light gray and reddish yellow mottling, wet, non-plastic, non-cohesive	SC	
7	100	0.0				
8		0.0				
9		0.0				
10			End of Boring			

Total Borehole Depth: 10' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/07/2020
 Weather : Sunny, 40s

Northing (US ft) : 569770.32
 Easting (US ft) : 1464456.49

Boring ID: B7-058-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B7-058-SB-1	(0-1.3') SILT with trace SAND and ORGANIC matter, very firm, brown, dry to moist, low plasticity, cohesive	ML	
1		-	B7-058-SB-2	(1.3-4.7') CLAY with SAND, very firm to hard, reddish yellow, dry, low plasticity, cohesive	CL	
2	50	0.0				
3		0.0				
4		0.0	B7-058-SB-5			
5		0.0		(4.7-5') SAND, fine to medium, reddish yellow, dry, non-plastic, non-cohesive	SW	
6		0.0		(5-16.8') CLAY, hard then soft at 15' bgs, light brownish gray with reddish yellow mottling, dry then moist at 15' bgs, low plasticity, cohesive	CL	
7	100	0.0				
8		0.0				
9		0.0				
10		0.0				
11		0.0				
12	92	0.2				
13		0.2				
14		0.0				
15		0.0				
16		-				
17		0.0		(16.8-20') SAND, fine to medium, reddish yellow then yellowish red at 18' bgs, then reddish yellow at 18.8' bgs, wet, non-plastic, non-cohesive	SW	Wet at 16.8' bgs
18	92	0.0				
19		0.0				
20		0.0				
21				End of Boring		

Total Borehole Depth: 20' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/07/2020
 Weather : Sunny, 40s

Northing (US ft) : 569742.54
 Easting (US ft) : 1464874.90

Boring ID: B7-059-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		-	B7-059-SB-1	(0-1') SILT with SAND and ORGANIC MATTER, firm, dark brown, moist, low plasticity, cohesive	ML	
1		0.3	B7-059-SB-2	(1-10') CLAY with trace SAND and SILT, soft then hard to very firm, reddish yellow, dry, non-plastic, non-cohesive	CL	
2	84	0.3				
3		1.2				
4		0.8	B7-059-SB-5			
5		0.1				
6		0.1				
7	90	0.1				
8		0.2				
9		0.2	B7-059-SB-10			
10		0.0		(10-18') CLAY, soft, reddish yellow and very pale brown, very moist, low plasticity, cohesive	CL	
11		0.0				
12	100	0.0				
13		0.0				
14		0.0				
15		0.0				
16		0.0				
17	86	0.0				
18		0.0		(18-20') SAND, medium dense, wet, non-plastic, non-cohesive	SW	Wet at 18' bgs
19		0.0				
20		0.0				
21				End of Boring		

Total Borehole Depth: 20' bgs due to water.



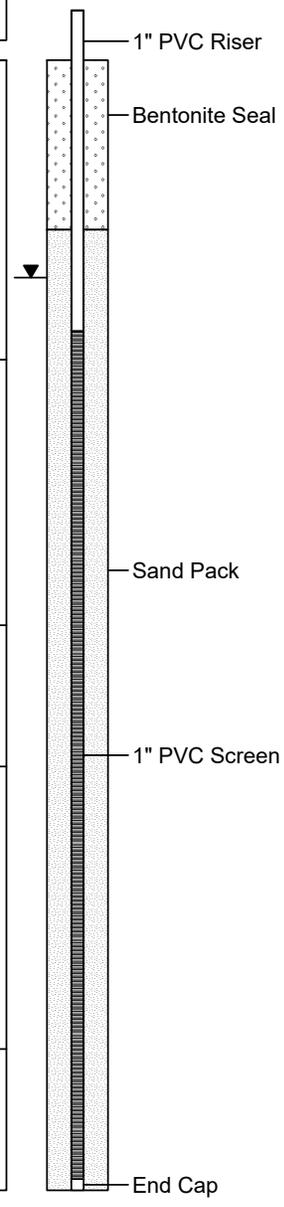
Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Soil Boring Installation Date : 12/08/2020
 Piezometer Installation Date : 12/08/2020
 Casing/Riser/Screen Type : PVC
 Borehole Diameter : 2.25"
 Riser/Screen Diameter : 1"
 Northing (US ft) : 569934.34
 Easting (US ft) : 1464669.10
 48-Hr DTW : 7.35' TOC
 No LNAPL or DNAPL detected at 0 or 48 hours

Boring ID: B7-060-SB/PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0	94	0.0	B7-060-SB-1	(0-5.3') SILT with some SLAG, GRAVEL-sized, and some ORGANIC matter, soft then hard at 2.7' bgs, dark brown, moist to very moist then dry at 2.7' bgs, low plasticity, cohesive	ML	
		0.0	B7-060-SB-2			
		1.1				
		2.4				
		0.6	B7-060-SB-5			
5	92	0.0		(5.3-10') CLAY, soft to firm then hard at 7' bgs, reddish yellow and pale brown, very moist to dry, low plasticity, cohesive	CL	
		0.0				
		0.0				
		0.2				
	0.3	B7-060-SB-10				
10	90	-		(10-12.5') CLAY with SAND with very small intermittent wet SAND layers, firm to soft, very pale brown with reddish yellow, moist, low plasticity, cohesive	CL	
		0.0				
		0.0				
	0.0			(12.5-17.5') Small alternating CLAY with SAND and CLAYEY SAND layers, soft and medium dense, very pale brown and reddish yellow, very moist and wet, low plasticity with non-plastic sand, cohesive with non-cohesive sand	CL/SC	
15	-					
	60	0.0		(17.5-20') SAND, fine to medium, medium dense, very pale brown and reddish yellow with some yellowish red, wet, non-plastic, non-cohesive	SW	
		0.0				
		0.0				
20				End of Boring		



Wet at 12.5' bgs

Boring terminated at 20' bgs due to water and piezometer installation
 TOC: Top of PVC casing
 DTW: Depth to water
 bgs: Below ground surface

Riser Stickup: 3.50' ags
 Riser: 0 - 5' bgs
 Screen: 5 - 20' bgs [Slot Size: 0.010"]
 Sand Pack: 3 - 20' bgs [Grain Size: WG #2]
 Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/10/2020
 Weather : Sunny, 40s

Northing (US ft) : 570141.12
 Easting (US ft) : 1464509.77

Boring ID: B7-061-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-061-SB-1	(0-4.8') CLAY with SAND, firm to hard, light gray with reddish yellow mottling, dry, low plasticity, cohesive	CL	Organics at surface
1		0.0	B7-061-SB-2			
2	100	0.0				
3		0.0	B7-061-SB-4			
4		0.0		(4.8-5') SAND, coarse, medium dense, brown to reddish yellow, wet, non-plastic, non-cohesive (5-10') NO RECOVERY; HEAVING SANDS	SP	Wet at 4.8' bgs
5		-				
6		-		(10-12') CLAY with SAND, soft to firm, light gray with reddish yellow mottling, moist, low plasticity, cohesive	SW	
7	0	-				
8		-				
9		-				
10		0.0			CL	
11	100	0.0				
12			End of Boring			
13						

Total Borehole Depth: 12' bgs due to water.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Soil Boring Installation Date : 12/10/2020
 Piezometer Installation Date : 12/10/2020
 Casing/Riser/Screen Type : PVC
 Borehole Diameter : 2.25"
 Riser/Screen Diameter : 1"
 Northing (US ft) : 570349.36
 Easting (US ft) : 1464521.81
 24-Hr DTW : 5.81' TOC
 No LNAPL or DNAPL detected at 0 or 48 hours

Boring ID: B7-064-SB/PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.9	B7-064-SB-1	(0-0.7') SILT with SAND and CLAY, soft, brown, very moist, non-plastic, non-cohesive	ML	<p>1" PVC Riser Bentonite Seal Sand Pack 1" PVC Screen End Cap</p> <p>Organics at surface</p> <p>Wet at 5' bgs</p>
		1.1	B7-064-SB-2	(0.7-5') CLAY with SAND, hard, light gray with reddish yellow mottling, dry, low plasticity, cohesive	CL	
100		0.0			CL	
		0.0				
		0.0	B7-064-SB-5			
5		0.0		(5-6.2') CLAYEY SAND, fine, loose, light gray, pale brown, and reddish yellow, wet, non-plastic, non-cohesive	SC	
		0.0		(6.2-10') CLAY with SAND, firm to hard, light gray with reddish yellow mottling, moist, low plasticity, cohesive	CL	
100		0.0			CL	
		0.0				
		0.0				
10		0.0		(10-14.5') SAND, fine, loose, light gray, very pale brown, and reddish yellow, wet, non-plastic, non-cohesive	SP	
		0.0				
		0.0				
		0.0				
15		0.0		(14.5-15') CLAY with SAND, firm to hard, light gray with reddish yellow mottling, moist, low plasticity, cohesive	CL	
				End of Boring		

Boring terminated at 15' bgs due to water and piezometer installation
 TOC: Top of PVC casing
 DTW: Depth to water
 bgs: Below ground surface

Riser Stickup: 2.88' ags
 Riser: 0 - 5' bgs
 Screen: 5 - 15' bgs [Slot Size: 0.010"]
 Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
 Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]



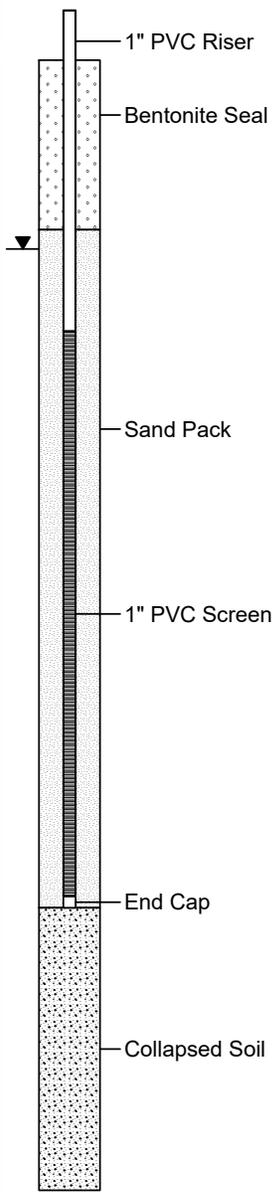
Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Sparrows Point - Parcel B7
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Soil Boring Installation Date : 12/10/2020
 Piezometer Installation Date : 12/10/2020
 Casing/Riser/Screen Type : PVC
 Borehole Diameter : 2.25"
 Riser/Screen Diameter : 1"
 Northing (US ft) : 570371.97
 Easting (US ft) : 1464504.95
 24-Hr DTW : 6.26' TOC
 No LNAPL or DNAPL detected at 0 or 48 hours

Boring ID: B7-065-SB/PZ

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		0.0	B7-065-SB-1	(0-1') SILT with SAND and CLAY, soft to firm, brown with light gray and reddish yellow mottling, moist, non-plastic, non-cohesive	ML	Organics at surface
		1.1	B7-065-SB-2			
	100	0.4		(1-6') CLAY with SAND, hard, light gray with reddish yellow mottling, dry, low plasticity, cohesive	CL	Wet at 7' bgs
		0.0				
5		0.0	B7-065-SB-5			
	50	-		(6-10') CLAYEY SAND with SILT, loose to medium dense, wet, non-plastic, non-cohesive	SC	
		0.0				
10		0.0				
	10	-		(10-15') SAND, fine, medium dense, reddish yellow, wet, non-plastic, non-cohesive; HEAVING SANDS	SP	
		-				
15		-				
	100	0.0		(15-20) CLAY with SAND grading to CLAY, firm to soft, light gray grading to dark gray, moist, low plasticity, cohesive	CL	
		0.0				
		0.0				
20		0.0				
End of Boring						



Boring terminated at 20' bgs due to water and piezometer installation
 TOC: Top of PVC casing
 DTW: Depth to water
 bgs: Below ground surface

Riser Stickup: 2.92' ags
 Riser: 0 - 5' bgs
 Screen: 5 - 15' bgs [Slot Size: 0.010"]
 Sand Pack: 3 - 15' bgs [Grain Size: WG #2]
 Bentonite Seal: 0 - 3' bgs [Grain Size: bentonite chips]



Client : Tradepoint Atlantic
 ARM Project No. : 20010225
 Project Description : Sparrows Point - Parcel B25
 Site Location : Sparrows Point, MD
 ARM Representative : L. Perrin
 Checked by : M. Hritz, E.I.T.
 Drilling Company : Allied
 Driller : Tim Moyer
 Drilling Equipment : Geoprobe 77DT

Date : 10/17/18
 Weather : Sunny, 60s

Northing (US ft) : 569375.05
 Easting (US ft) : 1464067.49

Boring ID: B25-013-SB

(page 1 of 1)

Depth (ft.)	% Recovery	PID Reading (PPM)	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0		34.4	B25-013-SB-1	(0-1') SANDY SILT with heavy organic matter, soft, dark brown, dry, no plasticity, no cohesion	ML	Wet at 8' bgs
		7.0	B25-013-SB-2	(1-7.6') CLAY, very firm then hard at 1.8-5' bgs, then very firm grading to soft at 5-7.6' bgs, reddish yellow with pale brown mottling, dry then moist at 5' bgs grading to very moist, low plasticity, cohesive	CL	
	92	2.4				
		8.9				
		0.0				
5		1128	B25-013-SB-6			
		58.8				
	100	147.3		(7.6-8') SANDY CLAY, very firm, reddish yellow, very moist, low plasticity, cohesive	CL	
		0.4		(8-9.5') SILTY SAND, very fine to medium, dense, pale brown, wet, no plasticity, no cohesion	SM	
		0.3		(9.5-10') SAND, fine to coarse, medium dense to dense, yellowish red, wet, no plasticity, no cohesion	SW	
10				End of boring		

Boring terminated at 10' bgs due to water



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Parcel B7 Slag Delineation
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/08/2020
 Weather : Sunny, 30s

Northing (US ft) : 569519.9
 Easting (US ft) : 1464143.1

Boring ID: Transect 1-1

(page 1 of 1)

Depth (ft.)	% Recovery	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			(0-0.1') SLAG, GRAVEL-sized, gray, dry	GW	No water encountered
1			(0.1-1.7') SILTY SAND, loose, black and gray, dry, non-plastic, non-cohesive	SM	
2			(1.7-5') SANDY CLAY, hard, gray grading to light gray with yellowish red mottling, dry, low plasticity, cohesive	CL	
3	100	None			
4					
5			End of Boring		
6					

Total Borehole Depth: 5' bgs due to Work Plan.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Parcel B7 Slag Delineation
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/08/2020
 Weather : Sunny, 30s

Northing (US ft) : 569660.9
 Easting (US ft) : 1464478.6

Boring ID: Transect 2-1

(page 1 of 1)

Depth (ft.)	% Recovery	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			(0-1.5') SILT with CLAY and SAND, firm, brown, moist, non-plastic, non-cohesive	ML	No water encountered
1			(1.5-3.5') SAND, coarse, medium dense, light brown and yellowish red, moist, non-plastic, non-cohesive	SP	
2	80	None	(3.5-5') CLAY with SAND, firm, light gray with yellowish red mottling, moist, low plasticity, cohesive	CL	
3					
4					
5			End of Boring		
6					

Total Borehole Depth: 5' bgs due to Work Plan.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Parcel B7 Slag Delineation
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/08/2020
 Weather : Sunny, 30s

Northing (US ft) : 569614.0
 Easting (US ft) : 1464819.6

Boring ID: Transect 3-1

(page 1 of 1)

Depth (ft.)	% Recovery	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			(0-2.3') SLAG, GRAVEL-sized with some SAND-sized, loose, black and dark gray, moist, non-plastic, non-cohesive	GW	No water encountered
1 2 3	100	None	(2.3-5') CLAY, hard, light gray with light brown mottling, dry, low plasticity, cohesive	CL	
5			End of Boring		
6					

Total Borehole Depth: 5' bgs due to Work Plan.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Parcel B7 Slag Delineation
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/08/2020
 Weather : Sunny, 30s

Northing (US ft) : 569660.2
 Easting (US ft) : 1464838.6

Boring ID: Transect 3-2

(page 1 of 1)

Depth (ft.)	% Recovery	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			(0-2.1') SILT with SAND, firm, dark brown, moist, non-plastic, non-cohesive		
1				ML	
2					No water encountered
	94	None	(2.1-5') CLAY with SAND, hard, light gray with yellowish brown mottling, moist, low plasticity, cohesive		
3					
				CL	
4					
5			End of Boring		
6					

Total Borehole Depth: 5' bgs due to Work Plan.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Parcel B7 Slag Delineation
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/08/2020
 Weather : Sunny, 30s

Northing (US ft) : 569420.9
 Easting (US ft) : 1465044.0

Boring ID: Transect 4-2

(page 1 of 1)

Depth (ft.)	% Recovery	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			(0-1.2') SLAG, SAND and GRAVEL-sized, medium dense, light gray and dark gray, moist, non-plastic, non-cohesive	GW	No water encountered
1			(1.2-4') CLAY, hard, light gray with yellowish red mottling, dry, low plasticity, cohesive	CL	
2	92	None	(4-5') CLAY with SAND, firm, light brown, dry, low plasticity, cohesive	CL	
3					
4					
5			End of Boring		
6					

Total Borehole Depth: 5' bgs due to Work Plan.



Client : Tradepoint Atlantic
 ARM Project No. : 20010207
 Project Description : Parcel B7 Slag Delineation
 Site Location : Sparrows Point, MD
 ARM Representative : L. Glumac
 Checked by : M. Hritz, E.I.T.
 Drilling Company : GSI
 Driller : A. Berenbrok-Niblett
 Drilling Equipment : Geoprobe 7822DT

Date : 12/08/2020
 Weather : Sunny, 30s

Northing (US ft) : 569290.4
 Easting (US ft) : 1464551.2

Boring ID: Transect 5-1

(page 1 of 1)

Depth (ft.)	% Recovery	Sample No/Interval	DESCRIPTION	USCS	REMARKS
0			(0-4.5') SLAG, SAND and GRAVEL-sized, dark and light gray, moist, non-plastic, non-cohesive		
1					
2					
2.5	80	None		GW	No water encountered
3					
4					
4.5			(4.5-5') CLAY with SAND, firm, light gray and light brown, dry, low plasticity, cohesive	CL	
5			End of Boring		
6					

Total Borehole Depth: 5' bgs due to Work Plan.



Project Name : Sparrows Point
 Project Number : 150300M-10-3
 Client : EnviroAnalytics Group
 Site : Sparrows Point - Area B
 Borehole Location : Parcel B-7
 ARM Representative : Peter Vogel
 Checked by : Peter Vogel
 Drilling Company : Allied Well Drilling
 Driller : Mike Waller, Austin Bonacum
 Drilling Equipment : Diedrich-D120

Northing (ft) : 569504.23
 Easting (ft) : 1464948.41
 Date/Time Started : 11/02/15 / 1400
 Date/Time Completed : 11/02/15 / 1600
 Surf. Elev. (ft AMSL) : 10.1
 TOC Elev. (ft AMSL) : 9.80
 Total Depth (ft) : 15.5' (bgs)
 Depth to Water (ft) : 8.0 (bgs) 11/03/15
 Depth to Water (ft) : 7.41' (TOC) 12/11/15
 Bit/Auger Size (in.) : 7.75" OD (4.25" ID) HSA

Well ID: SW-046-MWS

(page 1 of 1)

Depth (ft.)	Surf. Elev. 10.1	LITHOLOGIC DESCRIPTION		COMPLETION DETAILS
0	10.1	0-1' Gravelly SAND, gray to black, dense, dry (fill)		2x2' concrete pad 8-inch Flush-mount Protective Cover
		1-2' Sandy SILT, light gray with some brown, very stiff, fine grained, dry (fill)		
		2-3' Silty SAND, light gray, very stiff, fine grained sand with trace clay, moist (fill)		
		3-4' Clayey SAND, tan to light gray, stiff, with trace coarse sand to fine gravel, moist (fill)		
5	5.1	4-14' Clayey SILT, light gray to brown, medium stiff to stiff, mottled, moist; 2" seam of dark brown gravelly sand at ~13' bgs, slag gravel (fill)		Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): -0.3 (Flush- Mount)
10	.1			Screen: Sch 40 PVC Screen Diameter: 2 in Top of Screen: 5.5' bgs Screen Amount: 10.0 lf Slot Size: 0.020"
		14-16' SAND, light brown, stiff, fine grained, wet		Bentonite Seal: 3/8" chips Top: 2.0' Bottom: 4.0' Filter Pack: Filpro WG2 Top: 4.0' Bottom: 16.0'
15	-4.9	16-18' SAND, tan, fine grained, medium stiff, fine grained, trace fine well rounded gravel, wet		
20		End of Boring		Monitoring Well Development Date: 11/09/15 Purged Amount: 50 gal. Well Volumes Removed: 28 Time Started/Completed: 1515/1755

TOC - Top of PVC Casing
 AMSL - Above Mean Sea Level
 ags - above ground surface
 bgs - below ground surface



Project Name : Sparrows Point
 Project Number : 150300M-10-3
 Client : EnviroAnalytics Group
 Site : Sparrows Point - Area B
 Borehole Location : Parcel B-7
 ARM Representative : Peter Vogel
 Checked by : Peter Vogel
 Drilling Company : Allied Well Drilling
 Driller : Mike Waller, Austin Bonacum
 Drilling Equipment : Diedrich-D120

Northing (ft) : 570242.63
 Easting (ft) : 1464394.66
 Date/Time Started : 11/25/15 / 0915
 Date/Time Completed : 11/25/15 / 1200
 Surf. Elev. (ft AMSL) : 20.6
 TOC Elev. (ft AMSL) : 20.24
 Total Depth (ft) : 16.8' (bgs)
 Depth to Water (ft) : 9.5 (bgs) 11/30/15
 Depth to Water (ft) : 8.4' (TOC) 12/11/15
 Bit/Auger Size (in.) : 7.75" OD (4.25" ID) HSA

Well ID: SW-047-MWS

(page 1 of 1)

Depth (ft.)	Surf. Elev. 20.6	LITHOLOGIC DESCRIPTION	COMPLETION DETAILS	
0	20.6	<p>0-3.8' Gravelly SAND, dark brown, dense to medium dense fine to coarse grained, dry (fill)</p> <p>3.8-5' Clayey SILT, light brown to gray, stiff, mottled, moist</p> <p>5-11' SILT, light brown to gray, very stiff, with trace clay, mottled, moist</p> <p>grading to fine grained sand at 11' bgs</p> <p>11-13.5' Silty SAND, light brown to gray, very stiff, fine grained, wet</p> <p>13.5-14.5' SAND, orangish brown, medium stiff, fine grained</p> <p>14.5-19' Clayey SILT, light brown to gray, moist</p> <p>with rusty iron particles and friable gravel sized material from 17-19' bgs (possible fill material)</p> <p>19-20' Clayey SILT, light brown to gray, medium stiff, wet</p> <p>End of Boring</p>	<p>SW-47-MWS</p> <p>Casing</p> <p>Sand</p> <p>Concrete</p> <p>Bentonite Seal</p> <p>2" PVC Riser</p> <p>Fine Sand</p> <p>Sand Pack</p> <p>2" PVC Screen</p> <p>End Cap</p>	<p>2x2' concrete pad 8-inch Flush-mount Protective Cover</p> <p>Riser: Sch 40 PVC Riser Diameter: 2 in Riser Stickup (ags): -0.3 (Flush-Mount)</p> <p>Screen: Sch 40 PVC Screen Diameter: 2 in Top of Screen: 6.5' bgs Screen Amount: 10.0 lf Slot Size: 0.020"</p> <p>Bentonite Seal: 3/8" chips Top: 2.0' Bottom: 5.0' Fine Sand: FilterSil "000" Top: 5.0' Bottom: 5.5' Filter Pack: DSI M2 Sand Top: 5.5' Bottom: 17.5'</p> <p>Monitoring Well Development Date: 12/11/15 Purged Amount: 30 gal. Well Volumes Removed: 21 Time Started/Completed: 1034/1140</p>

TOC - Top of PVC Casing
 AMSL - Above Mean Sea Level
 ags - above ground surface
 bgs - below ground surface

APPENDIX C

Parcel B7 - PID Calibration Log

PROJECT NAME: Area B, Parcel B7 Phase II				SAMPLER NAME: L. Perrin, L. Glumac, M. Kedenburg			
PROJECT NUMBER: 20010207				DATE: Oct. 2018 - Dec. 2020		PAGE <u>1</u> of <u>1</u>	
DATE/TIME	SAMPLER INITIALS	PID SERIAL #	FRESH AIR CAL	STANDARD	STANDARD CONCENTRATION	METER READING	COMMENTS
10/1/2018 10:20	MK	592-913262	0.0	Isobutylene	100 ppm	100.0	-
10/2/2018 8:20	MK	592-913262	0.0	Isobutylene	100 ppm	100.0	-
10/3/2018 8:25	LLP	592-913262	0.0	Isobutylene	100 ppm	100.0	-
10/4/2018 8:10	MK	592-913262	0.0	Isobutylene	100 ppm	101.0	-
10/5/2018 8:15	LLP	592-913262	0.0	Isobutylene	100 ppm	99.8	-
10/8/2018 8:30	MK	592-913262	0.0	Isobutylene	100 ppm	99.6	-
10/30/2018 9:30	MK	592-913262	0.0	Isobutylene	100 ppm	99.6	-
10/31/2018 8:45	MK	12673	0.0	Isobutylene	100 ppm	100.0	-
3/7/2019 9:40	LLP	592-913262	0.0	Isobutylene	100 ppm	100.0	-
3/8/2019 8:20	LLP	592-913262	0.0	Isobutylene	100 ppm	100.0	-
9/18/2019 9:00	LMG	592-913262	0.0	Isobutylene	100 ppm	100.0	-
12/7/2020 8:45	LLP	032401	0.0	Isobutylene	100 ppm	100.0	-
12/8/2020 8:15	LLP	032401	0.0	Isobutylene	100 ppm	100.0	-
12/10/2020 11:00	LMG	032401	0.0	Isobutylene	100 ppm	100.0	-
12/21/2020 NR	NR	NR	NR	Isobutylene	100 ppm	NR	-

NR: indicates that the PID calibration was not recorded on 12/21/2020.

APPENDIX D

Low Flow Sampling Permanent Wells



ARM Group Inc.
Bank Resource Engineers and Consultants

Project Name: **20010207 B7 Phase II**

Project Number: **20010207**

Well Number: **B7-053-PZ**

Date: **12/30/20**

Well Diameter (in): **1"**

One Well Volume (gal):

Depth to Product (ft):

QED Controller Settings:

Depth to Water (ft): **3.23' TOC**

Flow Rate (mL/min) **100 ml/min**

Product Thickness (ft):

Length of time Purged (min)

Depth to Bottom (ft): **15.15' TOC**

Condition of Pad/Cover: **/**

PURGING RECORD

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
1148	0	3.23	8.87	9.80	0.574	0.0	113	0.0	
1153	0.13	7.60	8.96	9.03	0.586	0.0	95	197	
1158	0.26	9.73	9.09	8.79	0.588	0.0	202.47	992	
1203	0.39	11.67	9.14	8.61	0.590	0.0	28	996	
1208	0.52	13.60	9.20	8.47	0.591	3.43	-16	881	
1213	~0.65								purged dry

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
B7-053-PZ	1350	TCL-VOCs	3 - 40 mL VOA	HCl	
		TPH-GRO	3 - 40 mL VOA	HCl	
		TPH-DRO	2 - 1 L Amber	none	
		TCL-SVOCs	2 - 1 L Amber	none	
		Oil & Grease	2 - 1 L Amber	HCl	
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	
		Total Cyanide	1 - 250 mL Plastic	NaOH	
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	X
PCB	2 - 1 L Amber	None			
Matrix Spike					
Duplicate					

Sampled By: LER

Comments: Purged dry, returned to sample later
DTW @ sampling: 3.97' TOC
run 5 min before sampling @ 1350

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
ft x gal/ft = (gal)

Low Flow Sampling Permanent Wells



ARM Group Inc.
Earth Resources, Engineers, and Consultants

Project Name: B7 Phasett

Project Number: 20016207

Well Number: SW-046-MWS

Date: 12/30/20

Well Diameter (in): 2"

One Well Volume (gal):

Depth to Product (ft):

QED Controller Settings:

Depth to Water (ft): 7.97' TOC

Flow Rate (mL/min) 150 ml/min

Product Thickness (ft):

Length of time Purged (min)

Depth to Bottom (ft): 15.72' TOC

Condition of Pad/Cover: /

PURGING RECORD

Time	Volume Purged (gallons)	DTW (feet)	Temp (°C)	pH (s.u.) ± 0.1	Specific Conductance (ms/cm) ± 3%	Dissolved Oxygen (mg/L) ± 0.3	ORP (mV) ± 10	Turbidity (NTU) ± 10% or < 5	Comments
1254	0	7.97'	10.20	8.29	0.482	0.34	8	269	
1259	0.2	8.01'	10.67	6.67	0.491	0.00	149	172	
1304	0.4	8.00'	11.21	6.17	0.485	0.00	168	91.1	
1309	0.6	8.00'	11.63	5.96	0.476	0.00	179	50.5	
1314	0.8	8.00'	11.89	5.87	0.472	0.0	184	39.2	
1319	1.0	7.99'	12.28	5.81	0.466	0.0	189	30.3	
1324	1.2	7.99'	12.59	5.76	0.462	0.0	190	21.9	

MONITORING SAMPLE RECORD

Sample ID	Time Collected	Parameter/Order	Container	Perservative	Collected?
SW-046-MWS	1325 1451	TCL-VOCs	3 - 40 mL VOA	HCl	✓
		TPH-GRO	3 - 40 mL VOA	HCl	✓
		TPH-DRO	2 - 1 L Amber	none	✓
		TCL-SVOCs	2 - 1 L Amber	none	✓
		Oil & Grease	2 - 1 L Amber	HCl	✓
		TAL-Metals & Mercury (total)	1 - 250 mL Plastic	HNO3	✓
		Hexavalent Chromium (total)	1 - 250 mL Plastic	none	✓
		Total Cyanide	1 - 250 mL Plastic	NaOH	✓
		TAL-Metals & Mercury (Dissolved) Field Filtered	1 - 250 mL Plastic	HNO3	✓
		Hexavalent Chromium (Dissolved) Field Filtered	1 - 250 mL Plastic	none	✓

Matrix Spike

Duplicate

Sampled By: LEP

Comments: MS/MSD

Casing Volume: 1" I.D. = 0.041 gal/ft - 2" I.D. = 0.163 gal/ft - 4" I.D. = 0.653 gal/ft - 6" I.D. = 1.47 gal/ft
ft x gal/ft = (gal)

Hex Chrom only

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B Parcel B7 Phase II Date 12-11-20
 Weather 40s, Cloudy
 Calibrated by L. Glumac Instrument (Serial Number) Horiba U-52 (2BOMSAX4)
Lamotte 2020t (1223-1319)

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard	4.49	34 F	-	61 F (est.)
Specific Conductance Standard #2	-		-	
pH (7)	-		-	
pH (4)	4.00		-	
pH(10)	-		-	
ORP Zobel Solution (240 mV)	-		-	
Dissolved Oxygen 100% water saturated air mg/L	9.06 [‡]		-	
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	-		-	
Barometric Pressure mm Hg	760.22		760.48 (est.)	
Turbidity #1 (0 NTU)	0.0		-	
Turbidity #2 (1 NTU)	1.0		-	
Turbidity #3 (10 NTU)	10		-	

[‡] Dissolved Oxygen were outside of the calibration acceptance criteria. Post-calibration check was not performed. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B Parcel B7 Phase II Date 12-18-20
 Weather 30s, Cloudy
 Calibrated by L. Glumac Instrument (Serial Number) Horiba U-52 (2BOMSAX4)
Lamotte 2020t (1223-1319)

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard	4.49	36 F	4.53	31 F
Specific Conductance Standard #2	-		-	
pH (7)	-		-	
pH (4)	4.00		4.02	
pH(10)	-		-	
ORP Zobel Solution (240 mV)	-		-	
Dissolved Oxygen 100% water saturated air mg/L	9.97 [‡]		10.01 [‡]	
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	-		-	
Barometric Pressure mm Hg	762.25		763.27	
Turbidity #1 (0 NTU)	0.0		-	
Turbidity #2 (1 NTU)	1.0		-	
Turbidity #3 (10 NTU)	10		9.97	

[‡] Dissolved Oxygen were outside of the calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

TABLE 1
MULTIPARAMETER CALIBRATION LOG

Project Name Area B Parcel B7 Phase II Date 12-30-20
 Weather 40s, Sunny
 Calibrated by L. Parker Instrument (Serial Number) Horiba U-52 (2BOMSAX4)

Parameters	Morning Calibration	Morning Temperature	End of Day Calibration Check	End of Day Temperature
Specific Conductance Standard	4.49	31 F	4.53	44 F
Specific Conductance Standard #2	-		-	
pH (7)	-		-	
pH (4)	4.01		3.93	
pH(10)	-		-	
ORP Zobel Solution (240 mV)	-		-	
Dissolved Oxygen 100% water saturated air mg/L	10.06 [‡]		9.08 [‡]	
Dissolved Oxygen Zero Dissolved Oxygen Solution mg/L	-		-	
Barometric Pressure mm Hg	774.95		768.35	
Turbidity #1 (0 NTU)	-		-	
Turbidity #2 (1 NTU)	-		-	
Turbidity #3 (10 NTU)	-		-	

[‡] Dissolved Oxygen were outside of the calibration acceptance criteria. Values displayed on field purge logs may be inaccurate.

APPENDIX E

Parcel B7 - IDW Drum Log

Drum Identification Number	Designation	Activity/Phase	Contents	Open Date
1073-PPE-10/1/18-B7	Non. Haz.	Parcel B7 Phase II Investigation	PPE	10/1/2018
1074-Soil-10/1/18-B7	Non. Haz.	Parcel B7 Phase II Investigation	Soil	10/1/2018
1075-Liners-10/1/18-B7	Non. Haz.	Parcel B7 Phase II Investigation	Liners	10/1/2018
1087-Nitric Acid-10/15/18-Various	Non. Haz.	Parcel B7 Phase II Investigation	Nitric Acid	10/15/2018
1107-Soil-10/31/18-B7	Non. Haz.	Parcel B7 Phase II Investigation	Soil	10/31/2018
1161-Liners-3/10/19-B7	Non. Haz.	Parcel B7 Phase II Investigation	Liners	3/10/2019
1260-Soil-9/18/19-B7	Non. Haz.	Parcel B7 Phase II Investigation	Soil	9/18/2019
1261-Liners-9/18/19-B7	Non. Haz.	Parcel B7 Phase II Investigation	Liners	9/18/2019
1262-PPE-9/18/19-B7	Non. Haz.	Parcel B7 Phase II Investigation	PPE	9/18/2019
1269-Water-9/11/19-A8/A10/B4/B23/B7/A6	Non. Haz.	Parcel B7 Phase II Investigation	Water	9/11/2019
1452-Decon Water-12/7/2020-B7	Non. Haz.	Parcel B7 Phase II Investigation	Water	12/7/2020
1453-Purge Water-12/30/2020-B7	Non. Haz.	Parcel B7 Phase II Investigation	Water	12/30/2020
1454-Soil-12/7/2020-B7	Non. Haz.	Parcel B7 Phase II Investigation	Soil	12/7/2020

APPENDIX F

QA/QC Tracking Log

Trip Blank:	Date:	Sample IDs:	Notes:	Trip Blank:	Date:	Sample IDs:	Notes:
	10/1/2018	1) B7-014-SB-1	QA/QC for all soil samples		10/4/2018	1) B7-028-SB-1	QA/QC for all soil samples
		2) B7-014-SB-2				2) B7-028-SB-2	
		3) B7-014-SB-5				3) B7-036-SB-1	
		4) B7-014-SB-10				4) B7-036-SB-2	
		5) B7-015-SB-1				5) B7-036-SB-5	
		6) B7-015-SB-2				6) B7-044-SB-1	
		7) B7-015-SB-5	7) B7-044-SB-2			Duplicate: B7-028-SB-2	
		8) B7-015-SB-10	8) B7-044-SB-5			Date: 10/4/2018	
TB1	10/2/2018	9) B7-003-SB-1	MS/MSD: B7-003-SB-6		10/5/2018	9) B7-042-SB-1	MS/MSD: B7-036-SB-5
		10) B7-003-SB-2	Date: 10/2/2018			10) B7-042-SB-2	Date: 10/4/2018
		11) B7-003-SB-6	Field Blank:			11)	Field Blank:
		12) B7-003-SB-10	Date: 10/1/2018			12) B7-042-SB-5	Date: 10/5/2018
		13) B7-002-SB-1	Eq. Blank:			13) B7-033-SB-1	Eq. Blank:
		14) B7-002-SB-5	Date: 10/1/2018			14) B7-033-SB-2	Date: 10/5/2018
		15) B7-002-SB-9				15) B7-033-SB-5	
		16) B7-002-SB-10				16) B7-035-SB-1	
		17) B7-001-SB-1				17) B7-035-SB-2	
		18) B7-001-SB-2				18) B7-035-SB-5	
		19) B7-001-SB-5				19) B7-037-SB-1	
		20) B7-001-SB-10				20) B7-037-SB-2	
TB1	10/2/2018	1) B7-038-SB-1	QA/QC for all soil samples		10/5/2018	1) B7-037-SB-5	QA/QC for all soil samples
		2) B7-038-SB-2				2) B7-043-SB-1	
		3) B7-038-SB-8				3) B7-043-SB-2	
		4) B7-038-SB-10				4) B7-043-SB-4	
		5) B7-034-SB-1				5) B7-029-SB-1	
		6) B7-034-SB-2				6) B7-029-SB-2	
		7) B7-034-SB-7	7) B7-029-SB-5			Duplicate: B7-043-SB-4	
		8) B7-040-SB-1	Date: 10/2/2018			8) B7-019-SB-1	Date: 10/5/2018
		9) B7-040-SB-2	MS/MSD: B7-041-SB-5			9) B7-019-SB-8	MS/MSD: B7-029-SB-5
		10) B7-040-SB-7	Date: 10/3/2018			10) B7-018-SB-1	Date: 10/5/2018
		11) B7-040-SB-10	Field Blank:			11) B7-018-SB-5	Field Blank:
TB1	10/3/2018	12) B7-041-SB-1	Date: 10/2/2018		10/5/2018	12) B7-009-SB-1	Date: 10/5/2018
		13) B7-041-SB-2	Eq. Blank:			13) B7-009-SB-7	Eq. Blank:
		14) B7-041-SB-5	Date: 10/2/2018			14) B7-009-SB-10	Date: 10/5/2018
		15) B7-030-SB-1				15) B7-011-SB-1	
		16) B7-030-SB-2				16) B7-011-SB-6	
		17) B7-049-SB-1				17) B7-011-SB-10	
		18) B7-049-SB-5				18) B7-046-SB-1	
		19) B7-047-SB-1				19) B7-046-SB-4	
		20) B7-047-SB-5				20) B7-046-SB-10	

Soil samples with a sustained PID reading of 10 ppm or greater were collected for VOCs.
 VOC samples were placed in a cooler with a trip blank.

Samples in gray were collected via the full Parcel B7 QA/QC method, however, these samples were not part of the Baltimore County Property Transfer

QA/QC Tracking Log

<u>Trip</u> Blank:	<u>Date:</u>	<u>Sample IDs:</u>		<u>Trip</u> Blank:	<u>Date:</u>	<u>Sample IDs:</u>	
	10/8/2018	1) B7-050-SB-1	QA/QC for all soil samples	TB	3/7/2019	1) B7-051-SB-1	QA/QC for all soil samples
		2) B7-050-SB-5				2) B7-051-SB-5	
		3) B7-050-SB-10				3) B7-007-SB-1	
		4) B7-010-SB-1				4) B7-007-SB-5	
		5) B7-010-SB-5				5) B7-007-SB-10	
		6) B7-048-SB-1				6) B7-052-SB-1	
		7) B7-048-SB-5	Duplicate: B7-048-SB-5			7) B7-052-SB-4	Duplicate: B7-052-SB-4
		8) B7-048-SB-10	Date: 10/8/2020			8) B7-021-SB-1	Date: 3/7/2019
		9) B7-031-SB-1	MS/MSD: B7-031-SB-5			9) B7-021-SB-4	MS/MSD: B7-024-SB-4
		10) B7-031-SB-2	Date: 10/8/2018			10) B7-024-SB-1	Date: 3/8/2019
		11) B7-031-SB-5	Field Blank:			11) B7-024-SB-4	Field Blank:
TB1	10/30/2018	12) B7-045-SB-1.5	Date: 10/8/2018	TB	3/8/2019	12) B7-025-SB-1	Date: 3/8/2019
		13) B7-027-SD	Eq. Blank:			13) B7-025-SB-5	Eq. Blank:
		14) B7-026-SD	Date: 10/8/2018			14) B7-020-SB-1.5	Date: 3/8/2019
		15) B7-045-SB-5				15) B7-020-SB-5	
		16) B7-045-SB-10				16) B7-020-SB-10	
		17) B7-023-SB-1.5				17) B7-008-SB-1.5	
		18) B7-023-SB-5				18) B7-008-SB-4	
		19) B7-005-SB-1				19)	
		20) B7-005-SB-5				20)	
		TB1	10/30/2018			1) B7-005-SB-10	QA/QC for all soil samples
2) B7-022-SB-1.5	2) B7-013-SB-4						
3) B7-022-SB-5	3) B7-012-SB-1						
4) B7-022-SB-10	4) B7-012-SB-5						
	10/31/2018	5) B7-006-SB-1		5) B7-016-SB-1			
		6) B7-006-SB-5		6) B7-016-SB-8			
		7) B7-004-SB-1	Duplicate: B7-006-SB-5	7) B7-016-SB-10	Duplicate: B7-012-SB-5		
		8) B7-004-SB-5	Date: 10/30/2018	8) B7-017-SB-1	Date: 9/18/2019		
		9) B7-004-SB-10	MS/MSD: B7-022-SB-10	9) B7-017-SB-4	MS/MSD: B7-016-SB-8		
		10)	Date: 10/30/2018	10) B7-017-SB-10	Date: 9/18/2019		
		11)	Field Blank:	11) B7-062-SB-1	Field Blank:		
		12)	Date: 10/30/2018	12) B7-062-SB-5	Date: 9/18/2019		
		13)	Eq. Blank:	13) B7-063-SB-1	Eq. Blank:		
		14)	Date: 10/30/2018	14) B7-063-SB-8	Date: 9/18/2019		
15)		15)					
16)		16)					
17)		17)					
18)		18)					
19)		19)					
20)		20)					

Soil samples with a sustained PID reading of 10 ppm or greater were collected for VOCs. VOC samples were placed in a cooler with a trip blank.

Samples in gray were collected via the full Parcel B7 QA/QC method, however, these samples were not part of the Baltimore County Property Transfer

QA/QC Tracking Log

<u>Trip</u> Blank:	<u>Date:</u>	<u>Sample IDs:</u>		<u>Trip</u> Blank:	<u>Date:</u>	<u>Sample IDs:</u>	
TB1	12/7/2020	1) B7-053-SB-1	QA/QC for all soil samples	TB1	12/21/2020	1) B7-032-SB-2	QA/QC for all soil samples
		2) B7-053-SB-2				2) B7-032-SB-5	
		3) B7-053-SB-5				3)	
		4) B7-054-SB-1				4)	
		5) B7-054-SB-2				5)	
		6) B7-054-SB-5				6)	
		7) B7-054-SB-10	Duplicate: B7-059-SB-5			7)	Duplicate: B7-032-SB-2
		8) B7-056-SB-1	Date: 12/7/2020			8)	Date: 12/21/2020
		9) B7-056-SB-2	MS/MSD: B7-058-SB-5			9)	MS/MSD: B7-032-SB-1
		10) B7-056-SB-5	Date: 12/7/2020			10)	Date: 12/21/2020
		11) B7-056-SB-10	Field Blank:			11)	Field Blank:
		12) B7-059-SB-1	Date: 12/7/2020			12)	Date: 12/21/2020
		13) B7-059-SB-2	Eq. Blank:			13)	Eq. Blank:
		14) B7-059-SB-5	Date: 12/7/2020			14)	Date: 12/21/2020
		15) B7-059-SB-10				15)	
		16) B7-058-SB-1				16)	
		17) B7-058-SB-2				17)	
		18) B7-058-SB-5				18)	
		19) B7-058-SB-10				19)	
TB1	12/8/2020	20) B7-060-SB-1				20)	

TB1	12/8/2020	1) B7-060-SB-2	QA/QC for all soil samples	TB	12/11/2020	1) B7-065-PZ	QA/QC for all groundwater samples
		2) B7-060-SB-5				2) B7-064-PZ	
		3) B7-060-SB-10				3) B7-060-PZ	
		4) B7-055-SB-1		TB	12/18/2020	4) SW-046-MWS	
		5) B7-055-SB-2				5) B7-053-PZ	
		6) B7-055-SB-5				6) SW-046-MWS	
TB1	12/10/2020	7) B7-055-SB-10	Duplicate: B7-061-SB-4	TB	12/30/2020	7) B7-053-PZ	Duplicate: SW-046-MWS
		8) B7-061-SB-1	Date: 12/10/2020			8)	Date: 12/30/2020
		9) B7-061-SB-2	MS/MSD: B7-055-SB-5			9)	MS/MSD: SW-046-MWS
		10) B7-061-SB-4	Date: 12/8/2020			10)	Date: 12/18/2020
		11) B7-065-SB-1	Field Blank:			11)	Field Blank: 12/18/20
		12) B7-065-SB-2	Date: 12/8/2020			12)	Date: &12/30/20
		13) B7-065-SB-5	Eq. Blank:			13)	Eq. Blank:
		14) B7-064-SB-1	Date: 12/8/2020			14)	Date:
		15) B7-064-SB-2				15)	
		16) B7-064-SB-5				16)	
		17) B7-057-SB-1				17)	
		18) B7-057-SB-2				18)	
		19) B7-057-SB-5				19)	
		TB1	12/21/2020			20) B7-032-SB-1	

Soil samples with a sustained PID reading of 10 ppm or greater were collected for VOCs. VOC samples were placed in a cooler with a trip blank.

Samples in gray were collected via the full Parcel B7 QA/QC method, however, these samples were not part of the Baltimore County Property Transfer

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EVALUATION OF DATA COMPLETENESS
Percentage of Non-Rejected Results vs Total Results

Parameter	Parameter Group	Matrix	Number of Validated Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
Cyanide	CN	Soil	15	14	0	15	100.00%
Aluminum	Metal	Soil	15	15	0	15	100.00%
Antimony	Metal	Soil	15	0	0	15	100.00%
Arsenic	Metal	Soil	17	15	0	17	100.00%
Barium	Metal	Soil	15	15	0	15	100.00%
Beryllium	Metal	Soil	15	15	0	15	100.00%
Cadmium	Metal	Soil	15	3	0	15	100.00%
Chromium	Metal	Soil	15	15	0	15	100.00%
Chromium VI	Metal	Soil	15	0	11	4	26.67%
Cobalt	Metal	Soil	15	14	0	15	100.00%
Copper	Metal	Soil	15	15	0	15	100.00%
Iron	Metal	Soil	15	15	0	15	100.00%
Lead	Metal	Soil	15	15	0	15	100.00%
Manganese	Metal	Soil	15	15	0	15	100.00%
Mercury	Metal	Soil	15	10	0	15	100.00%
Nickel	Metal	Soil	15	15	0	15	100.00%
Selenium	Metal	Soil	15	0	0	15	100.00%
Silver	Metal	Soil	15	0	0	15	100.00%
Thallium	Metal	Soil	15	0	0	15	100.00%
Vanadium	Metal	Soil	15	15	0	15	100.00%
Zinc	Metal	Soil	15	15	0	15	100.00%
Aroclor 1016	PCB	Soil	5	0	0	5	100.00%
Aroclor 1221	PCB	Soil	5	0	0	5	100.00%
Aroclor 1232	PCB	Soil	5	0	0	5	100.00%
Aroclor 1242	PCB	Soil	5	0	0	5	100.00%
Aroclor 1248	PCB	Soil	5	0	0	5	100.00%
Aroclor 1254	PCB	Soil	5	0	0	5	100.00%
Aroclor 1260	PCB	Soil	5	0	0	5	100.00%
Aroclor 1262	PCB	Soil	5	0	0	5	100.00%
Aroclor 1268	PCB	Soil	5	0	0	5	100.00%
PCBs (total)	PCB	Soil	5	0	0	5	100.00%
4,4'-DDD	Pesticides	Soil	10	0	0	10	100.00%
4,4'-DDE	Pesticides	Soil	10	0	0	10	100.00%
4,4'-DDT	Pesticides	Soil	10	0	0	10	100.00%
Aldrin	Pesticides	Soil	10	0	0	10	100.00%
alpha-BHC	Pesticides	Soil	10	0	0	10	100.00%
alpha-Chlordane	Pesticides	Soil	10	0	0	10	100.00%
beta-BHC	Pesticides	Soil	10	0	0	10	100.00%
delta-BHC	Pesticides	Soil	10	0	0	10	100.00%
Dieldrin	Pesticides	Soil	10	0	0	10	100.00%
Endosulfan I	Pesticides	Soil	10	0	0	10	100.00%
Endosulfan II	Pesticides	Soil	10	0	0	10	100.00%
Endosulfan sulfate	Pesticides	Soil	10	0	0	10	100.00%
Endrin	Pesticides	Soil	10	0	0	10	100.00%
Endrin aldehyde	Pesticides	Soil	10	1	0	10	100.00%
Endrine ketone	Pesticides	Soil	10	0	0	10	100.00%
gamma-BHC (Lindane)	Pesticides	Soil	10	0	0	10	100.00%
gamma-Chlordane	Pesticides	Soil	10	0	0	10	100.00%
Heptachlor	Pesticides	Soil	10	0	0	10	100.00%
Heptachlor epoxide	Pesticides	Soil	10	0	0	10	100.00%
Methoxychlor	Pesticides	Soil	10	0	0	10	100.00%
Toxaphene	Pesticides	Soil	10	0	0	10	100.00%
1,1-Biphenyl	SVOC	Soil	15	0	0	15	100.00%
1,2,4,5-Tetrachlorobenzene	SVOC	Soil	15	0	0	15	100.00%

EVALUATION OF DATA COMPLETENESS
Percentage of Non-Rejected Results vs Total Results

Parameter	Parameter Group	Matrix	Number of Validated Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
2,3,4,6-Tetrachlorophenol	SVOC	Soil	15	0	0	15	100.00%
2,4,5-Trichlorophenol	SVOC	Soil	15	0	0	15	100.00%
2,4,6-Trichlorophenol	SVOC	Soil	15	0	0	15	100.00%
2,4-Dichlorophenol	SVOC	Soil	15	0	0	15	100.00%
2,4-Dimethylphenol	SVOC	Soil	15	0	0	15	100.00%
2,4-Dinitrophenol	SVOC	Soil	15	0	0	15	100.00%
2,4-Dinitrotoluene	SVOC	Soil	15	0	0	15	100.00%
2,6-Dinitrotoluene	SVOC	Soil	15	0	0	15	100.00%
2-Chloronaphthalene	SVOC	Soil	15	0	0	15	100.00%
2-Chlorophenol	SVOC	Soil	15	0	0	15	100.00%
2-Methylnaphthalene	SVOC	Soil	15	9	0	15	100.00%
2-Methylphenol	SVOC	Soil	15	0	0	15	100.00%
2-Nitroaniline	SVOC	Soil	15	0	0	15	100.00%
3&4-Methylphenol(m&p Cresol)	SVOC	Soil	15	0	0	15	100.00%
3,3'-Dichlorobenzidine	SVOC	Soil	15	0	0	15	100.00%
4-Chloroaniline	SVOC	Soil	15	0	0	15	100.00%
4-Nitroaniline	SVOC	Soil	15	0	0	15	100.00%
Acenaphthene	SVOC	Soil	15	8	0	15	100.00%
Acenaphthylene	SVOC	Soil	15	11	0	15	100.00%
Acetophenone	SVOC	Soil	15	0	0	15	100.00%
Anthracene	SVOC	Soil	15	11	0	15	100.00%
Benz[a]anthracene	SVOC	Soil	15	11	0	15	100.00%
Benzaldehyde	SVOC	Soil	15	0	0	15	100.00%
Benzo[a]pyrene	SVOC	Soil	15	11	0	15	100.00%
Benzo[b]fluoranthene	SVOC	Soil	15	11	0	15	100.00%
Benzo[g,h,i]perylene	SVOC	Soil	15	11	0	15	100.00%
Benzo[k]fluoranthene	SVOC	Soil	15	11	0	15	100.00%
bis(2-chloroethoxy)methane	SVOC	Soil	15	0	0	15	100.00%
bis(2-Chloroethyl)ether	SVOC	Soil	15	0	0	15	100.00%
bis(2-Chloroisopropyl)ether	SVOC	Soil	15	0	0	15	100.00%
bis(2-Ethylhexyl)phthalate	SVOC	Soil	15	0	0	15	100.00%
Caprolactam	SVOC	Soil	15	0	0	15	100.00%
Carbazole	SVOC	Soil	15	0	0	15	100.00%
Chrysene	SVOC	Soil	15	11	0	15	100.00%
Dibenz[a,h]anthracene	SVOC	Soil	15	10	0	15	100.00%
Diethylphthalate	SVOC	Soil	15	0	0	15	100.00%
Di-n-butylphthalate	SVOC	Soil	15	0	0	15	100.00%
Di-n-octylphthalate	SVOC	Soil	15	0	0	15	100.00%
Fluoranthene	SVOC	Soil	15	11	0	15	100.00%
Fluorene	SVOC	Soil	15	9	0	15	100.00%
Hexachlorobenzene	SVOC	Soil	15	0	0	15	100.00%
Hexachlorobutadiene	SVOC	Soil	15	0	0	15	100.00%
Hexachlorocyclopentadiene	SVOC	Soil	15	0	0	15	100.00%
Hexachloroethane	SVOC	Soil	15	0	0	15	100.00%
Indeno[1,2,3-c,d]pyrene	SVOC	Soil	15	11	0	15	100.00%
Isophorone	SVOC	Soil	15	0	0	15	100.00%
Naphthalene	SVOC	Soil	15	11	0	15	100.00%
Nitrobenzene	SVOC	Soil	15	0	0	15	100.00%
N-Nitroso-di-n-propylamine	SVOC	Soil	15	0	0	15	100.00%
N-Nitrosodiphenylamine	SVOC	Soil	15	0	0	15	100.00%
Pentachlorophenol	SVOC	Soil	15	0	0	15	100.00%
Phenanthrene	SVOC	Soil	15	12	0	15	100.00%
Phenol	SVOC	Soil	15	0	0	15	100.00%
Pyrene	SVOC	Soil	15	11	0	15	100.00%

EVALUATION OF DATA COMPLETENESS
Percentage of Non-Rejected Results vs Total Results

Parameter	Parameter Group	Matrix	Number of Validated Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
Diesel Range Organics	TPH	Soil	15	10	0	15	100.00%
Gasoline Range Organics	TPH	Soil	15	0	0	15	100.00%
Oil & Grease	TPH	Soil	15	4	0	15	100.00%
Cyanide	CN	Water	4	1	0	4	100.00%
Aluminum	Metal	Water	5	5	0	5	100.00%
Antimony	Metal	Water	5	0	0	5	100.00%
Arsenic	Metal	Water	5	2	0	5	100.00%
Barium	Metal	Water	5	5	0	5	100.00%
Beryllium	Metal	Water	5	5	0	5	100.00%
Cadmium	Metal	Water	5	4	0	5	100.00%
Chromium	Metal	Water	5	4	0	5	100.00%
Chromium VI	Metal	Water	4	1	0	4	100.00%
Cobalt	Metal	Water	5	5	0	5	100.00%
Copper	Metal	Water	5	4	0	5	100.00%
Iron	Metal	Water	5	3	0	5	100.00%
Lead	Metal	Water	5	2	0	5	100.00%
Manganese	Metal	Water	5	5	0	5	100.00%
Mercury	Metal	Water	5	1	0	5	100.00%
Nickel	Metal	Water	5	5	0	5	100.00%
Selenium	Metal	Water	5	0	0	5	100.00%
Silver	Metal	Water	5	0	0	5	100.00%
Thallium	Metal	Water	5	0	0	5	100.00%
Vanadium	Metal	Water	5	1	0	5	100.00%
Zinc	Metal	Water	5	5	0	5	100.00%
Dichlorobiphenyl	PCB	Water	1	0	0	1	100.00%
Heptachlorobiphenyl	PCB	Water	1	0	0	1	100.00%
Hexachlorobiphenyl	PCB	Water	1	0	0	1	100.00%
Monochlorobiphenyl	PCB	Water	1	0	0	1	100.00%
Nonachlorobiphenyl	PCB	Water	1	0	0	1	100.00%
Octachlorobiphenyl	PCB	Water	1	0	0	1	100.00%
PCBs (total)	PCB	Water	1	0	0	1	100.00%
Pentachlorobiphenyl	PCB	Water	1	0	0	1	100.00%
Tetrachlorobiphenyl	PCB	Water	1	0	0	1	100.00%
Trichlorobiphenyl	PCB	Water	1	0	0	1	100.00%
1,1-Biphenyl	SVOC	Water	4	0	0	4	100.00%
1,2,4,5-Tetrachlorobenzene	SVOC	Water	4	0	0	4	100.00%
2,3,4,6-Tetrachlorophenol	SVOC	Water	4	0	0	4	100.00%
2,4,5-Trichlorophenol	SVOC	Water	4	0	0	4	100.00%
2,4,6-Trichlorophenol	SVOC	Water	4	0	0	4	100.00%
2,4-Dichlorophenol	SVOC	Water	4	0	0	4	100.00%
2,4-Dimethylphenol	SVOC	Water	4	0	0	4	100.00%
2,4-Dinitrophenol	SVOC	Water	4	0	0	4	100.00%
2,4-Dinitrotoluene	SVOC	Water	4	0	0	4	100.00%
2,6-Dinitrotoluene	SVOC	Water	4	0	0	4	100.00%
2-Chloronaphthalene	SVOC	Water	4	0	0	4	100.00%
2-Chlorophenol	SVOC	Water	4	0	0	4	100.00%
2-Methylnaphthalene	SVOC	Water	7	1	0	7	100.00%
2-Methylphenol	SVOC	Water	4	0	0	4	100.00%
2-Nitroaniline	SVOC	Water	4	0	0	4	100.00%
2-Nitrophenol	SVOC	Water	3	0	0	3	100.00%
3&4-Methylphenol(m&p Cresol)	SVOC	Water	1	0	0	1	100.00%
3,3'-Dichlorobenzidine	SVOC	Water	4	0	1	3	75.00%
4,6-Dinitro-2-methylphenol	SVOC	Water	3	0	0	3	100.00%
4-Bromophenyl phenyl ether	SVOC	Water	3	0	0	3	100.00%

EVALUATION OF DATA COMPLETENESS
Percentage of Non-Rejected Results vs Total Results

Parameter	Parameter Group	Matrix	Number of Validated Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
4-Chloro-3-methylphenol	SVOC	Water	3	0	0	3	100.00%
4-Chloroaniline	SVOC	Water	4	0	0	4	100.00%
4-Chlorophenyl phenyl ether	SVOC	Water	3	0	0	3	100.00%
4-Nitroaniline	SVOC	Water	4	0	0	4	100.00%
4-Nitrophenol	SVOC	Water	3	0	0	3	100.00%
Acenaphthene	SVOC	Water	7	0	0	7	100.00%
Acenaphthylene	SVOC	Water	7	0	0	7	100.00%
Acetophenone	SVOC	Water	4	0	0	4	100.00%
Anthracene	SVOC	Water	7	0	0	7	100.00%
Benz[a]anthracene	SVOC	Water	7	1	0	7	100.00%
Benzaldehyde	SVOC	Water	4	0	0	4	100.00%
Benzo[a]pyrene	SVOC	Water	7	1	0	7	100.00%
Benzo[b]fluoranthene	SVOC	Water	7	1	0	7	100.00%
Benzo[g,h,i]perylene	SVOC	Water	7	1	0	7	100.00%
Benzo[k]fluoranthene	SVOC	Water	7	1	0	7	100.00%
bis(2-chloroethoxy)methane	SVOC	Water	4	0	0	4	100.00%
bis(2-Chloroethyl)ether	SVOC	Water	4	0	0	4	100.00%
bis(2-Chloroisopropyl)ether	SVOC	Water	4	0	0	4	100.00%
bis(2-Ethylhexyl)phthalate	SVOC	Water	4	0	0	4	100.00%
Butylbenzylphthalate	SVOC	Water	3	0	0	3	100.00%
Caprolactam	SVOC	Water	4	0	0	4	100.00%
Carbazole	SVOC	Water	4	0	0	4	100.00%
Chrysene	SVOC	Water	7	1	0	7	100.00%
Dibenz[a,h]anthracene	SVOC	Water	7	0	0	7	100.00%
Diethylphthalate	SVOC	Water	4	1	0	4	100.00%
Dimethylphthalate	SVOC	Water	3	1	0	3	100.00%
Di-n-butylphthalate	SVOC	Water	4	2	0	4	100.00%
Di-n-octylphthalate	SVOC	Water	4	0	0	4	100.00%
Fluoranthene	SVOC	Water	7	2	0	7	100.00%
Fluorene	SVOC	Water	7	0	0	7	100.00%
Hexachlorobenzene	SVOC	Water	4	0	0	4	100.00%
Hexachlorobutadiene	SVOC	Water	4	0	0	4	100.00%
Hexachlorocyclopentadiene	SVOC	Water	4	0	0	4	100.00%
Hexachloroethane	SVOC	Water	4	0	0	4	100.00%
Indeno[1,2,3-c,d]pyrene	SVOC	Water	7	1	0	7	100.00%
Isophorone	SVOC	Water	4	0	0	4	100.00%
Naphthalene	SVOC	Water	7	0	0	7	100.00%
Nitrobenzene	SVOC	Water	4	0	0	4	100.00%
N-Nitroso-di-n-propylamine	SVOC	Water	4	0	0	4	100.00%
N-Nitrosodiphenylamine	SVOC	Water	4	0	0	4	100.00%
Pentachlorophenol	SVOC	Water	4	0	0	4	100.00%
Phenanthrene	SVOC	Water	7	3	0	7	100.00%
Phenol	SVOC	Water	4	0	0	4	100.00%
Pyrene	SVOC	Water	7	1	0	7	100.00%
Diesel Range Organics	TPH	Water	4	2	0	4	100.00%
Gasoline Range Organics	TPH	Water	4	0	0	4	100.00%
Oil & Grease	TPH	Water	3	0	0	3	100.00%
1,1,1-Trichloroethane	VOC	Water	4	0	0	4	100.00%
1,1,2,2-Tetrachloroethane	VOC	Water	4	0	0	4	100.00%
1,1,2-Trichloro-1,2,2-Trifluoroethane	VOC	Water	4	0	0	4	100.00%
1,1,2-Trichloroethane	VOC	Water	4	0	0	4	100.00%
1,1-Dichloroethane	VOC	Water	4	0	0	4	100.00%
1,1-Dichloroethene	VOC	Water	4	0	0	4	100.00%
1,2,3-Trichlorobenzene	VOC	Water	4	0	0	4	100.00%

EVALUATION OF DATA COMPLETENESS
Percentage of Non-Rejected Results vs Total Results

Parameter	Parameter Group	Matrix	Number of Validated Results	Detections	Number of Rejected Results	Number of Non-rejected Results	Completeness
1,2,4-Trichlorobenzene	VOC	Water	4	0	0	4	100.00%
1,2-Dibromo-3-chloropropane	VOC	Water	4	0	0	4	100.00%
1,2-Dibromoethane	VOC	Water	4	0	0	4	100.00%
1,2-Dichlorobenzene	VOC	Water	4	0	0	4	100.00%
1,2-Dichloroethane	VOC	Water	4	0	0	4	100.00%
1,2-Dichloroethene (Total)	VOC	Water	4	1	0	4	100.00%
1,2-Dichloropropane	VOC	Water	4	0	0	4	100.00%
1,3-Dichlorobenzene	VOC	Water	4	0	0	4	100.00%
1,4-Dichlorobenzene	VOC	Water	4	0	0	4	100.00%
2-Butanone (MEK)	VOC	Water	4	0	0	4	100.00%
2-Hexanone	VOC	Water	4	0	0	4	100.00%
4-Methyl-2-pentanone (MIBK)	VOC	Water	4	0	0	4	100.00%
Acetone	VOC	Water	4	0	0	4	100.00%
Benzene	VOC	Water	4	0	0	4	100.00%
Bromodichloromethane	VOC	Water	4	0	0	4	100.00%
Bromoform	VOC	Water	4	0	0	4	100.00%
Bromomethane	VOC	Water	4	0	0	4	100.00%
Carbon disulfide	VOC	Water	4	0	0	4	100.00%
Carbon tetrachloride	VOC	Water	4	0	0	4	100.00%
Chlorobenzene	VOC	Water	4	0	0	4	100.00%
Chloroethane	VOC	Water	4	0	0	4	100.00%
Chloroform	VOC	Water	4	1	0	4	100.00%
Chloromethane	VOC	Water	4	0	0	4	100.00%
cis-1,2-Dichloroethene	VOC	Water	4	1	0	4	100.00%
cis-1,3-Dichloropropene	VOC	Water	4	0	0	4	100.00%
Cyclohexane	VOC	Water	4	0	0	4	100.00%
Dibromochloromethane	VOC	Water	4	0	0	4	100.00%
Dichlorodifluoromethane	VOC	Water	4	0	0	4	100.00%
Ethylbenzene	VOC	Water	4	0	0	4	100.00%
Isopropylbenzene	VOC	Water	4	0	0	4	100.00%
Methyl Acetate	VOC	Water	4	0	0	4	100.00%
Methyl tert-butyl ether (MTBE)	VOC	Water	4	1	0	4	100.00%
Methylene Chloride	VOC	Water	4	0	0	4	100.00%
Styrene	VOC	Water	4	0	0	4	100.00%
Tetrachloroethene	VOC	Water	4	0	0	4	100.00%
Toluene	VOC	Water	4	0	0	4	100.00%
trans-1,2-Dichloroethene	VOC	Water	4	0	0	4	100.00%
trans-1,3-Dichloropropene	VOC	Water	4	0	0	4	100.00%
Trichloroethene	VOC	Water	4	0	0	4	100.00%
Trichlorofluoromethane	VOC	Water	4	0	0	4	100.00%
Vinyl chloride	VOC	Water	4	0	0	4	100.00%
Xylenes	VOC	Water	4	0	0	4	100.00%
1,4-Dioxane	VOC/SVOC	Water	4	1	0	4	100.00%

Data validation has been completed for a representative 30% of all samples
Requirement was evaluated independently for Parcel B7, Parcel B25, and Property Transfer